COMPENDIUM ON ENVIRONMENT STATISTICS OF PAKISTAN





2015





Pakistan Bureau of Statistics
Government of Pakistan
ISLAMABAD

COMPENDIUM ON ENVIRONMENT STATISTICS OF PAKISTAN 2015

Pakistan Bureau of Statistics
Government of Pakistan
ISLAMABAD

Asif Bajwa

Chief Statistician
Government of Pakistan
Pakistan Bureau of Statistics

Statistics House
21- Mauve Area,
G-9/1, Islamabad

Tel: 051-9106515
Fax: 051-9106561
Email: chiefstat@pbs.gov.pk
Website: www.pbs.gov.pk

Ismail Khan

Deputy Director General
Government of Pakistan
Pakistan Bureau of Statistics

Statistics House
21- Mauve Area, G-9/1, Islamabad

Tel: 051-9106558
Fax: 051-9106556
Email: ismail.khan@pbs.gov.pk

FOREWORD

As an inescapable concomitant with the traditional route of economic development, Pakistan has been facing natural resource degradation and pollution problems. The unsavory spectacle of air pollution, water contamination and other macro environmental impacts such as water logging, land degradation and desertification, are on rise. All this, in conjunction with rapid growth in population, have been instrumental to the expanding tentacles of poverty. In order to assess the environmental problems as a prelude to arrest the pace of degeneration and provide for sustainable course of economic development, the availability of adequate data is imperative. This publication is an attempt to provide relevant statistics compiled through secondary sources collected from different departments.

The task of environmental data collection does not consist just in determining the frame and approaching the selected sources of information because environmental statistics per se do not exist as a ready-to-compile/pick category as generally perceived about data and statistics. The information on environment has generated through deliberate scientific observations and measurements in a consistent way, under the aegis of specialized agencies. Since it is skill and resource intensive pursuit and generally undertaken in public sector, the overall budgetary/financial constraints do take the toll of the canvas and continuity of environmental data generation down the time lane.

Consequently, availability of the statistics falls short of desired level. Further, the studies pertaining to normal over a period of time are repeated after long time intervals, which may not conform with the quinquennial periodicity of this document. Similarly, many variables antecedental, associated with and, consequential to, environment are derived from population census, which is yet to be carried out even though the stipulated decennial time frame has long been overstepped.

Nevertheless, the latest update of the compendium is a good attempt to mirror quite a few environmental factors as a means to raise awareness and help stay focus on the pivotality of environmental concerns for instituting sustainable development paradigm-the only way forward to ensuring the continuity of human race on the face of planet earth.

I hope that researchers, planers and environmentalists would find this document useful for their specific pursuits. Comments/suggestions for improvement would be welcomed and will be highly appreciated.

The report is also available on www.pbs.gov.pk.

ASIF BAJWA
Chief Statistician

Pakistan Bureau of Statistics
Statistics Division
Government of Pakistan
Islamabad
December 2015

PREFACE

Pakistan Bureau of Statistics prepared the 1st Compendium on Environment Statistics of Pakistan in 1998 under the Technical Assistance of Asian Development Bank in accordance with, as far as possible, the guidelines of United Nations "Framework for the Development of Environment Statistics (FDES)". It has since been updating it as a regular activity with quinquennial periodicity. Compendium on Environment Statistics of Pakistan 2015 is the third update in the series. The predecessor of the current one presented the statistics of 2010 vintage.

Notwithstanding exclusive reliance on mail inquiry, all possible efforts have been made to collect available secondary data and, quite a few new tables on quality of water, greenhouse gases and disasters have also been included in the compendium. However, some tables included in the predecessor of this publication could not be up-dated due either to their being single time or cyclical activity or, the source agencies did not have the pertinent data.

I hope this opportunity to acknowledge the debt of gratitude owed to our worthy respondents of data both in public and in private sector. I would also like to appreciate the staff of Social Statistics Section for their untiring efforts towards compiling this document in accordance with the stipulated periodicity. I do hope that the planners, researcher and other users at large will find this document useful for their varied inquests.

ISMAIL KHAN
Deputy Director General

Pakistan Bureau of Statistics
Statistics Division
Government of Pakistan
Islamabad
December, 2015

GENSIS OF THE REPORT

The compilation of Compendium on Environment Statistics of Pakistan 2015 owes to the untiring efforts of the following staff of the Pakistan Bureau of Statistics.

Mr. Ismail Khan
Deputy Director General

Mr. Ghulam Muhammad
Director

Mr. Arshad Mahmood
Chief Statistical Officer

Miss Shahnaz Akhtar
Statistical Officer

Mrs. Zahida Parveen
Statistical Officer

Mr. Shabbir Ali
Steno Typist

Mr. Muhammad Azhar
Statistical Assistant

Mr. Muhammad Bukhsh
Statistical Assistant

Mr. Muhammad Iqbal Malik
Statistical Assistant

Mr. Muhammad Ahsan Farooqi
Statistical Assistant

Mrs. Sakina Malik
Statistical Assistant

CONTENT

Foreword ..... **i**
GENSIS OF THE REPORT ..... **iii**
SECTION - A **1**
Socio-economic Activities and Natural Events 1
A-I Demographic Situation 1
A-II Housing 7
A-III Labour Force 11
A-IV Land Utilization 12
A-V Agriculture 12
A-VI Water 12
A-VII Livestock 16
A-VIII Forestry 16
A-IX Transportation 16
Table A-01: Population of Pakistan by Region/Province, Land Area and Percentage Distribution, 1951 to 1998 Censuses 18
Table A-01-a: Population of Pakistan by Region/Province, Land Area and Percentage Distribution 2010-2015 18
Table A-02: Population Density by Region/Province, 1951 to 1998 Censuses 19
Table A-02-a: Population Density by Region/Province, 2010-2015 19
Table A-03: Percentage Distribution of Population (10 years and over) by Marital Status Pakistan and Provinces, 2013-14 20
Table A-04: Population (10 years and above) by Age, Sex and Literacy 2013-14 21
Table A-05: Percentage Distribution of Total Population and That of 10 Years Age and Over by Age, Sex, Area and Nature of Activities, 2013-14 22
Table A-06: Population (15 years and above) by Age groups, Sex and Marital Status for Urban and Rural Areas, 2013-14 23
Table A-07: Employed Population (10 years and above) by Major Occupation, Sex, Broad Age Group and Rural/Urban Areas 2013-14 26
Table A-08: Working Population (10 years and above) by Industry Status, Sex, Broad Age Group, Areas 2013-14 29
Table A-09: Percentage Distribution of Households by Housing Tenure PSLM, 2012-2013 32
Table A-10: Percentage Distribution of Households by Material Used for Walls PSLM, 2012-2013 33
Table A-11: Percentage Distribution of Households by Material Used for Roof PSLM, 2012-2013 34
Table A-12: Percentage Distribution of Households by Fuel Used For Lighting PSLM 2012-2013 35
Table A-13: Percentage Distribution of Households by Fuel Used For Cooking PSLM 36
Table A-14: Percentage Distribution of Households by Main Source of Drinking Water- Pakistan and Provinces 2011-2012, 2012-13 & 2013-14 37
Table A-15: Percentage Distribution of Housing Units by Type of Toilet Used and Urban/Rural 38
Table A-16: Percentage Distribution of Civilian Labour Force 39
Table A-17: Percentage Distribution of Population by Economic Category 40
Table A-18: Percentage Distribution of Employed Persons by Major Industry Division 41
Table A-19: Percentage Distribution of Employed Persons by Major Occupational Group 42
Table A-20: Land Utilization Statistics 43
TableA-21: Area under Agricultural Crops 44
Table A-22: Production of Agricultural Crops 46
Table A-23: Number of Tube wells by Province 48
Table A-24: Overall Water Availability at Farm Gate 49
Table A-25: Production of Chemical Fertilizers 50
Table A-26: Season-Wise Consumption of Fertilizers 51
Table A-27: Usage of Fertilizers by Crops 52
Table A-28: Consumption of Pesticides 53
Table A-29: Estimated Livestock Population 54
Table A-30: Estimated Livestock Products 56
Table A-31: Estimated Milk Production 57
Table A-32: Estimated Meat and Eggs Production 58
Table A-33: Fish Production 59
Table A-34: Total Catch of Fish and their Indices 60
Table A-35: Fishermen Engaged in Marine and Inland Fisheries 60
Table A-36: Number of Fishing Crafts in Pakistan 61

Table A-37: Forest Products of Pakistan 61
Table A-38: Uses of Forest Resources (Estimated Wood Consumption in Various End-uses) 62
Table A-39: Production of Manufacturing Items 63
Table A-40: Mineral Production in Pakistan 66
Table A-41: Crude Oil Production by Field 68
Table A-42: Petroleum Energy Products Consumption by Sector 73
Table A-43: Petroleum Energy Products Consumption by Province 74
Table A-44: Consumption of Petroleum (Energy) Products by Fuel 75
Table A-45: Consumption of Indigenous Coal by Sector 76
Table A-46: Associated Gas Production by Field 77
Table A-47: Non-Associated Gas Production by Field 78
Table A-48: Natural Gas Consumption by Sector 85
Table A-49: Natural Gas Consumption 2013-14 by Province 86
Table A-50: Gas Supplies to Fertilizer and Power Sectors by Source 87
Table A-51: Installed Capacity of Electricity Generation as on 30th June 88
Table A-52: Gross Generation of Electricity by Source 90
Table A-53: Electricity Consumption by Sector (Public Utilities Only) 90
Table A-54: Electricity Consumption by Province (Public Utilities Only) 91
Table A-55: Fuel Consumption for Thermal Power Generation 91
Table A-56: Thermal Electricity Generation by Fuel 92
Table A-57: Field-wise Production of Coal in Pakistan 92
Table A-58: Energy Consumption by Sector 93
Table A-59: International Shipping-Entered and Cleared at Karachi Port/Port Qasim 95
Table A-60: Number and Registered Tonnage of Native Crafts by Nationalities, which Entered/Cleared in Coastal Shipping with Cargo into/From Karachi Port 96
Table A-61: Total Passengers Handled at Civil Airports in Pakistan (Scheduled and Non-scheduled) 96
Table A-62: Air Traffic of Passengers, Freight and Mail of Pakistan International Airlines 97
Table A-63: Major Traffic Flows by Airlines during the July, 2014 to June, 2015 (Location All) 98
Table A-64: Major Traffic Flows by Airports during the July, 2014 to June, 2015 (Location All) 100
Table A-65: Transport Statistics 102
Table A-66: Number of Motor Vehicles Registered 103
Table A-67: Motor Vehicles on Road 104
Table A-68: Post and Telecommunications 105
Table A-69: Traffic Accidents 106
Table A-70: River In-flow at Rim Stations in Pakistan 109
Table A-71: Population Served with Water Supply and Sanitation Facilities in WASA Area, District Lahore 110
Table A-72: Population Served with Water Supply, Sewerage and Drainage Facilities of Various Cities 111
Table A-73: Distance to Water Source by Province and Source, PSLM 2011-12 113
Table A-73: Distance to Water Source by Province and Source, PSLM 2013-14 114
Table A-74: Municipal Solid Waste Disposal System (Transportation) at Selected Cities during 115
Table A-75: Municipal Solid Waste Disposal System (by Number of Employees) at selected cities during 2014 116
Table A-76: Municipal Solid Waste Disposal System (Sanitary Landfill/Dumps) at selected cities during 2014 116
Table A-77: Garbage Collection System from the Household by Province 2013-14 117
Table A-78: Type of Sanitation System Used-by Province, 2007-08 2011-12 118
Table A-79: Summary Report for National Greenhouse Gases (Giga gram), 2008 119
Table A-80: Month Wise Analysis of Air Quality at Shahidra Metro Bus Stop, Lahore- 2014 120
Table A-81: State of Air Quality in Urban Centers of Punjab (From 2008 to Jan 2010) 121
Table A-82: Month wise Analysis of Air Quality at Townhall, Lahore 123
Table A-82: Month wise Analysis of Air Quality at Townhall (F1), Lahore 124
Table A-82: Month wise Analysis of Air Quality at Townhall (F2), Lahore 125
Table A-83: Tide Data off Seashore Karachi 126
Table A-84: Films Released by Language 127
Table A-85: Documentary Films Produced/Released 128
Table A-86: Dramas and Plays Produced/Released 129
Table A-87: Cinemas and Seating Capacity therein by Province 130
Table A-88: Visitors, Type of Attraction, Total Expenditure and Income by Zoo 131

Table A-89: Visitors, Type of Attraction, Total Expenditure and Income by Zoo 132
SECTION - B 133
Environmental Impacts of Socio-Economic Activities and Natural Events 133
Table B-01: Area under Agricultural Crops and Fruits Indices (2001-02=100) 134
Table B-02: Production of Agricultural Crops and Fruits Indices (2001-02=100) 136
Table B-03: Quantity and Value of Export of Major Agricultural Commodities 138
Table B-04: Import of other Agricultural Commodities 140
Table B-05: Import of Edible Oil 141
Table B-06: Import of Milk and Milk Products 142
Table B-07: Import of Fertilizers 143
Table B-08: Import of Wood and Wood Products 143
Table B-09: Export of Crude Oil and Petroleum Products 145
Table B-10: Import of Petroleum Products 146
Table B-11: Import of Crude Oil 147
Table B-12: Import of Coal * 148
Table B-13: Revenue Earned by Forest Department 149
Table B-14: Solid Waste Generation Estimates 150
Table B-15: Physical Composition of Waste 151
Table B-16: Waste Generation Rate and Amount 152
Table- B-17: Results of Chemical Analysis of Water Samples from River Ravi 153
Table- B-17: Results of Chemical Analysis of Water Samples from River Ravi 154
Table B-17: Results of Chemical Analysis of Water Samples from River Sutlej 155
Table B-17: Results of Chemical Analysis of Water Samples from River Sutlej 156
Table B-17: Results of Chemical Analysis of Water Samples from River Chenab 157
Table B-17: Results of Chemical Analysis of Water Samples from River Chenab 158
Table B-17: Results of Chemical Analysis of Water Samples from River Jhelum 159
Table B-17: Results of Chemical Analysis of Water Samples from River Indus 160
Table B-18: Who Installed the Water Delivery System by Province 161
Table B-19: Extent of Water logging and Salinity 162
Table B-20: Summary of Different Types of Pollutants on the Coast of Pakistan, 2010 to 2014 163
Table B-21: Major Natural Disasters in Pakistan 164
Table B-22: Summary of Damages Causes by Awaran Earthquake 2013 164
Table B-23: Total Destroyed and Damaged Housing Units Due to Awaran Earthquake, 2013 165
Table B-24: Total Destroyed and Damaged Health facilities due to Awaran Earthquake, 2013 165
Table B-25: Total Destroyed and Damaged Education Facilities due to Awaran Earthquake, 2013 165
Table B-26: Summary of Roads/Bridges Damaged due to Awaran Earthquake, 2013 165
Table B-27: Preliminary Consolidated State of National Losses/Damages (As on 16 September 2015) 166
Table B-28: Preliminary Consolidated State of National Releif Efforts (As on 16 September 2015) 167
Table B-29: Preliminary Consolidated State of National Rescue Efforts (As on 16 September 2015) 167
SECTION - C 168
Responses to Environmental Impacts 168
C-I Climate 168
C-II Temperature 169
C-III Rain Fall 169
C-IV Pressure and Winds 170
Table C-01: Sunshine Hours at Selected Centres (Percentage of long term average) 171
Table C-02: Temperature at Selected Centres (Mean of Maximum) 172
Table C-03: Rainfall at Selected Centres 181
Table C-04: Air Pressure at Selected Centres 183
Table C-05: Vapour Pressure at Selected Centers 188
Table C-06: Area of Crops Covered by Ground Plant Protection Measures in Pakistan 190
Table C-07: Area Covered by Aerial Plant Protection Operation in Pakistan 190
Table C-08: Area Irrigated by Different Sources 191
Table C-09: River Flow Availability (Kharif and Rabi) 192
Table C-10: Summary of Protected Areas in Pakistan (based on NCCW data) 2014 193
Table C-11: Forest Area (2013-14) 193

Table C-12: Share of Forestry in Value Added of Agriculture Sector 194
Table C-13: Area of Forests by Legal Classification 2013-14 195
Table C-14: Forest Area under the Control of Forest Departments by Types of Vegetation in 2013-14 195
Table C-15: Area Afforested 196
Table C-16: Area Regenerated 197
Table C-17: Quality of Ground Water at Various Locations of Faisalabad during 2014 198
Table C-17: Quality of Ground Water at Various Locations of Faisalabad during 2015 199
Table C-18: Water Quality Monitoring in Rural Areas of Four Districts (Phase-II) (2009-2014)Overall Water Quality Situation of Four Districts and Causes of Contamination 200
Table C-18: Water Quality Status in Rural Areas of Pakistan (Phase-I) (2004-2010) 201
Table C-20: HCFCs Phase out Project Implemented by UNIDO, 2011 to 2015 204
SECTION - D 205
Inventories, Stocks and Background Conditions 205
D-I Education 205
D-II Health 211
D-II.iii Health Manpower 213
D-III Family Planning 214
D-IV Extended Programme of Immunization (EPI) 215
Table D-01 Literacy Rates (10 years & above) by Province, Sex and Area 216
Table D-02: Number of Institutions, Enrollment and Number of Teachers by Sex and Level of Educational Institutions . . 217
Table D-03: Professional Colleges by Type and Sex 221
Table D-04: Teachers in Professional Colleges by Type and Sex 222
Table D-05: Number of Secondary Vocational Institutions by Kind 223
Table D-06: Enrollment in Secondary Vocational Institutions by Kind and Sex 224
Table D-07: Medical Personnel in Pakistan 225
Table D-08: Hospitals, Dispensaries, Maternity & Child Health Centres and Beds 226
Table D-09: Electricity Balances (Public Utilities only) 227
Table D-10: Natural Gas Reserves as on June 30th, 2014 228
Table D-11: Associated Gas Reserves as on 30th June, 2014 232
Table D-12: Pakistan Coal Resources as on 30th June, 2014 233
Table D-13: Bunkering of Petroleum Products 235
Table D-14: Immunization Coverage 236
Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Pakistan 237
Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Balochistan 238
Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Khyber Pakhtunkhwa 239
Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Punjab 240
Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Sindh 241
REGIONAL COMPARISON 242
Table 1: Midyear Population 242
Table 2: Migration and Urbanization 243
Table 3: Agriculture Land Use 244
Table 4: Deforestation and Pollution 245
Table 4: Deforestation and Pollution 246
Table 5: Freshwater Resources 247
Table 6: Energy Production and Imports 248
Table 7: Use of Energy 249
CONCEPTS AND DEFINITIONS 250
ACRONYMS 256

SECTION - A

Socio-economic Activities and Natural Events

As national and international level the environmental problems are mainly caused by a variety of demographic and socio-economic factors viz, population growth, agricultural and industrial development, poverty, etc. Human activities are associated with environment involving continuous exchange and transformation of materials. Man's exploitation of resources without sustainability considerations leads to environmental degradation to the detriment of biosphere.

This section presents data on population growth, housing, Labour force, land utilization, agriculture, large-scale manufacturing, minerals, energy, transport and communication, water quality, noise level, waste generation and disposal, air quality, wave heights and tides and recreation.

A-I Demographic Situation

Average annual growth rate of population calculated based on decennial censuses. 2.45 percent in 1961, peaked to 3.69 % in 1972 and set on declining thereafter to the level of 1.92 percent in 2015 (estimated). Rural growth followed the overall pattern while urban growth has since been declining. However, in line with the expected demographic transition, percentage population share of rural areas has been decreasing while that of urban areas increasing.

Table: A-I Population Distribution, Growth Rates and Percentage Share by Urban and Rural Areas

Year	Population (Million)			Growth Rates			Percentage Share	
	All Areas	Rural Area	Urban Area	All Areas	Rural Area	Urban Area	Rural Area	Urban Area
1951 *	33.75	27.76	5.99	-	-	-	82.25	17.75
1961 *	42.88	33.23	9.65	2.45	1.83	4.94	77.50	22.50
1972 *	65.31	48.72	16.59	3.69	3.35	4.77	74.60	25.40
1981 *	84.25	60.41	23.84	3.06	2.58	4.38	71.70	28.30
1998 *	132.35	89.24	40.01	2.69	2.33	3.53	67.43	32.57
2008	166.41	106.73	59.68	1.73	1.45	3.41	64.14	35.86
2009	169.94	108.08	61.87	2.08	1.26	3.67	63.60	36.40
2010	173.51	109.41	64.09	2.05	1.23	3.59	63.06	36.94
2011	177.10	110.73	66.37	2.03	1.21	3.56	62.52	37.48
2012	180.71	112.02	68.69	2.00	1.16	3.50	61.99	38.01
2013	184.35	113.28	71.07	1.97	1.12	3.46	61.44	38.56
2014	188.02	115.52	72.50	1.95	1.98	2.01	61.44	38.56
2015	191.71	116.52	75.19	1.92	0.86	3.71	60.78	39.22

Source: - * Population Census Organization.
Economic Survery of Pakistan.

Figure: A-1 (a) Population Trends 1951 to 2015

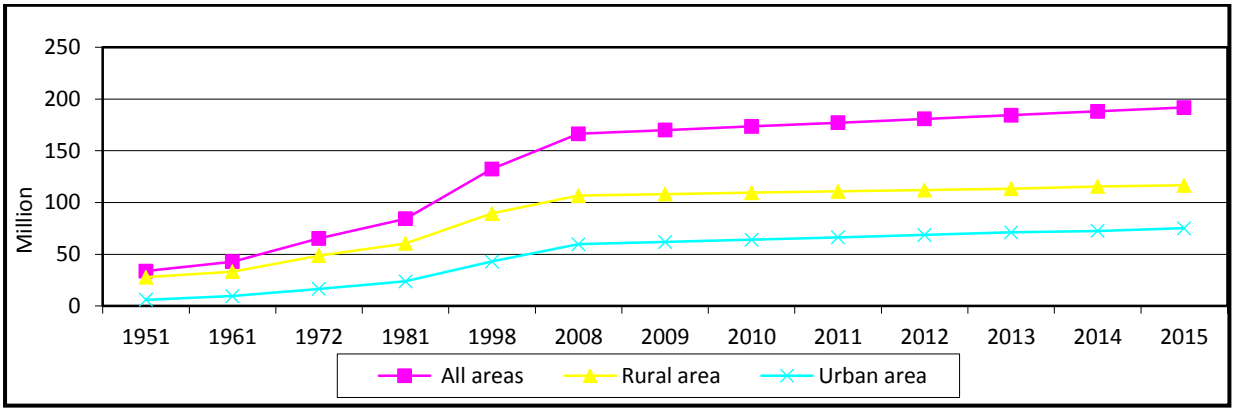
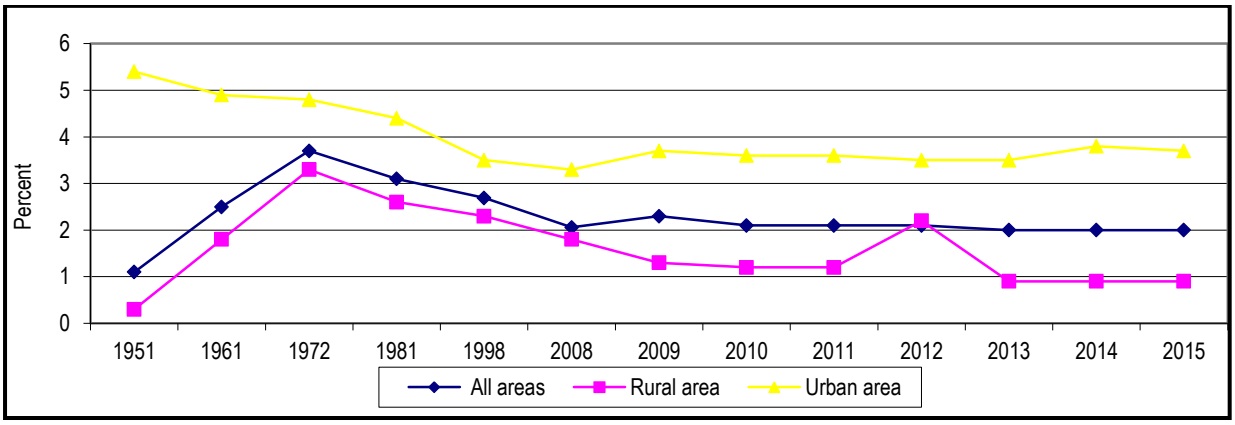


Figure: A-1 (b) Average Annual Growth Rate



Rapid urbanization is one of the foremost hallmarks of the demographic scene of Pakistan. The five most populous cities of Pakistan (Table A-II) add similar numbers during seventeen (17) years span between 1998 and 2015 as were accrue in the duration of seventeen (17) years between 1981 and 1998. As Pakistan's resourcefulness does not concede ample space to prioritize infrastructural development, rapid urbanization is likely to lead to proliferation of slums to the detriment of physical, social and administrative environment of urban localities.

Table: A-II Most Populous Cities, 2015

In Millions

Cities	1981	1998	2010	2015
Karachi	5.21	9.34	13.38	11.62
Lahore	2.95	5.14	7.21	6.31
Faisalabad	1.10	2.01	2.91	2.51
Rawalpindi	0.79	1.41	2.01	1.74
Gujranwala	0.60	1.13	1.67	1.38

Source: - National Institute of Population Studies, Islamabad.

The age composition of country's population has significant implication on the current and future development of the country and it determines the potential for future growth of specific age groups. Therefore, the most important demographic characteristic of a population is its age structure or the proportion of people at each age, by sex. Population of any country can be categorized into three broad

groups. These are children, young and senior citizen. The population the group of children between 0 to 14 years of age is economically unproductive and need family care, playgrounds, education and medical care. They depend upon working population for their necessities. Countries with young population need to invest more in schools colleges and technical institutes.

The young population is considered and asset of a nation. This age structure of a population affects a nation's key socio-economic issues. These people are economically productive and they comprise the working population. Nevertheless, the rapid growth in this group can become employment. However, the government with appropriate polices can utilize this youth bulge for the development of the economy. The senior citizens also belong to dependent group and needs medical facilities and old age benefit system.

It is apparent from the Table A-III that 33 percent population is under the age group of 15 years and 6 percent population is in the age group of 60 years and above in 2015. This 40 percent population is economically dependent and needs food, and medical facilities. Pakistan has a remarkable young age structure and it can be observed from the table that 60 percent population belongs to the age group of working class that is 15-59 years. This dynamic group is the main source to raise the economic growth and can create and opportunity for the country to boost its productive capacity. However, this demographic dividend is dependent on the investment being made in the human development education, training and health.

Table: A-III Population by Selected Age Groups

In Millions

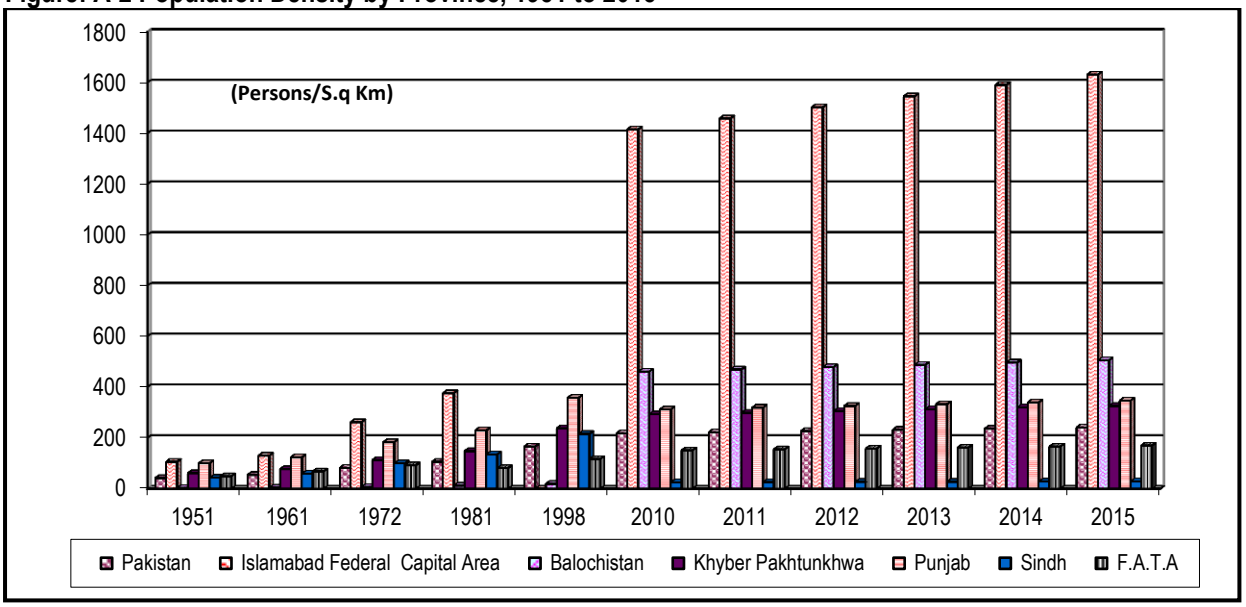
Age Groups	1998	2014	2015	2020	2025	2030
00-04	19.59	22.59	22.76	23.28	22.44	20.35
05-09	20.72	21.10	21.33	22.35	22.95	22.18
10-14	17.14	19.82	20.07	21.24	22.28	22.88
15-19	13.73	20.42	20.12	20.01	21.19	22.24
20-24	11.88	19.31	19.80	20.05	19.95	21.14
25-29	9.76	16.64	17.13	19.71	19.98	19.89
30-34	8.24	14.28	14.72	17.04	19.62	19.91
35-39	6.32	11.97	12.40	14.62	16.94	19.53
40-44	5.89	10.03	10.36	12.27	14.49	16.81
45-49	4.68	8.16	8.49	10.20	12.01	14.31
50-54	4.26	6.65	6.88	8.26	9.95	11.84
55-59	2.86	5.34	5.53	6.57	7.93	9.60
60-64	2.72	4.17	4.31	5.13	6.14	7.45
65+	4.64	7.54	7.82	9.39	11.39	13.93
Total	132.43	188.02	191.72	210.12	227.26	242.06

Source: - National Institute of Population Studies, Planning & Development Division, June 2010 Ibd.

A-I.i Population Density

The country's population density has tripled from 54 in 1961 to 166 persons per sq. kilometer in 1998. It increased to 214 in 2015 (estimated). Population density by province forms a descending sequence of Sindh (326), Punjab (506), Khyber Pakhtunkhwa (347) and Balochistan (29) in 2015(Table A-02 and Figure: A-2).

Figure: A-2 Population Density by Province, 1951 to 2015



A-I.ii Urban-Rural Population Distribution

The urban population increased from 17.8 percent of the total population in 1951 to 39.2 percent in 2015, registering an annual growth rate of 3.7 percent. Rural population increased by 0.9 percent per year during the same period. Thus, share of rural population decreased from 82.2 percent in 1951 to 60.8percent in 2015 In terms of absolute numbers, urban population grew from 5.99 million in 1951 to 75.19 million in 2015 posting 13 times increase in 64 years, while rural population quadrupled. (Table A-I). Arguably, Pakistan is on the way to rapid urbanization.

A-I.iii Global Perspective

United State Population Reference Bureau (PRB) publishes tabulations on world's demographics. According to PRB's estimates-, which appear to be extrapolation of intercensal growth, rate under certain assumptions-Pakistan's average annual growth rate is the 2nd highest (Table A-IV) and ranks sixth among the most populous countries of the world. Previously, Pakistan ranked 10th in 1991, seventh in 1998, and sixth in 2015.

Table: A-IV Ten Most Populous Countries, 2010 and 2050

S. No	Country	Population 2010 (million)	Rate of Natural increase	Population 2015 (millions)	Rate of Natural increase	Projected Population Mid-2050 (millions)
1	China	1,330	0.5	1362	-0.1	1304
2	India	1,173	1.3	1252	0.8	1657
3	USA	310	0.7	321	0.9	439
4	Indonesia	243	1.0	256	0.6	313
5	Brazil	201	0.3	204	0.7	261
6	Pakistan	184	1.6	199	1.0	276
7	Nigeria	152	3.7	182	1.1	264
8	Bangladesh	156	1.6	169	0.9	234
9	Russia	139	0.4	142	-0.8	109
10	Japan	127	0.0	127	-0.9	94

Sources: - (i) 2010 Population Reference Bureau.
(ii) Internet World Start-2015

A-I.iv Fertility

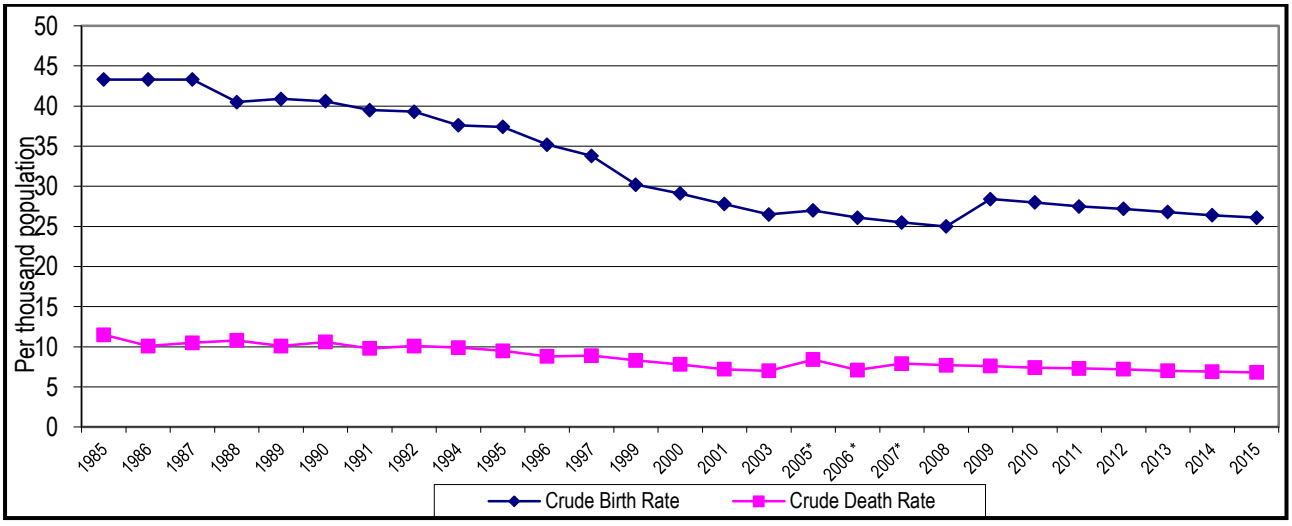
In the absence of vital statistics registration system and consequential inadequacy of data, it is difficult to estimate accurate fertility rates in the country. However, some direct and indirect estimates of fertility under different assumptions have been made through various surveys. One of the major source of such information is the Pakistan Demographic Survey (PDS) from 1985 to 2007 conducted by Federal Bureau of Statistics. This survey indicates decline in total fertility rate (TFR) from an around 7 per woman in 1985 to 3.2 in 2015. Antecedently, the crude birth rate (CBR) declined from 43.3 per thousand population in 1985 to 26.1 percent per thousand population in 2015. (Table A-V). These trends allude to a sort of demographic transition towards sustainable population dynamics.

Table: A-V Crude Birth, Crude Death and Total Fertility Rates

Year	Crude Birth Rate(Per 1000 Population)	Crude Death Rate (Per 1000 Population)	Rate of Natural Increase (%)	Total Fertility Rate (per Woman)
1985	43.30	11.5	3.2	7.0
1986	43.30	10.1	3.3	6.9
1987	43.30	10.5	3.3	6.9
1988	40.50	10.8	3.0	6.5
1989	40.90	10.1	3.1	6.4
1990	40.60	10.6	3.0	6.2
1991	39.50	9.8	3.0	6.0
1992	39.30	10.1	2.9	5.8
1994	37.60	9.9	2.8	5.6
1995	37.40	9.5	2.8	5.6
1996	35.20	8.8	2.6	5.5
1997	33.80	8.9	2.5	5.0
1999	30.20	8.3	2.2	4.5
2000	29.10	7.8	2.1	4.3
2001	27.80	7.2	2.0	4.1
2003	26.50	7.0	2.1	3.9
2005*	27.00	8.4	1.9	3.5
2006 *	26.10	7.1	1.8	3.3
2007*	25.50	7.9	1.8	3.9
2008	25.00	7.7	1.7	3.8
2009	28.40	7.6	2.1	3.7
2010	28.00	7.4	2.0	3.6
2011	27.50	7.3	2.0	3.5
2012	27.20	7.2	2.0	3.4
2013	26.80	7.0	2.0	3.3
2014	26.40	6.9	1.9	3.2
2015	26.10	6.8	1.9	3.2

Source: - Pakistan Demographic Survey PBS.
* Planning & Development Division.

Figure: A-3 Crude Birth Rate and Crude Death Rate



A-I.v Mortality

Crude death rate (CDR) provides an overall picture of the level of mortality in the country. CDR declined from eleven (12) per thousand in 1985 to seven (7) in 2015 during a span of thirty (30) years (Table-V). Better health facilities, improved nutrition and introduction of vaccination programme are some of the prime factors to have resulted in the decline of mortality rate.

A-I.vi Infant Mortality Rate

Infant mortality rate (IMR) is an important indicator of health situation in a country. Pakistan has been having very high infant mortality rate. IMR was 102.4 per thousand live births in 1991 declined to 64.6 per thousand live births in 2015. However, it is still high (Table A-VI) as compared to other developing countries.

A-I.vii Life Expectancy

Expectancy of life at birth is an important indicator of survivability. In the absence of vital statistics registration system, the adequate data on age specific deaths are not available. Pakistan Demographic Survey, conducted by Pakistan Bureau of Statistics, compiles such information on sample basis. Table below presents life expectancy at birth by sex. It indicates that expectancy of life at birth, which was 59.30 for male and 60.70 for female in 1991 increased to 65.2 for male and 67.3 for females in 2015. Higher stride in the case of females indicates gravitation towards progressive socio-cultural practices.

Table: A-VI Infant Mortality Rates, and Life Expectancy at Birth, 1991-2015

Years	Infant Mortality Rate	Life Expectancy at Birth (years)	
		Male	Female
1991	102.4	59.30	60.70
1992	100.9	59.30	60.70
1993	100.80	59.30	60.70
1994	101.40	59.30	60.70
1996	85.5	60.31	61.88
1997	84.0	62.76	64.63
1999	81.5	64.00	66.00
2000	79.8	64.00	66.00
2001	77.1	64.70	66.02
2003	76.2	64.70	66.00
2005	76.7	63.59	66.00
2006	76.2	64.67	67.00
2007	75.2	63.55	68.00
2008	70.2	63.0	64.5
2009	73.5	63.3	65.0
2010	72.0	63.6	65.4
2011	70.5	63.9	65.8
2012	69.0	64.3	66.1
2013	67.5	64.6	66.5
2014	66.1	65.9	66.9
2015	64.6	65.2	67.3

Source: - Pakistan Bureau of Statistics.

A-II Housing

As per Population Census and household based Surveys, a "household "or a" housing unit" is defined as a socio-economic unit consisting of individuals who live together whether related to each other or not but sharing the same kitchen. In the context of housing units' deficit at the time of independence due to mass migration, coupled with high population growth, the country has continuously been facing shortages of housing units. Housing stocks during 1960-98 and percentage changes in three censuses by provinces and area.

An analysis of data for the last four housing censuses indicates that the number of housing units, which were about 7.816 million in 1960, increased to 19.211 million in 1998. Thus, housing grew by 2.39 percent per annum during 1960-98, which is about 0.7 percent less than the population growth rate during the period.

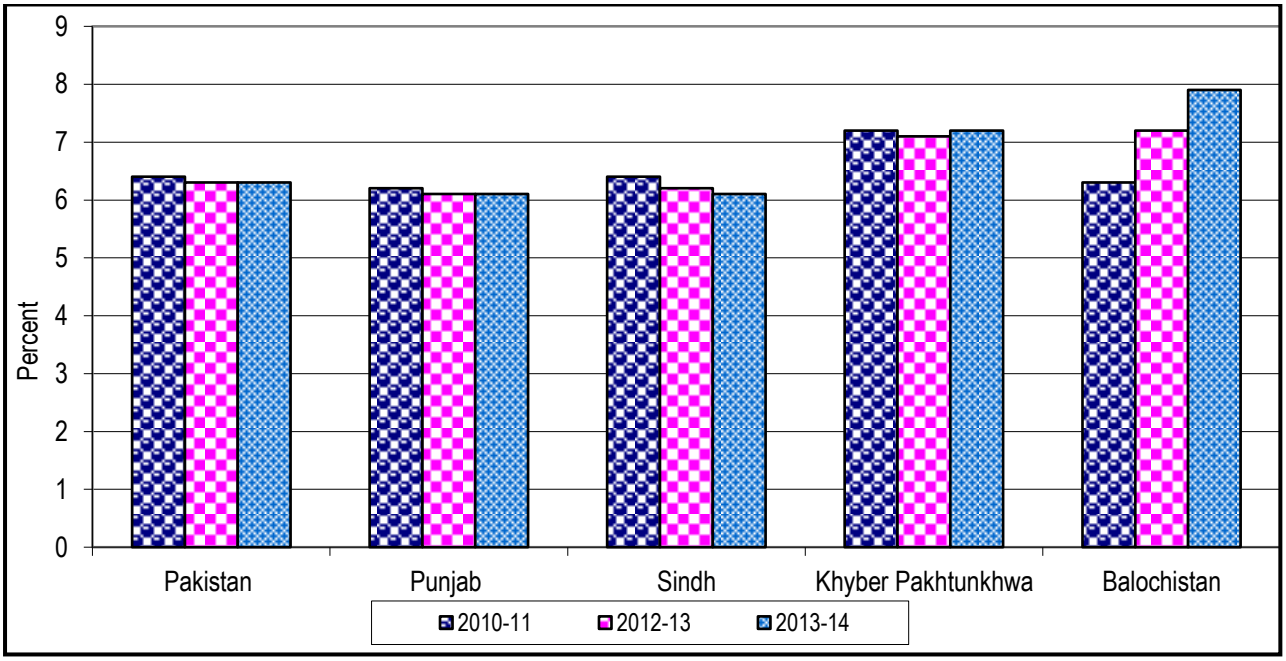
During this period, urban areas of Sindh and Punjab witnessed increase in the construction of housing units while pace of construction in KP and Balochistan remained almost on the same level. As for pressure on housing units, the average household size during 2010-11 to 2013-14 (Table A-VII) remains same; though seem to be relieving in all provinces, except Balochistan.

Table: A-VII Average Household Size by Provinces and Urban/Rural Areas

Area	2010-11	2012-13	2013-14
Pakistan	**6.4**	**6.3**	**6.3**
Urban	6.2	6.0	6.1
Rural	6.5	6.4	6.5
Punjab	**6.2**	**6.1**	**6.1**
Urban	6.2	6.0	6.1
Rural	6.2	6.1	6.2
Sindh	**6.4**	**6.2**	**6.1**
Urban	6.0	5.8	5.8
Rural	6.8	6.6	6.5
Khyber Pakhtunkhwa	**7.2**	**7.1**	**7.2**
Urban	7.2	6.9	7.0
Rural	7.1	7.1	7.2
Balochistan	**6.3**	**7.2**	**7.9**
Urban	6.8	7.2	8.3
Rural	6.2	7.2	7.8

Source: - Pakistan Social and Living Standard Measurement Surveys, PBS.

Figure: A-4: Average Household Size Pakistan and Provinces 2010-11, 2012-13 & 2013-14



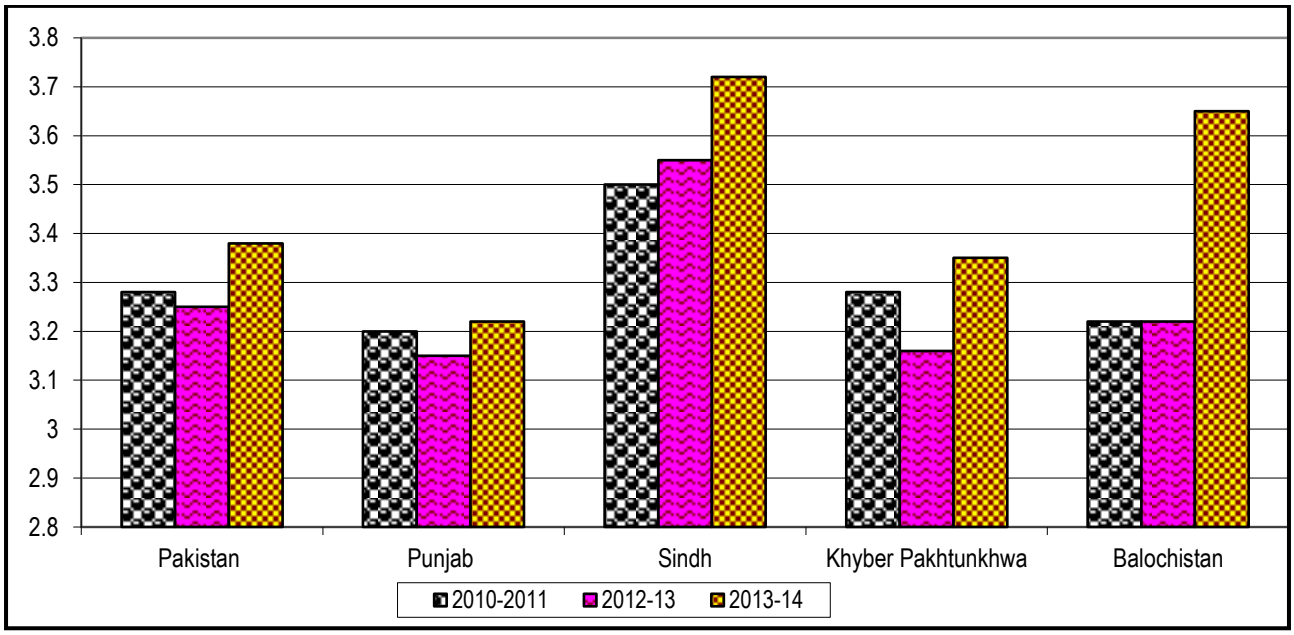
Average number of persons per room does not reflect an enviable situation. However, it seems to be decreasing, more in urban than rural areas. Province wise figures, except in the case of Balochistan, do also indicate gravitation towards lower average number of persons per room (Table A-VIII).

Table: A-VIII Average Number of Persons per Room by Provinces and Urban/Rural Areas

Area	2010-2011	2012-13	2013-14
Pakistan	**3.28**	**3.25**	**3.38**
Urban	2.96	2.93	3.06
Rural	3.45	3.42	3.57
Punjab	**3.20**	**3.15**	**3.22**
Urban	3.03	2.98	3.04
Rural	3.28	3.23	3.31
Sindh	**3.50**	**3.55**	**3.72**
Urban	2.83	2.83	3.06
Rural	4.20	4.35	4.46
Khyber Pakhtunkhwa	**3.28**	**3.16**	**3.35**
Urban	3.17	3.03	3.10
Rural	3.30	3.18	3.40
Balochistan	**3.22**	**3.22**	**3.65**
Urban	2.75	3.00	3.28
Rural	3.36	3.29	3.78

Source: - Pakistan Social and Living Standard Measurement Survey, PBS.

Figure: A.5: Average Number of persons per Room 2010-11, 2012-13 & 2013-14



There were 25 percent one-roomed, 39 percent two roomed, 36 percent three or more roomed housing units in 2010-11. The share of all but the foremost category increased in 2013-14, across the areas generally. As for share of population, 20.59 percent were residing in one room housing units in 2010-11, 38.71 percent in two roomed and about 40.7 percent in three roomed or more. The share of all but the foremost category increased in 2013-14, across the areas generally (Table A-IX).

Table: A-IX Percentage Distribution of the Housing Units and the Population by Number of Rooms per Unit by Urban-Rural Areas, Pakistan

Area/year	Total	Percent Distribution of Housing units by Number of Rooms Per Housing Unit					Percent Distribution of the Population by Number of Rooms Per Housing Unit				
		1	2	3	4	5+	1	2	3	4	5+
Pakistan											
2010-11	100.0	24.8	39.7	20.1	9.5	5.8	20.59	38.71	21.65	11.29	7.76
2012-13	100.0	25.7	38.7	20.2	9.5	5.9	21.14	37.77	21.77	11.25	8.08
2013-14	100.0	29.1	37.5	19.3	8.6	5.4	23.73	36.6	21.19	1063	7.84
Urban											
2010-11	100.0	19.2	37.7	23.9	11.7	7.6	16.23	35.74	25.11	13.36	9.56
2012-13	100.0	20.6	38.7	23.5	10.6	6.6	17.14	37.13	24.79	12.04	8.89
2013-14	100.0	23.6	38.5	22.9	9.6	5.5	19.15	36.59	24.66	11.82	7.78
Rural											
2010-11	100.0	27.7	40.8	18.1	8.4	5.0	22.75	40.18	19.94	10.26	6.87
2012-13	100.0	28.4	38.7	18.4	9.0	5.5	23.13	38.09	20.25	10.85	7.68
2013-14	100.0	32.3	37.0	17.3	8.0	5.4	26.20	36.6	19.33	9.99	7.88

Source: - Pakistan Social and Living Standard Measurement Survey, PBS.

Figure: A-6 (b) Percentage Distribution of Population by No. of Rooms per Housing Units Pakistan 2010-11, 2012-13 & 2013-14

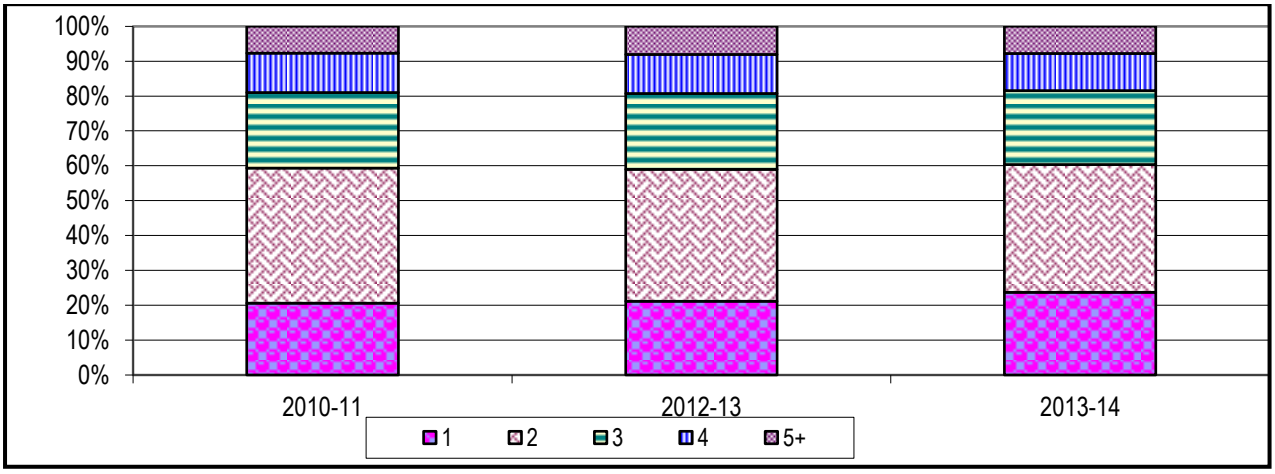
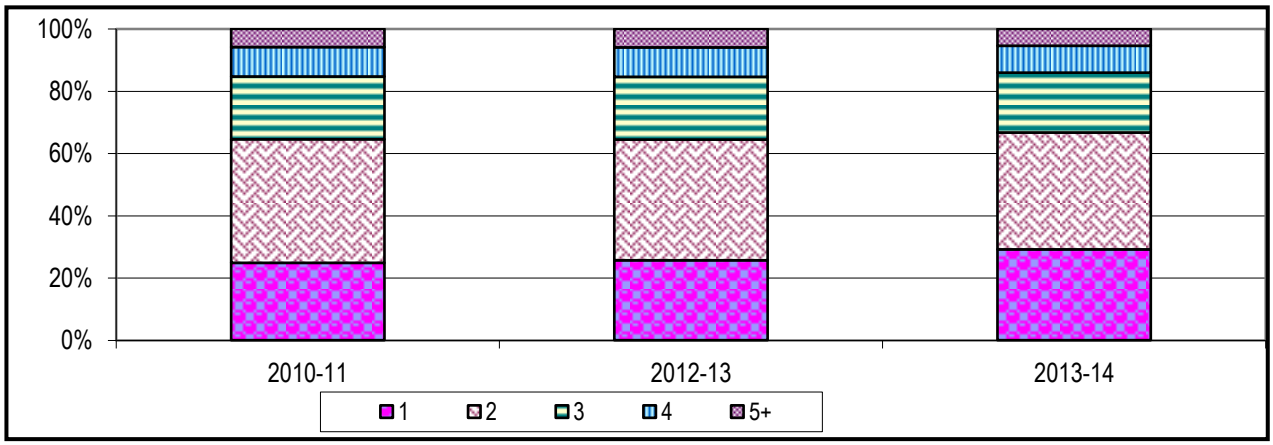


Figure: A-6 Percent Distribution of Housing Unites by Number of Rooms per Unit Pakistan 2010-11, 2012-13 & 2013-14



A-II.i Housing Units by Lighting Facilities

According to Pakistan Social & Living Standards Measurement (PSLM) Survey, 91.37 percent of the housing units had electricity facilities in 2010-11 and it increased to 93.22 percent in 2012-13, whereas about 7.28 percent of the households were using Gas and oil for lighting in 2010-11, their share decreased to about 4.96 percent in 2012-13. A comparison of data by urban-rural areas shows that 98.33 percent of the housing units in urban areas have electricity facilities in 2012-13 while 90.49 percent of rural housing units have electricity facilities in 2012-13 (Table A-12).

A-II.ii Housing Units by Type of Cooking Fuel Used

Analysis of data suggests that 47.47 percent of housing units were using wood as cooking fuel in 2010-11, which decreased to 45.20 percent in 2012-13. About 35.42 percent of the households were using Gas and oil as cooking fuel in 2010-11, which increased to 38.31 percent in 2012-13, (Table A-13).

A-II.iii Housing Units by Water Facilities

An important basic need for the population is the access to safe drinking water. In 2011-12 only 29 percent housing units had access to tap water either available inside or outside the housing unit while, about 60 percent of the households were using ground water i.e. either hand pumps or well, and the remaining 11 percent were using water from ponds, springs, rivers and streams (Table A-14).

Analysis by area shows that about 58 percent of the urban population had access to tap water either inside or outside of the housing units in 2011-12 while, the share of such category increased to 52 percent in 2013-14. The situation in rural areas was worst where only 14 percent of the rural housing units had facilities of safe tap water in 2011-12, which was 11 percent in 2013-14. Whereas about 74 percent of rural housing units were using ground water in 2011-12 which increased to 75 percent in 2013-14 whereas, about 8 percent were using water for drinking purposes either from ponds, springs, rivers and streams the share of which decreased to 10 percent in 2013-14 (Table A-14).

A-II.iv Housing Units with Latrine Facilities

According to (PSLM) survey, about 72 percent of the households had flush facility in their toilets, 10 percent were without flush and 18 percent of the households had no latrine facility in their housing units in 2011-12. The area wise analysis indicates that 97 percent of the urban household had flush system in their toilets in 2011-12, which increased to 98 percent in 2013-14. While 2 percent had no flush facility decreased to, 1 percent and 1 percent of the urban household did not have toilet facility in the housing units in 2011-12, which decreased to 1 percent. The situation in rural areas has improved more as compared to urban areas and it increased from 58 percent in 2011-12 to 61 percent 2013-14.The overall situation has also improved in 2013-14 and the percentage of housing units having flush facility in their toilets increased to 74 percent (A-15).

A-III Labour Force

The economically active population or Labour Force is the group of persons who produce goods and services to meet the requirement of the society. In Pakistan, labour force has defined as all persons ten years of age and above who are working or looking for work for cash or kind, one week prior to the date of enumeration. The labour force participation rate in Pakistan is comparatively low mainly due to low participation of female in the labour force. There may be several explanations for this however; few are stated as early age marriages, strong social and cultural influence on free movement of women and absence of an organized labour market. The main sources of labour force and employment statistics are decennial Population Census and Labour Force Survey conducted by Pakistan Bureau of Statistics on annual basis. According to the latest available Labour Force Survey, 2013-14, about 45.5 percent of the

total population was in the civilian labour force. The analysis of data of last 32 years indicates that the total Civilian Labour Force that was 27.57 in 1981 increased to 45.5 in 2013-14. There was not much difference in the urban-rural labour force participation rates, according to 2013-14 Labour Force Survey, about 39.0 percent of the urban population (10 years and above) was in civilian labour force as against 49.2 percent for rural areas. The percentage of un-employed was 2.71 in 2013-14. The urban unemployment rate was slightly lower as compared to that of rural areas (Table A-16 to19).

A-IV Land Utilization

Pakistan has 79.61 million hectares of land of which 57.99 million hectares (73%) have been surveyed and reported. Of the total reported area, only 39 percent was cropped area till 2013-14. The cropped area registered same during 1999-00 to 2013-14 last 15 years. In the face of increasing population, it is imperative to employ all means to increase agricultural productivity including as well the expansion of area under cultivation.

The net area sown during 2013-14 was 70 percent of the total cultivated area. About 7.33 million hectares of areas was shown more than once during 2013-14 (Table A-20). The analysis of data shows that Area sown more than once is continuously increasing since 1999-00. The share of “Area sown more than once" was about 32 percent of the total cropped area during 2013-14. This is an encouraging trend, and amounts to substantial expansion in productive capacity to the benefit of attaining food security.

A-V Agriculture

A-V.i Area under Agriculture Crops

The largest segment of the cultivated area (9.199 million hectares) went to wheat crop during 2013-14 followed by Rice (2.789 million hectares), Cotton (2.806 million hectares), Gram (0-.950 million hectares), Maize (1.169 million hectares), Sugarcane (1.173 million hectares) and various types of fruits like, Mango, Apple, Guava, Citrus Fruits, Bananas, Grapes and Dates (0.776 million hectares). An analysis of data for last 14 years regarding area under agricultural crops indicates fluctuating trends for different crops, however, shows increasing trend for some of the major crops like wheat, cotton, rice and fruits like bananas, apples and dates (Table A-21).

A-V.ii Production of Agriculture Crops

The wheat is foremost of the major crops in terms of area and production. Production of wheat during 2013-14 was 25.979 million tones as against 118.226 million in 2001-02. The rice production was 3.882 million tons in 2001-02, which increased to 6.798 million tons in 2013-14. Like area under cultivation, production of various important crops also indicates fluctuating trends during 2001-02 to 2013-14. This may be attributed more too natural than economic causes. However, there was significant increase in the production of major crops during 2013-14 as compared to 2001-02 (Table A-22).

A-VI Water

Pakistan has entered into the 21st century with rising challenge to meet food and fiber requirements for its population for domestic consumption and export. Water in Pakistan is becoming scarce, while major parts of conventional resources have already been developed.

In order to meet the needs of water and sanitation, food and fiber, industry and environmental protection, concerted efforts are required to develop the requisite resources with futuristic considerations. Achieving sustainable development will, thus be a major challenge and conservation and optimum utilization of available resources will undoubtedly be one of the most critical considerations in this regard.

River flows: Pakistan is one of the very few countries in the world whose water resources entirely depend upon one river system- the Indus Basin. Although, in addition to the Indus River System, the Kharan Closed Desert Basin and the Mekran Coastal Basin located in Balochistan have some development potential but it constitutes less than three percent of the total surface water.

Of the total available annual flow of 145MAF in the Indus Basin, 105MAF has already being used through 19 barrages with 45 canal systems above and below rim stations. Average annual escapades below the Kotri Barrage going to the sea are 35MAF. Flow below Kotri provides an indication of the available potential since it is the result of all enroute inflows, outflows, gains and losses of the system. In order to develop and utilize the surplus flows, some provision has to be made for minimum flow below Kotri to meet daily requirements of drinking, cultivation of riverine area, forests etc., and occasional needs for pallah fish, mangroves and to check the saltwater intrusion.

It would be pertinent to reiterate that the yield of our crops is lower than the world average in spite of favourable combination of land and agro-climatic environments. The primary reason for it is inadequate availability of water at critical times during the crop growth. The problem of already-restricted supplies is being compounded by the continuous silting-up of the existing reservoirs, which had initially provided some flexibility in meeting the demand-based water needs of crops.

Rainfall Harvesting Monsoon and westerly disturbances are two main weather systems that contribute to the rainfall in Pakistan. The average annual rainfall is 291mm (11.4 inches). Nearly two-third is received in the Kharif (summer), while the rest in the Rabi (winter). During the three Monsoon months (July to September), almost half of the rainfall is received.

While a substantial portion of the rainfall occurring in the cultivated areas of the Indus Plain is consumed by crops as a consumptive use, in the foothill areas of Pakistan rainfall gives rise to flashy hill torrents, and major portion of the flow goes waste, in the form of evaporation. From the development point of view the potential of flows in hill torrent, Pakistan can be divided in to 13 major regions:

The hill torrents bring in flashy floods of short durations but of high magnitudes. Due to steep gradients, flood flows move with enormous velocity which results in the erosion of banks and bed of channels. Flood flows debauching onto the plain areas are generally charged with high silt contents, which preclude their management, by dams or reservoirs. As the flood flows traverse the flatter areas, they rapidly deposit their silt load because of reduction in velocity. Silting and scouring phenomena are largely responsible for frequent changes in flow regime and shifting of flow paths of hill torrents that are typical of geological young “fans”. Unpredictable and erratic nature of floods and high silt contents thus pose a serious challenge to the ingenuity of water planners and engineers for their economic management.

Presently, a major part of hill torrent runoff not only goes waste but also causes untold miseries further aggravating conditions in the areas, which are grossly underdeveloped. A rational planning of the existing water resources can ensure a systematic agriculture to lay the foundation for the socio-economic uplift. The conservation of flows of various hill torrent areas also conforms with the overall national planning for bringing additional areas under cultivation so as to produce more food, besides, improving the socio-economic conditions of the local population.

The total development potential of hill torrents is about 17MAF of which 5MAF has already been conserved through the construction of more than 500 structural interventions such as delay action dams, reservoirs, dispersion/diversion structures, flood retraining walls, etc. Thus, gross balance development potential is about 12 MAF for which 1,204 sites have been identified in 13 major hill torrent areas, with financial requirements of about Rs. 40 billion.

Glaciers and snow: Glacial area of the Upper Indus is around 22,500 sq. km, where on an average three to four meters of snowfall occurs every year. The Upper Indus catchments contains some of the largest glaciers in the world outside the Polar Regions. Glacier area of the Kabul River is located near Unai Pass of the Southern Hindukush, while glacial and snowmelt area of Chenab and Jhelum Rivers are located in the Occupied Jammu and Kashmir. The right bank tributaries of Jhelum River i.e., Kunhar and Neelum rivers carry major share of the snow melt, primarily, situated in Pakistan or along the Line of Control. Glaciers and snowmelt contribution is 85 percent in the case of Indus,80 percent for Kabul,75 percent for Chenab and slightly over 50 percent for Jhelum River.

It is estimated that the total volume of water stored in the glacial area of Indus river is about 340 MAF, while the volume of water stored in glacial zed area of Kabul, Chenab and Jhelum Rivers is 300 MAF. The yearly contribution of flow at rim stations as a result of melting of snow and ice is over 110 MAF. The formation and melting of snow and ice in the glacial area, is in a state of equilibrium. It must not be disturbed to get additional water benefits during drought conditions by resorting, to otherwise, highly tempting artificial techniques. If equilibrium is upset, the sustainability will be destroyed leading to disastrous consequences. Accordingly, no additional development potential is considered available from this valuable resource.

Groundwater: The readily available groundwater resources of Pakistan have played an increasingly important role in meeting the country's food and fiber requirements. Groundwater now supplies around 45 percent of crop water requirements in the country. The reservoirs underlying the Indus Plains are an inherent offshoot of the canal system, and are of immeasurable value in poverty alleviation in Pakistan. Ground water use permits farmers to exercise a greater control over the available water and results in timely application of water for crops. This has transformed the concept of low and uncertain crop yields to more secure and predictable form of crop production. Even away from the Indus Plains in the highland areas of Balochistan and North West Frontier Province, ground water has been crucial in supporting the agricultural sector. It is therefore, imperative that long-term sustainability of groundwater, as a resource, is maintained to ensure the growing food requirements of the country.

From the point of view of availability of groundwater, the country can be divided into two major areas, the predominantly canal irrigated Indus Plain primarily located in Punjab and Sindh, and the areas of the KP and Balochistan with a limited groundwater development potential in a few localized areas.

During the last 30 years or so, spectacular increase in the number of private tube wells has changed the underground paradigm entirely. In several groundwater areas, there has been a complete Volta face. Where some years ago high groundwater was a major threat, water levels have now declined due to private tube wells development. However, the pace at which the groundwater exploitation has unfolded has added complexity of its management. The number of users is over 2.5 million farmers, who extract groundwater through their own tube wells or buy water from their neighbours. Their behavioral patterns are highly variable and they understand little about any adverse interaction, which is likely to result due to unsystematic and erratic nature of groundwater pumping. Their major interest is to pump ever more water to meet the rising crop water requirements. In many regions, the impact on the groundwater resources is alarming; levels are declining rapidly to infeasible pumping depths, and there is intrusion of saline water in the fresh groundwater areas through lateral or upward movement.

Existing number of private tube wells in Pakistan is over 700,000 and annual groundwater extraction through private tube wells under the normal hydro-climatic conditions is of the order of 42 MAF.

The province wise sustainable development potential is:

Province	(MAF) Sustainable potential
Punjab	36
Sindh	8*
KP	2
Balochistan	2

* Potential can be further increased to about 14 MAF (65 per cent of annual recharge) by using latest state-of-the –art-techniques.

Development potential and requirements: Remaining development potential of water resources is approaching a stage where complex factors involved, require fine-tuning to permit sustainability. Surface-water resources have some potential for development that are not fully exploited, while groundwater sources require system controls and a regulatory body to permit private operations to enhance production. Pakistan is facing increasing water needs, by growing population, increased urbanization, higher standards of living and by an agricultural policy which has emphasized on expanded production for future.

The development potential of the three water resources of Pakistan is summarized as:

Resource	(MAF) Development Potential
River flows	22
Rainfall harvesting (hill torrents)	12
Ground water:	
	a) 6
	b) 12*

* Under ultimate conditions, with the latest state-of-the-art techniques.

It has been estimated that the population of Pakistan will be around 221 million by the year-2025. In order to meet water requirements across various sector by the year 2025 i.e., agriculture, water supply/sanitation, industry etc., the country would need additional water to the tune of 20 MAF at the farm gate for agriculture and 8 MAF for other sectors. Agriculture requirements are based on the assumption of 50 percent increase in the yields of crops with non-water uses, like better seeds, fertilizers pesticides and better agronomic practices for which potential of 300 percent exists in Pakistan, (Dawn Economic & Business Review, July 12-18, 2004 by Sabir Ali Bhatti)

Agricultural development in Pakistan is affected by two main constraints, suitable soil and water, particularly the latter one. There are two major sources of water supply in the country i.e. surface water and ground water. The main source of surface water is Indus Basin. The share of surface water is higher than the ground water towards the total availability of water. Moreover, the surface water availability during Kharif Season is higher than Rabi.

Year wise breakdown Table A-24 indicates that about 56.3% in kharif and 31.0% in Rabi requirement for 2013-14 of water availability at form gate met with surface water while remaining requirements are met with ground water by means of public and private tube wells. The overall surface water 134.78% was available during the year 2003-04 and the overall ground water 50.02% was available at form gate during 2003-04.

A-VI.i Tube wells

Tube wells are the source of ground water supply in the country and contribute about 34 percent of total water availability in 2008-09. There were about 707 thousand tube wells in the country in 2001-02,

which increased to 1315 thousand in 2013-14, at an average annual growth rate of about 4.9 percent. As for share by province, Punjab accounts 78.0 percent of the total tube wells installed in the country during 2013-14, followed by Balouchistan (3.2 percent), Khyber Pakhtunkhwa (1.2 percent) and Sindh (17.5 percent). (Table A-23).

A-VII Livestock

A-VII.i Livestock Population

Livestock accounts for 25 to 30 percent of the GDP in agriculture sector and about 12-15 percent of the total export earnings. Besides, this sector also provide animals for land cultivation, land leveling and transportation, especially in the rural areas. (Rukhnuddin, 1988).

Analysis of data on livestock population for the period 2007-08 to 2013-14 indicates increase in various categories of animals. The number of buffalos which were 29.0 million in 2007-08 increased to 34.6 million in 2013-14, with 2.5% annual growth. The population of goats and sheep was higher as compared to other animals. The population of goats increased by 2.3 percent per year while the population of sheep increased by 1.0 percent per year during the same period (Table A-29).

A-VII.ii Livestock Products

The major livestock products are beef butter, mutton, poultry meat, milk and eggs. The beef production registered about 22.0 percent increase in last 6 years. From 1548 thousand tonnes in 2007-08 it increased to 1888 thousand tones in 2013-14. The mutton production registered increase (14.0 %) from 578 thousand tones in 2007-08 to 657 thousand tones in 2013-14.

The milk is the major food item in Pakistan widely used for preparation of tea, sweets, butter and yogurt as well as for drinking purposes. The production of milk increased by 50% from 34.0 million tons in 2007-08 to 51.0 million tons in 2013-14 (Table A-30).

Poultry meat is also in high demand due to higher prices of beef and mutton since last few years. The poultry farming has increased considerably during the early 1991-92. The production for poultry meat surged by 64% from 601 thousand tones in 2007-08 to 987 thousand tones in 2013-14 during last 6 years. Eggs production was 10711 million in 2007-08 increase to 14556 million in 2013-14 during the same period by 36% (Table A-30).

A-VIII Forestry

Forests play important role in the ecological and economic life. Pakistan with one of the lowest forest area in the world is rank 113 among 140 countries. About 20-25 percent of the total land, area is the desired level for the forest. In the public sector, the government has taken various initiatives for increasing the forest area in the country. Notwithstanding frequent, tree plantation campaigns, natural events like flood, landslides and erosion and man-made like excessive grazing, deforestation due to reliance on wood as major fuel source and wanton falling of trees by timber mafia have taken their excessive pound of flesh and as such, forest cover has not witnessed appreciable expansion. Besides, million Afghan refugees together with their herds of sheep and goats in different areas have also taken the big toll of the diminishing forest cover. (Rukhnuddin, 1988).

A-IX Transportation

Smoke that comes out of industrial units, houses, motor cars and other vehicular traffic contains gases like carbon dioxide, carbon monoxide, oxides of Sulphur, nitrogen and carbon particles etc. All

such compound and particles are injurious to health. The gases used as coolant in air conditioners, refrigerators and similar devices cause extremely harmful changes in the upper atmosphere, where they are believe to be decreasing the thickness of the Ozone layer, which normally protects human and other living organisms from the injurious sunrays. If this process goes on unchecked, it will prove disastrous for environment and living organisms.

Transportation plays vital role in the development of the country, Railway tracks, roads and high ways are essential for economic development. However, the transport in cities and major urban Centre is threat to the environment. The air pollution due to transport in large cities like Karachi, Lahore, Faisalabad, Peshawar, Quetta and Rawalpindi has considerably increased during the recent years. The vehicular emission of hydrocarbons, baldheads, carbon monoxide, Sulphur dioxide and nitrogen oxides are dangerous pollutants to human health, causing bronchitis, irritation, asthma attacks and irritate the eyes, arise primarily through vehicles emission in the urban areas (PNCS-94).

Analysis of transport statistics indicates that Pakistan has about 8 thousand route kilometers of railway in 2008-09. The railway route kilometers almost remained the same during last 27 years i.e. 1987-2014. However, there was decline in number of passengers, in 2013-14 as compared to 2002-03. The passenger traveled through railways in 2002-03 (about 72.4 million) declined by 46% and to 38.68 million in 2013-14. Similarly, there is decline in freight handling during this period, mainly due to improved high ways, construction of Motor Way etc. Further, due to better transportation system by roads, people prefer to travel through buses, which are more comfortable and time saving as compared to trains (Table A-63).

The road length which was about 252 thousand km in 2002-03 increased by 5% to 264 thousand in 2013-14. The average annual growth in length during 2002-03 to 2013-14 was 0.4 percent whereas the length of high type roads during the same period increased about 21 percent (Table A-63).

Total registered vehicles during 1996 were 3.838 million, which increased by 295 percent during 19 years period to 15.168 million in 2014. There were about 114 thousand registered buses in 1996 and the number of buses increased to about 223 thousand in 2014. There were only 54 thousand taxis in the country in 1996 increased to 224 thousand in 2014. Of the total registered 224 thousand buses, only 145.0 thousand were on road in 2014. Despite considerable increase in the number of buses, taxis, motor rickshaws and wagons, the urban population is still facing the transport problem. The high population growth along with rapid urbanization has caused serious traffic problems in major cities (Table A-64 & A-65). The analysis of transport data indicates increasing trends in almost all sorts of vehicles to the rising detriment of the environment.

Table A-01: Population of Pakistan by Region/Province, Land Area and Percentage Distribution, 1951 to 1998 Censuses

Region/Province	Area Sq. km	Population (In thousand)				
		1951	1961	1972	1981	1998
Pakistan	796096	33740	42880	65309	84254	132352
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Islamabad	906	96	118	238	340	805
	(0.1)	(0.3)	(0.3)	(0.4)	(0.4)	(0.6)
Balochistan	347190	1167	1353	2429	4332	6566
	(43.6)	(3.5)	(3.2)	(3.7)	(5.1)	(5.0)
Khyber Pakhtunkhwa	74521	4557	5731	8389	11061	17744
	(9.4)	(13.5)	(13.4)	(12.8)	(13.1)	(13.4)
Punjab	205345	20541	25464	37607	47292	73621
	(25.8)	(60.9)	(59.4)	(57.6)	(56.1)	(55.6)
Sindh	140914	6048	8367	14156	19029	30440
	(17.7)	(17.9)	(19.5)	(21.7)	(22.6)	(23.0)
FATA	27220	1332	1847	2491	2199	3176
	(3.4)	(3.9)	(4.3)	(3.8)	(2.6)	(2.4)

Source: - Population Census Organization
Note: - Percentage distribution is given in parenthesis

Table A-01-a: Population of Pakistan by Region/Province, Land Area and Percentage Distribution 2010-2015

Region/Province	Area Sq. km	Population					
		2010	2011	2012	2013	2014	2015
Pakistan	796096	173509	177095	180711	184349	188019	191708
	(100.00)	(100.00)	(100.00)	(100.00	(100.00)	(100)	(100)
Islamabad	906	1283	1322	1362	1401	1441	1479
	(0.1)	(0.7)	(0.7)	(0.8)	(0.8)	(0.8)	(0.8)
Punjab	205344	94745	96545	98355	100174	102005	103837
	(25.8)	(54.6)	(54.5)	(54.4)	(54.3)	(54. 3)	(54.2)
Sindh	140914	41248	42188	43132	44080	45032	45988
	(17.7)	(23.8)	(23.8)	(23.9)	(23.9)	(24.0)	(24.0)
Khyber Pakhtunkhwa	74521	23273	23770	24277	24788	25308	25836
	(9.4)	(13.4)	(13.4)	(13.4)	(13.4)	(13.5)	(13.5)
Balochistan	347190	8853	9064	9278	9495	9717	9942
	(43.6)	(5.1)	(5.1)	(5.1)	(5.2)	(5.2)	(5.2)
FATA	27220	4107	4206	4307	4410	4516	4623
	(3.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)

Source: National Institute of Population Studies (NIPS Islamabad (Projection).
Note:- Percentage distribution is given in parenthesis

Table A-02: Population Density by Region/Province, 1951 to 1998 Censuses

(Persons/Sq. Km.)

Region / Province	1951	1961	1972	1981	1998
Pakistan	42	54	82	106	166
Islamabad Federal Capital Area	106	130	262	376	889
Balochistan	3	4	7	12	19
Khyber Pakhtunkhwa	61	77	113	148	238
Punjab	100	124	183	230	358
Sindh	43	59	100	135	216
F.A.T.A	49	68	92	81	117

Source:- Population Census Organization

Table A-02-a: Population Density by Region/Province, 2010-2015

(Persons/Sq. Km.)

Region/Province	2010	2011	2012	2013	2014	2015
Pakistan	218	222	227	232	236	241
Islamabad	1416	1459	1503	1546	1591	1632
Punjab	461	470	479	488	497	506
Sindh	293	299	306	313	320	326
Khyber Pakhtunkhwa	312	319	326	333	340	347
Balochistan	25	26	27	27	28	29
FATA	151	155	158	162	166	170

Source: National Institute of Population Studies (NIPS Islamabad (Projection).

Table A-03: Percentage Distribution of Population (10 years and over) by Marital Status Pakistan and Provinces, 2013-14

Region/Province	Marital status				
	Total	Never Married	Married	Widow/ Widower	Divorced
Pakistan					
Both Sexes	100.00	43.35	52.59	3.79	0.27
Male	100.00	48.26	49.33	2.18	0.23
Female	100.00	38.30	55.94	5.44	0.32
Balochistan					
Both Sexes	100.00	42.71	55.65	1.60	0.04
Male	100.00	49.74	49.61	0.60	0.05
Female	100.00	33.91	63.21	2.85	0.03
Khyber Pakhtunkhwa					
Both Sexes	100.00	44.72	51.71	3.49	0.08
Male	100.00	52.11	46.24	1.60	0.05
Female	100.00	37.65	56.92	5.30	0.12
Punjab					
Both Sexes	100.00	42.70	52.52	4.36	0.92
Male	100.00	46.68	50.12	2.83	0.37
Female	100.00	38.77	54.88	5.88	0.47
Sindh					
Both Sexes	100.00	44.26	52.56	3.11	0.08
Male	100.00	49.41	49.10	1.44	0.05
Female	100.00	38.45	56.46	4.99	0.10

Source:- Labour Force 2013-14, PBS

Table A-04: Population (10 years and above) by Age, Sex and Literacy 2013-14

Age group (Years)	Population			Literates		
	Both sexes	Male	Female	Both sexes	Male	Female
10 & above	132238283	67064521	65173762	79322507	47808178	31514329
10-14	23699462	12678764	11020698	17973945	10323403	7650542
15-19	20756561	10905191	9851370	15509695	8880559.8	6629135
20-24	16741334	8046905	8694429	11355304	6333258.4	5022045
25-29	13529071	6196998	7332073	8153535	4528984	3624551
30-34	11125894	5213257	5912638	6417050	3808720	2608330
35-39	9936385	4761808	5174577	5237727	3291220	1946507
40-44	8639994	4246057	4393936	4096143	2734840	1361304
45-49	8049124	4197859	3851265	3535528	2500373	1035155
50-54	5844881	3085314	2759568	2411969	1747940	664029
55-59	4569233	2451742	2117491	1780841	1348596	432244
60 & above	9346344	5280626	4065718	2850770	2310284	540486

Age group (Years)	Literacy Ratio		
	Both sexes	Male	Female
10 & above	59.98	71.29	48.35
10-14	75.84	81.42	69.42
15-19	74.72	81.43	67.29
20-24	67.83	78.70	57.76
25-29	60.27	73.08	49.43
30-34	57.68	73.06	44.11
35-39	52.71	69.12	37.62
40-44	47.41	64.41	30.98
45-49	43.92	59.56	26.88
50-54	41.27	56.65	24.06
55-59	38.97	55.01	20.41
60 & above	30.50	43.75	13.29

Source :- Labour Force Surve-2013-14 PBS

Table A-05: Percentage Distribution of Total Population and That of 10 Years Age and Over by Age, Sex, Area and Nature of Activities, 2013-14

Age Groups (Years)	Total Population			Civilian Labour Force			Out of Labour Force		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Areas									
Total (All ages)	100.00	51.04	48.96	32.28	24.52	7.76	67.72	26.52	41.20
10 years & above	100.00	50.71	49.29	45.45	34.52	10.92	54.55	16.19	38.36
10-14	17.92	9.59	8.33	1.91	1.21	0.70	16.01	8.38	7.64
15-19	15.70	8.25	7.45	5.54	4.10	1.44	10.16	4.15	6.01
20-24	12.66	6.09	6.57	6.62	4.97	1.65	62.04	1.11	4.92
25-29	10.23	4.69	5.54	5.94	4.50	1.44	4.29	0.19	4.10
30-34	8.41	3.94	4.47	5.08	3.87	1.22	3.33	0.08	3.25
35-39	7.51	3.60	3.91	4.69	3.53	1.15	2.83	0.07	2.76
40-44	6.53	3.21	3.32	4.17	3.15	1.02	2.37	0.06	2.30
45-49	6.09	3.17	2.91	3.95	3.11	0.84	2.14	0.07	2.07
50-54	4.42	2.33	2.09	2.87	2.25	0.62	1.55	0.09	1.46
55-59	3.46	1.85	1.60	2.16	1.72	0.44	1.29	0.13	1.16
60 -64	2.69	1.47	1.22	1.36	1.13	0.24	1.33	0.35	0.98
65 years & above	4.38	2.52	1.86	1.16	1.00	0.15	3.22	1.51	1.70
Rural									
Total (All ages)	100.00	50.74	49.26	33.84	23.93	9.90	66.16	26.81	39.36
10 years & above	100.00	50.18	49.82	49.19	34.79	14.40	50.81	15.39	35.42
10-14	18.81	10.09	8.71	2.54	1.49	1.05	16.27	8.60	7.67
15-19	15.73	8.30	7.43	6.51	4.56	1.96	9.21	3.74	5.47
20-24	12.09	5.58	6.51	6.87	4.84	2.03	5.22	0.74	4.48
25-29	10.09	4.48	5.60	6.15	4.33	1.82	3.93	0.15	3.78
30-34	8.27	3.83	4.44	35.36	3.76	1.60	2.91	0.07	2.85
35-39	7.42	3.49	3.94	4.95	3.43	1.52	2.48	0.06	2.42
40-44	6.32	3.01	3.31	4.32	2.96	1.35	2.00	0.05	1.95
45-49	5.94	3.05	2.89	4.11	3.00	1.12	1.83	0.05	1.77
50-54	4.37	2.27	2.09	3.03	2.21	0.82	1.34	0.06	1.27
55-59	3.43	1.80	1.63	2.33	1.72	0.61	1.11	0.08	1.02
60 -64	2.77	1.53	1.24	1.61	1.28	0.33	1.16	0.25	0.91
65 years & above	4.77	2.75	2.02	1.41	1.20	0.21	3.36	1.55	1.81
Urban									
Total (All ages)	100.00	50.97	49.03	30.78	25.81	4.97	69.22	25.16	44.07
10 years & above	100.00	50.81	49.19	40.36	33.85	6.51	59.64	16.96	42.68
10-14	16.40	8.01	7.41	0.84	0.70	0.15	14.58	7.32	7.26
15-19	15.64	8.08	7.54	4.14	3.40	0.74	11.48	4.68	6.80
20-24	13.65	7.05	7.14	6.66	5.39	1.27	7.53	1.66	5.87
25-29	10.48	5.00	5.76	5.79	4.72	1.07	4.98	0.29	4.69
30-34	8.65	4.12	4.19	4.75	4.02	0.73	3.56	0.10	3.46
35-39	7.67	3.54	3.78	4.09	3.42	0.67	3.24	0.12	3.11
40-44	6.90	3.29	3.37	3.77	3.17	0.60	2.89	0.12	2.78
45-49	6.34	3.56	3.17	3.96	3.44	0.52	2.76	0.11	2.65
50-54	4.51	2.39	2.16	2.61	2.25	0.36	1.94	0.14	1.80
55-59	3.50	1.85	1.59	1.79	1.57	0.22	1.65	0.27	1.37
60 -64	2.55	1.41	1.19	1.03	0.92	0.11	1.57	0.49	1.08
65 years & above	3.71	2.50	1.89	0.93	0.84	0.09	3.46	1.66	1.80

Source: Labour Force Survey, 2013-14, PBS

Table A-06: Population (15 years and above) by Age groups, Sex and Marital Status for Urban and Rural Areas, 2013-14

All Areas

Age Group (Years)	Sex	Marital Status				
		Total	Never married	Married	Widowed	Divorced
15 and above	Both Sexes	108538821	33720962	69459245	5005448	353166
	Male	54385757	19732513	33046145	1459007	148091
	Female	54153065	13988448	36413100	3546441	205075
15-19	Both Sexes	20756561	19257079	1488788	6277	4416
	Male	10905191	10599979	302343	876	1994
	Female	9851370	8657100	1186445	5401	2423
20-24	Both Sexes	16741334	9835034	6833982	26834	45484
	Male	8046905	6022320	2001352	12083	11150
	Female	8694429	3812714	4832630	14751	34334
25-29	Both Sexes	13529071	3159327	10278358	45510	45876
	Male	6196998	2146626	4022336	10014	18023
	Female	7332073	1012702	6256023	35497	27852
30-34	Both Sexes	11125894	830233	10153165	91310	51186
	Male	5213257	562155	4603817	30915	16370
	Female	5912638	268078	5549348	60395	34816
35-39	Both Sexes	9936385	257223	9479730	146998	52434
	Male	4761808	180421	4520573	32762	28053
	Female	5174577	76802	4959158	114236	24381
40-44	Both Sexes	8639994	142370	8219632	244765	33226
	Male	4246057	81503	4094901	59213	10440
	Female	4393936	60867	4124731	185553	22786
45-49	Both Sexes	8049124	78010	7507324	419331	44459
	Male	4197859	42584	4050585	87401	17289
	Female	3851265	35426	3456739	331930	27170
50-54	Both Sexes	5844881	49879	5262339	505521	27142
	Male	3085314	26119	2924244	120366	14584
	Female	2759568	23759	2338095	385155	12558
55-59	Both Sexes	4569233	29499	3883947	634884	20903
	Male	2451742	18446	2283124	138795	11378
	Female	2117491	11053	1600823	496090	9525
60 and above	Both Sexes	9346344	82308	6351978	2884016	28041
	Male	5280626	52361	4242870	966584	18811
	Female	4065718	29947	2109108	1917432	9230

Contd…

Table A-06: Population (15 years and above) by Age groups, Sex and Marital Status for Urban and Rural Areas, 2013-14

Urban Areas

Age Group (Years)	Sex	Marital Status				
		Total	Never married	Married	Widowed	Divorced
15 and above	Both Sexes	40648205	14140637	24565546	1821554	120468
	Male	20863658	8255773	12067340	480872	59674
	Female	19784546	5884864	12498206	1340682	60794
15-19	Both Sexes	7606427	7278225	323201	3408	1593
	Male	3968588	3915528	51749	876	435
	Female	3637839	3362697	271452	2532	1158
20-24	Both Sexes	6635204	4593780	2019760	7873	13790
	Male	3381581	2790892	582430	4693	3566
	Female	3253623	1802889	1437330	3180	10224
25-29	Both Sexes	5095216	1566938	3492734	18216	17329
	Male	2448695	1062995	1375794	2690	7216
	Female	2646521	503943	2116940	15525	10113
30-34	Both Sexes	4207195	435398	3719903	33159	18735
	Male	2011031	312635	1681967	10377	6053
	Female	2196164	122763	2037936	22782	12682
35-39	Both Sexes	3728504	133678	3519348	58897	16581
	Male	1844936	96558	1727064	11916	9399
	Female	1883567	37120	1792284	46981	7182
40-44	Both Sexes	3357106	56552	3188620	98728	13206
	Male	1727988	34922	1664276	22499	6292
	Female	1629118	21630	1524344	76229	6914
45-49	Both Sexes	3082456	26857	2859545	180757	15296
	Male	1648331	12094	1593106	34627	8504
	Female	1434125	14764	1266439	146130	6793
50-54	Both Sexes	2193557	14199	1972412	200816	6130
	Male	1184977	9716	1122679	48700	3881
	Female	1008580	4482	849733	152116	2249
55-59	Both Sexes	1700360	11713	1427343	251807	9497
	Male	948285	6790	878369	56448	6678
	Female	752075	4923	548974	195359	2819
60 and above	Both Sexes	3042181	23296	2042681	967893	8311
	Male	1699246	13643	1389906	288046	7651
	Female	1342934	9653	652774	679847	660

Contd…

Table A-06: Population (15 years and above) by Age groups, Sex and Marital Status for Urban and Rural Areas, 2013-14

Rural Areas

Age Group (Years)	Sex	Marital Status				
		Total	Never married	Married	Widowed	Divorced
15 and above	Both Sexes	67890617	19580325	44893699	3183894	232699
	Male	33522098	11476740	20978805	978135	88417
	Female	34368518	8103585	23914894	2205758	144281
15-19	Both Sexes	13150134	11978854	1165587	2869	2824
	Male	6936603	6684451	250593	0	1559
	Female	6213531	5294403	914994	2869	1265
20-24	Both Sexes	10106130	5241254	4814221	18961	31694
	Male	4665324	3231428	1418922	7390	7584
	Female	5440806	2009826	3395299	11571	24110
25-29	Both Sexes	8433855	1592389	6785624	27294	28547
	Male	3748303	1083631	2646542	7323	10807
	Female	4685552	508758	4139083	19971	17740
30-34	Both Sexes	6918699	394835	6433262	58151	32451
	Male	3202225	249520	2921850	20538	10318
	Female	3716474	145315	3511412	37613	22133
35-39	Both Sexes	6207881	123545	5960383	88101	35853
	Male	2916872	83863	2793509	20846	18654
	Female	3291009	39682	3166873	67255	17199
40-44	Both Sexes	5282888	85818	5031013	146037	20020
	Male	2518069	46581	2430625	36714	4149
	Female	2764819	39237	2600387	109323	15871
45-49	Both Sexes	4966669	51153	4647779	238574	29163
	Male	2549528	30490	2457479	52774	8785
	Female	2417140	20662	2190300	185800	20378
50-54	Both Sexes	3651325	35680	3289928	304705	21012
	Male	1900337	16403	1801566	71666	10702
	Female	1750988	19277	1488362	233039	10310
55-59	Both Sexes	2868873	17785	2456605	383077	11406
	Male	1503457	11655	1404755	82347	4700
	Female	1365416	6130	1051849	300731	6706
60 and above	Both Sexes	6304163	59012	4309298	1916123	19730
	Male	3581379	38717	2852964	678538	11160
	Female	2722784	20295	1456334	1237585	8570

Source:- Labour Force Survey 2013-14, PBS

Table A-07: Employed Population (10 years and above) by Major Occupation, Sex, Broad Age Group and Rural/Urban Areas 2013-14

All Area

Occupation group	Total Employed population	Less than 25 Years			25-59 Years		
		Male	Female	Both Sexes	Male	Female	Both Sexes
	1	2	3	4	5	6	7
All Occupations	56515349	12171276	4421684	16592959	28495555	8329108	36824663
Managers	936196	70267	318	70584	776577	37138	813715
Professionals	2571555	167774	235305	403079	1540648	541996	2082644
Technicians and Associate professionals	1579125	215816	26187	242003	1153431	124279	1277710
Clerical Support workers	856868	122079	8903	130982	691787	19649	711436
Service and sale workers	9098525	2368071	67858	2435929	5962236	209232	6171468
Skilled agricultural Forestry and fishery workers	21385631	4020522	2624901	6645423	7693056	5287536	12980591
Craft and related trade warders	7967954	2069771	680390	2750161	4112000	854744	4966744
Plant and machine operator	3378312	832214	17901	850116	2432705	27274	2459979
Elementary occupations	8741184	2304761	759921	3064682	4133115	1227260	5360375

Occupation group	*60 Years and above*		
	Male	Female	Both Sexes
	8	9	10
All Occupations	2664709	433019	3097727
Managers	50646	1250	51896
Professionals	81281	4551	85832
Technicians and Associate professionals	57721	1691	59412
Clerical Support workers	14450	0	14450
Service and sale workers	476414	14713	491128
Skilled agricultural Forestry and fishery workers	1446042	313573	1759616
Craft and related trade warders	235963	15086	251049
Plant and machine operator	65865	2352	68217
Elementary occupations	236325	79802	316127

Contd...

Table A-07: Employed Population (10 years and above) by Major Occupation, Sex, Broad Age Group and Rural/Urban Areas 2013-14

Urban Area

Occupation group	Total Employed population	Less than 25 Years			25-59 Years		
		Male	Female	Both Sexes	Male	Female	Both Sexes
	1	2	3	4	5	6	7
All Occupations	17445043	3837512	591867	4429378	10986494	1302524	12289017
Managers	679183	36223	0	36223	580176	28760	608936
Professionals	1427691	76784	138807	215591	791740	360654	1152394
Technicians and Associate professionals	946336	130976	18443	149420	709020	47713	756733
Clerical Support workers	605182	84953	7348	92301	487317	16790	504107
Service and sale workers	5066344	1316094	42981	1359075	3341051	105366	3446417
Skilled agricultural Forestry and fishery workers	873610	140683	61979	202662	430954	134326	565280
Craft and related trade warders	3810379	1002153	211747	1213900	2174445	323714	2498159
Plant and machine operator	1611954	383487	10032	393519	1160762	20122	1180883
Elementary occupations	2424364	666159	100528	766687	1311029	265079	1576108

Occupation group	60 Years and above		
	Male	Female	Both Sexes
	8	9	10
All Occupations	679980	46667	726647
Managers	32774	1250	34024
Professionals	55520	4186	59707
Technicians and Associate professionals	39500	683	40183
Clerical Support workers	8774	0	8774
Service and sale workers	256833	4019	260852
Skilled agricultural Forestry and fishery workers	96259	9409	105668
Craft and related trade warders	96016	2303	98319
Plant and machine operator	36608	944	37552
Elementary occupations	57697	23872	81569

Contd…

Table A-07: Employed Population (10 years and above) by Major Occupation, Sex, Broad Age Group and Rural/Urban Areas 2013-14

Rural Area

Occupation group	Total Employed population	Less than 25 Years			25-59 Years		
		Male	Female	Both Sexes	Male	Female	Both Sexes
	1	2	3	4	5	6	7
All Occupations	39070307	8333764	3829817	12163581	17509061	7026585	24535645
Managers	257013	34044	318	34361	196401	8379	204779
Professionals	1143864	90991	96498	187488	748908	181342	930250
Technicians and Associate professionals	632789	84840	7743	92583	444411	76566	520977
Clerical Support workers	251686	37126	1555	38681	204470	2859	207329
Service and sale workers	4032181	1051977	24876	1076853	2621185	103866	2725052
Skilled agricultural Forestry and fishery workers	20512021	3879840	2562922	6442762	7262101	5153210	12415311
Craft and related trade warders	4157575	1067618	468643	1536261	1937555	531029	2468584
Plant and machine operator	1766358	448727	7870	456597	1271943	7152	1279096
Elementary occupations	6316820	1638602	659393	2297994	2822087	962181	3784267

Occupation group	60 Years and above		
	Male	Female	Both Sexes
	8	9	10
All Occupations	1984728	386352	2371080
Managers	17872	0	17872
Professionals	25761	364	26125
Technicians and Associate professionals	18221	1008	19229
Clerical Support workers	5677	0	5677
Service and sale workers	219582	10694	230276
Skilled agricultural Forestry and fishery workers	1349784	304164	1653948
Craft and related trade warders	139947	12782	152729
Plant and machine operator	29257	1408	30666
Elementary occupations	178628	55930	234558

Source:- Labour Force Survey-2013-14, PBS

Table A-08: Working Population (10 years and above) by Industry Status, Sex, Broad Age Group, All Areas 2013-14

Major Industry Division	Total Employed population	Less than 25 Years			25-59 Years		
		Male	Female	Both Sexes	Male	Female	Both Sexes
Total employed persons	56515349	12171276	4421684	16592959	28495555	8329108	36824663
Agriculture, forestry and fishing	24572506	4611359	3251219	7862579	8662032	6142092	14804124
Mining and quarrying	111955	38501	318	38819	69806	0	69806
Manufacturing	8006729	2055184	712300	2767484	4102575	895795	4998370
Electricity, gas steam and air condition supply	0	0	0	0	0	0	0
Water supply, Sewerage, Waste management & remediation activity	441002	51351	730	52081	371848	9385	381233
Construction	4142999	1298121	18937	1317058	2674653	22161	2696813
Wholesale & retail trade, repair of motor vehicles, motorcycles	8242079	2274731	40790	2315520	5322346	149512	5471857
Transport, storage	2832474	649615	7824	657439	2096901	8925	2105826
Accommodation and food services activities	888311	312049	7337	319386	518904	14806	533710
Information and Communication	251024	50003	791	50794	194486	3647	198133
Financial and insurance activities real estate activities	267680	32106	614	32720	224981	7964	232945
Professional scientific and technical activities	430975	42390	918	43308	344938	10877	355815
Administrative and support service activities,	281926	51133	1640	52773	212008	1647	213656
Pubic Administration and defence compulsory social security education	0	0	0	0	0	0	0
Human health and social work activities	4117468	321834	246196	568030	2762127	711465	3473593
Arts, Entertainment & recreation	91443	22279	1373	23652	57534	3819	61353
Other services activities	1188168	322999	37278	360278	692563	66495	759058
Activities of households as employers & undifferentiated goods & services producing activities of household for own use activities extraterritorial organizations and bodies	648612	37620	93419	131039	187854	280519	468373

Major Industry Division	60 Years and above		
	Male	Female	Both Sexes
Total employed persons	2664709	433019	3097727
Agriculture, forestry and fishing	1544206	361597	1905803
Mining and quarrying	3330	0	3330
Manufacturing	221155	19720	240875
Electricity, gas steam and air condition supply	0	0	0
Water supply, Sewerage, Waste management & remediation activity	7689	0	7689
Construction	127527	1601	129127
Wholesale & retail trade, repair of motor vehicles, motorcycles	438246	16455	454701
Transport, storage	69209	0	69209
Accommodation and food services activities	34336	879	35215
Information and Communication	2097	0	2097
Financial and insurance activities real estate activities	2015	0	2015
Professional scientific and technical activities	30218	1634	31852
Administrative and support service activities,	15498	0	15498
Pubic Administration and defence compulsory social security education	0	0	0
Human health and social work activities	66684	9162	75846
Arts, Entertainment & recreation	6437	0	6437
Other services activities	67772	1060	68832
Activities of households as employers & undifferentiated goods & services producing activities of household for own use activities extraterritorial organizations and bodies	28290	20911	49200

Contd..

Table A-08: Working Population (10 years and above) by Industry Status, Sex, Broad Age Group, Urban Areas 2013-14

Major Industry Division	Total Employed population	Less than 25 Years			25-59 Years		
		Male	Female	Both Sexes	Male	Female	Both Sexes
Total employed persons	17445043	3837512	591867	4429378	10986494	1302524	12289017
Agriculture, forestry and fishing	998177	187913	71368	259281	471763	155196	626959
Mining and quarrying	13429	1567	0	1567	11593	0	11593
Manufacturing	4225901	1060219	234262	1294481	2455155	356499	2811654
Electricity, gas steam and air condition supply	0	0	0	0	0	0	0
Water supply, Sewerage, Waste management & remediation activity	263735	24832	730	25562	223942	9073	233015
Construction	1364961	378945	8381	387326	927732	6860	934591
Wholesale & retail trade, repair of motor vehicles, motorcycles	4800303	1317349	27293	1344642	3139340	68023	3207363
Transport, storage	1218429	253901	2908	256809	933153	4311	937464
Accommodation and food services activities	528169	181955	6267	188221	313630	8326	321957
Information and Communication	191417	41344	791	42135	144299	3647	147945
Financial and insurance activities real estate activities	204857	22440	0	22440	174187	7964	182151
Professional scientific and technical activities	290134	27408	918	28326	229607	8308	237915
Administrative and support service activities,	176887	32654	1317	33971	131226	0	131226
Pubic Administration and defence compulsory social security education	0	0	0	0	0	0	0
Human health and social work activities	2181428	143573	154074	297647	1386736	443000	1829737
Arts, Entertainment & recreation	39205	9128	0	9128	25449	0	25449
Other services activities	513024	129883	17854	147737	291302	47250	338552
Activities of households as employers & undifferentiated goods & services producing activities of household for own use activities extraterritorial organizations and bodies	434986	24401	65705	90106	127380	184068	311448

Major Industry Division	60 Years and above		
	Male	Female	Both Sexes
Total employed persons	679980	46667	726647
Agriculture, forestry and fishing	102529	9409	111938
Mining and quarrying	270	0	270
Manufacturing	114274	5492	119766
Electricity, gas steam and air condition supply	0	0	0
Water supply, Sewerage, Waste management & remediation activity	5158	0	5158
Construction	43043	0	43043
Wholesale & retail trade, repair of motor vehicles, motorcycles	242370	5928	248298
Transport, storage	24157	0	24157
Accommodation and food services activities	17280	712	17991
Information and Communication	1337	0	1337
Financial and insurance activities real estate activities	266	0	266
Professional scientific and technical activities	22260	1634	23894
Administrative and support service activities,	11691	0	11691
Pubic Administration and defence compulsory social security education	0	0	0
Human health and social work activities	47521	6523	54043
Arts, Entertainment & recreation	4628	0	4628
Other services activities	25675	1060	26735
Activities of households as employers & undifferentiated goods & services producing activities of household for own use activities extraterritorial organizations and bodies	17523	15909	33432

Contd..

Table A-08: Working Population (10 years and above) by Industry Status, Sex, Broad Age Group, Rural Areas 2013-14

Major Industry Division	Total Employed population	Less than 25 Years			25-59 Years		
		Male	Female	Both Sexes	Male	Female	Both Sexes
Total employed persons	39070307	8333764	3829817	12163581	17509061	7026585	24535645
Agriculture, forestry and fishing	23574329	4423446	3179852	7603298	8190269	5986896	14177165
Mining and quarrying	98525	36935	318	37252	58213	0	58213
Manufacturing	3780828	994965	478038	1473003	1647420	539296	2186716
Electricity, gas steam and air condition supply	0	0	0	0	0	0	0
Water supply, Sewerage, Waste management & remediation activity	177267	26519	0	26519	147905	312	148217
Construction	2778039	919175	10557	929732	1746921	15301	1762222
Wholesale & retail trade, repair of motor vehicles, motorcycles	3441776	957382	13496	970878	2183006	81489	2264495
Transport, storage	1614044	395714	4916	400630	1163747	4615	1168362
Accommodation and food services activities	360141	130094	1070	131164	205274	6479	211753
Information and Communication	59606	8659	0	8659	50187	0	50187
Financial and insurance activities real estate activities	62823	9666	614	10280	50794	0	50794
Professional scientific and technical activities	140841	14982	0	14982	115332	2569	117900
Administrative and support service activities,	105039	18480	322	18802	80782	1647	82430
Pubic Administration and defence compulsory social security education	0	0	0	0	0	0	0
Human health and social work activities	1936041	178260	92122	270383	1375391	268465	1643856
Arts, Entertainment & recreation	52238	13151	1373	14524	32085	3819	35904
Other services activities	675143	193116	19425	212541	401261	19245	420506
Activities of households as employers & undifferentiated goods & services producing activities of household for own use activities extraterritorial organizations and bodies	213626	13219	27715	40933	60474	96451	156925

Major Industry Division	60 Years and above		
	Male	Female	Both Sexes
Total employed persons	1984728	386352	2371080
Agriculture, forestry and fishing	1441677	352188	1793866
Mining and quarrying	3060	0	3060
Manufacturing	106881	14227	121109
Electricity, gas steam and air condition supply	0	0	0
Water supply, Sewerage, Waste management & remediation activity	2531	0	2531
Construction	84484	1601	86085
Wholesale & retail trade, repair of motor vehicles, motorcycles	195876	10527	206403
Transport, storage	45052	0	45052
Accommodation and food services activities	17057	167	17224
Information and Communication	761	0	761
Financial and insurance activities real estate activities	1749	0	1749
Professional scientific and technical activities	7958	0	7958
Administrative and support service activities,	3807	0	3807
Pubic Administration and defence compulsory social security education	0	0	0
Human health and social work activities	19163	2639	21802
Arts, Entertainment & recreation	1809	0	1809
Other services activities	42097	0	42097
Activities of households as employers & undifferentiated goods & services producing activities of household for own use activities extraterritorial organizations and bodies	10766	5002	15768

Source:- Labour Force Survey, 2013-14 PBS

Table A-09: Percentage Distribution of Households by Housing Tenure PSLM, 2012-2013

Region & Province	Households by housing tenure				
	Own	Rent	Free	Subsidized Rent	Total
PSLM 2010-2011					
Pakistan	**85.92**	**6.75**	**5.97**	**1.35**	**100.00**
Punjab	86.25	5.93	6.77	1.05	100.00
Sindh	84.14	9.31	4.55	2.00	100.00
Khyber Pakhtunkhwa	86.55	6.97	4.93	1.55	100.00
Balochistan	88.83	3.79	5.94	1.43	100.00
Urban Areas	**75.72**	**6.75**	**5.97**	**1.35**	**100.00**
Punjab	76.24	15.45	5.50	2.82	100.00
Sindh	75.67	17.66	3.01	3.66	100.00
Khyber Pakhtunkhwa	70.48	22.43	3.87	3.22	100.00
Balochistan	77.61	15.31	2.01	5.07	100.00
Rural Areas	**91.18**	**1.65**	**6.79**	**0.39**	**100.00**
Punjab	90.89	1.65	6.79	0.39	100.00
Sindh	93.15	0.44	6.18	0.23	100.00
Khyber Pakhtunkhwa	89.79	3.85	5.15	1.21	100.00
Balochistan	92.06	0.48	7.08	0.38	100.00
PSLM 2012-2013					
Pakistan	**85.84**	**7.19**	**5.89**	**1.08**	**100.00**
Punjab	86.57	6.33	6.29	0.80	100.00
Sindh	82.48	10.17	5.73	1.62	100.00
Khyber Pakhtunkhwa	87.25	6.50	5.09	1.16	100.00
Balochistan	90.50	4.30	3.50	1.69	100.00
Urban Areas	**75.26**	**17.58**	**4.46**	**2.70**	**100.00**
Punjab	76.27	16.14	5.34	2.25	100.00
Sindh	74.00	19.30	3.66	3.05	100.00
Khyber Pakhtunkhwa	72.03	21.37	2.69	3.90	100.00
Balochistan	78.80	15.21	1.74	4.25	100.00
Rural Areas	**91.49**	**1.64**	**6.65**	**0.22**	**100.00**
Punjab	91.47	1.67	6.75	0.11	100.00
Sindh	91.71	0.23	8.00	0.06	100.00
Khyber Pakhtunkhwa	90.45	3.36	5.59	0.59	100.00
Balochistan	94.24	0.83	4.06	0.87	100.00

Source:- Pakistan Social and Living Standards Measurement Survey 2012-2013 PBS.

Note: Households having the housing tenure indicated expressed as a percentage of the total number of households. Total may not add to 100 because of rounding.

Table A-10: Percentage Distribution of Households by Material Used for Walls PSLM, 2012-2013

Region & Province	Households by Material Used for Walls				
	Burnt Bricks/ Blocks	Mud Bricks/ Mud	Wood/ Bamboo	Other	Total
PSLM 2010-2011					
Pakistan	**72.21**	**21.72**	**1.94**	**4.14**	**100.00**
Punjab	83.00	15.14	0.17	1.69	100.00
Sindh	65.56	27.54	6.03	0.86	100.00
Khyber Pakhtunkhwa	54.38	22.78	1.04	21.80	100.00
Balochistan	22.76	68.15	5.62	3.47	100.00
Urban Areas	**94.53**	**4.78**	**0.24**	**0.45**	**100.00**
Punjab	97.28	2.38	0.09	0.24	100.00
Sindh	94.48	4.95	0.45	0.11	100.00
Khyber Pakhtunkhwa	87.30	9.44	0.18	3.08	100.00
Balochistan	63.33	33.61	0.53	2.53	100.00
Rural Areas	**60.73**	**30.3**	**2.18**	**6.04**	**100.00**
Punjab	76.38	21.05	0.21	2.36	100.00
Sindh	34.82	51.55	11.96	1.66	13.70
Khyber Pakhtunkhwa	47.74	25.47	1.21	25.58	100.00
Balochistan	11.11	78.08	7.08	3.74	100.00
PSLM 2012-2013					
Pakistan	**76.19**	**18.63**	**1.53**	**3.65**	**100.00**
Punjab	86.59	12.28	0.10	1.03	100.00
Sindh	69.22	25.22	5.00	0.56	100.00
Khyber Pakhtunkhwa	57.10	19.90	0.87	22.12	100.00
Balochistan	27.84	65.77	3.55	2.85	100.00
Urban Areas	**95.63**	**3.75**	**0.25**	**0.37**	**100.00**
Punjab	98.05	1.56	0.11	0.27	100.00
Sindh	95.54	3.86	0.44	0.17	100.00
Khyber Pakhtunkhwa	88.83	8.81	0.16	2.20	100.00
Balochistan	66.12	32.26	0.75	0.87	100.00
Rural Areas	**65.80**	**26.59**	**2.22**	**5.40**	**100.00**
Punjab	81.13	17.38	0.10	1.39	100.00
Sindh	40.54	48.49	9.98	0.98	100.00
Khyber Pakhtunkhwa	50.42	22.24	1.02	26.32	100.00
Balochistan	15.64	76.44	4.44	3.48	100.00

Source:- Pakistan Social and Living Standards Measurement Survey, PBS 2012-2013

Note: Categories "Other" consists of stone and anything other than Burnt Bricks/Blocks, Mud Bricks/Mud & wood/Bamboo. Total may not add to 100 because of rounding.

Table A-11: Percentage Distribution of Households by Material Used for Roof PSLM, 2012-2013

Region & Province	Households by Material Used for Roof				
	RCC/ RBC	Wood/ Bamboo	Sheet/ Iron Cement	Other	Total
PSLM 2010-2011					
Pakistan	**27.80**	**36.00**	**6.78**	**29.43**	**100.00**
Punjab	24.91	31.20	4.93	38.96	100.00
Sindh	37.52	32.03	8.67	21.79	100.00
Khyber Pakhtunkhwa	31.48	50.86	10.34	7.32	100.00
Balochistan	7.09	72.71	10.39	9.81	100.00
Urban Areas	**59.53**	**13.02**	**6.42**	**21.03**	**100.00**
Punjab	54.41	15.29	3.42	26.88	100.00
Sindh	69.76	5.57	10.00	14.68	100.00
Khyber Pakhtunkhwa	63.39	25.19	4.95	6.47	100.00
Balochistan	27.10	32.34	20.21	20.35	100.00
Rural Areas	**11.47**	**47.82**	**6.96**	**33.75**	**100.00**
Punjab	11.23	38.57	5.64	44.56	100.00
Sindh	3.25	60.16	7.25	29.34	100.00
Khyber Pakhtunkhwa	25.04	56.04	11.43	7.49	100.00
Balochistan	1.34	84.31	7.57	6.78	100.00
PSLM 2012-2013					
Pakistan	**28.14**	**29.80**	**3.86**	**0.94**	**100.00**
Punjab	25.20	22.66	0.89	1.27	100.00
Sindh	35.10	33.29	7.78	0.34	100.00
Khyber Pakhtunkhwa	35.91	42.17	10.47	0.82	100.00
Balochistan	6.53	72.49	3.32	0.20	100.00
Urban Areas	**58.19**	**40.39**	**3.13**	**1.25**	**100.00**
Punjab	54.61	11.09	0.94	0.60	100.00
Sindh	65.02	4.97	11.88	0.06	100.00
Khyber Pakhtunkhwa	66.52	20.09	3.18	0.35	100.00
Balochistan	23.18	29.29	7.64	0.03	100.00
Rural Areas	**12.08**	**40.39**	**3.13**	**1.25**	**100.00**
Punjab	11.20	28.07	0.87	1.59	100.00
Sindh	2.50	64.12	3.31	0.65	100.00
Khyber Pakhtunkhwa	29.47	46.81	12.00	0.91	100.00
Balochistan	1.22	86.26	1.95	0.26	100.00

Source:- Pakistan Social and Living Standards Measurement Survey, 2012-2013 PBS

Note: RCC/RBC Reinforced Concrete & Cement & RBC is reinforced Bricks & Cement. Other includes any category other than RCC/RBS, Wood/Bamboo, and Sheet/Iron/Cement.
Total may not add to 100 because of rounding.

Table A-12: Percentage Distribution of Households by Fuel Used For Lighting PSLM 2012-2013

Region & Province	Fuel Used for Lighting				
	Electricity	Gas/ Oil	Candle	Other	Total
PSLM 2010-2011					
Pakistan	**91.37**	**7.28**	**0.57**	**0.78**	**100.00**
Punjab	93.05	6.41	0.22	0.31	100.00
Sindh	90.22	7.60	0.98	1.21	100.00
Khyber Pakhtunkhwa	93.44	5.49	0.20	0.87	100.00
Balochistan	72.08	20.33	3.54	4.05	100.00
Urban Areas	**98.08**	**1.80**	**0.06**	**0.06**	**100.00**
Punjab	98.30	1.59	0.07	0.03	100.00
Sindh	97.64	2.23	0.05	0.08	100.00
Khyber Pakhtunkhwa	98.48	1.36	0.02	0.13	100.00
Balochistan	98.42	1.37	0.03	0.18	100.00
Rural Areas	**87.92**	**10.10**	**0.83**	**1.15**	**100.00**
Punjab	90.62	8.65	0.29	0.44	100.00
Sindh	82.32	13.31	1.97	2.40	100.00
Khyber Pakhtunkhwa	92.42	6.33	0.24	1.02	100.00
Balochistan	64.52	25.77	4.55	5.16	100.00
PSLM 2012-2013					
Pakistan	**93.22**	**4.96**	**0.46**	**1.35**	**100.00**
Punjab	95.06	4.00	0.29	0.65	100.00
Sindh	90.85	6.17	0.63	2.35	100.00
Khyber Pakhtunkhwa	93.88	3.76	0.22	2.15	100.00
Balochistan	79.23	15.01	2.70	3.06	100.00
Urban Areas	**98.33**	**4.00**	**0.29**	**0.65**	**100.00**
Punjab	98.39	1.43	0.07	0.12	100.00
Sindh	98.23	1.53	0.04	0.20	100.00
Khyber Pakhtunkhwa	97.88	4.17	0.23	2.57	100.00
Balochistan	99.57	0.38	0.00	0.05	100.00
Rural Areas	**90.49**	**6.48**	**0.68**	**1.99**	**100.00**
Punjab	90.49	6.84	0.68	1.99	100.00
Sindh	82.81	11.22	1.28	4.70	100.00
Khyber Pakhtunkhwa	93.03	4.17	0.23	2.57	100.00
Balochistan	72.76	19.68	3.55	4.01	100.00

Source:- Pakistan Social and Living Standards Measurement Survey, 2012-2013 PBS.
Note: "Other" consists of wood for lighting and other.
Total may not add to 100 because of rounding.

Table A-13: Percentage Distribution of Households by Fuel Used For Cooking PSLM

Region & Province	Fuel Used for Cooking				
	Electricity	Gas/Oil	Wood/ Charcoal	Other	Total
PSLM 2010-2011					
Pakistan	**0.03**	**35.42**	**47.47**	**17.08**	**100.00**
Punjab	0.03	33.01	40.71	26.26	100.00
Sindh	0.03	50.68	44.78	4.51	100.00
Khyber Pakhtunkhwa	0.04	21.62	76.16	2.18	100.00
Balochistan	0.07	27.18	66.48	6.27	100.00
Urban Areas	**0.07**	**82.56**	**14.96**	**2.42**	**100.00**
Punjab	0.07	79.92	16.26	3.74	100.00
Sindh	0.03	89.99	9.34	0.65	100.00
Khyber Pakhtunkhwa	0.16	72.46	26.89	0.59	100.00
Balochistan	00.17	65.44	31.12	3.27	100.00
Rural Areas	**0.02**	**11.16**	**64.20**	**24.62**	**100.00**
Punjab	0.01	11.26	52.04	36.70	100.00
Sindh	0.03	8.91	82.44	8.63	100.00
Khyber Pakhtunkhwa	0.02	11.35	86.10	2.53	100.00
Balochistan	0.04	16.19	76.64	7.13	100.00
PSLM 2012-2013					
Pakistan	**0.04**	**38.31**	**45.20**	**16.45**	**100.00**
Punjab	0.04	36.03	39.68	24.25	100.00
Sindh	0.01	52.84	42.97	4.18	100.00
Khyber Pakhtunkhwa	0.10	26.31	67.39	6.19	100.00
Balochistan	0.11	22.98	68.70	8.21	100.00
Urban Areas	**0.04**	**84.05**	**13.08**	**2.84**	**100.00**
Punjab	0.04	81.11	14.52	4.33	100.00
Sindh	0.01	10.82	81.29	7.88	100.00
Khyber Pakhtunkhwa	0.08	77.69	20.94	1.30	100.00
Balochistan	0.44	61.69	34.29	3.58	100.00
Rural Areas	**0.04**	**13.87**	**62.36**	**23.73**	**100.00**
Punjab	0.03	14.58	51.66	33.73	100.00
Sindh	0.01	10.82	81.29	7.88	100.00
Khyber Pakhtunkhwa	0.11	15.50	77.16	7.22	100.00
Balochistan	0.00	10.65	79.66	9.69	100.00

Source:- Pakistan Social and Living Standards Measurement Survey 2012-2013 PBS

Table A-14: Percentage Distribution of Households by Main Source of Drinking Water- Pakistan and Provinces 2011-2012, 2012-13 & 2013-14

Province and water source	2011-2012 PSLM			2012-2013PSLM			2013-2014 PSLM		
	Urban	Rural	Overall	Urban	Rural	Overall	Urban	Rural	Overall
Pakistan									
Tap Water	58	14	29	56	17	30	52	11	26
Hand Pump	7	42	30	8	37	27	8	41	29
Motor Pump	27	32	30	27	31	30	28	34	32
Dug Well	1	4	3	1	5	3	1	5	3
Others	8	8	8	9	10	9	11	10	10
Total	100	100	100	100	100	100	100	100	100
Balochistan									
Tap Water	80	22	38	80	20	34	*68*	*19*	*32*
Hand Pump	4	19	15	2	8	7	*4*	*9*	*8*
Motor Pump	3	11	9	7	16	14	9	15	13
Dug Well	5	8	7	2	15	14	1	13	10
Others	8	39	31	9	38	31	19	44	36
Total	100	100	100	100	100	100	100	100	100
Khyber Pakhtunkhwa									
Tap Water	55	38	41	62	40	44	49	27	31
Hand Pump	9	13	12	8	13	12	8	15	14
Motor Pump	29	16	18	25	17	18	35	19	22
Dug Well	5	12	11	3	10	8	4	12	11
Others	2	21	18	3	21	18	3	27	23
Total	100	100	100	100	100	100	100	100	100
Punjab									
Tap Water	45	11	22	56	17	22	36	7	17
Hand Pump	7	42	31	8	37	27	9	42	31
Motor Pump	39	43	42	27	31	30	41	48	46
Dug Well	8	2	1	1	5	3	1	1	1
Others	1	3	5	9	10	9	13	2	6
Total	100	100	100	100	100	100	100	100	100
Sindh									
Tap Water	77	6	42	72	11	43	73	8	42
Hand Pump	7	73	39	8	63	34	8	69	37
Motor Pump	11	8	9	10	8	9	10	7	8
Dug Well	0	5	3	1	7	4	1	7	3
Others	6	8	7	8	11	10	10	10	9
Total	100	100	100	100	100	100	100	100	100

Source**:-** Pakistan Social & Living Standards Measurement 2013-14 PBS

Notes: 1. Household obtaining water from the source indicated expressed as a percentage of the total number of households.

2. Categories: "Tap water" consists of both tap water inside and outside house. "Hand pump" includes hand pumps both inside and outside. "Motor pump" includes motor pump and tube well outside the house; "Dug well" includes well open and well closed both inside and outside the house; and "Other" includes public standpipe (supplied by tanker), water sell, canal, river, spring, stream, pond and other.

3. Total may not add to 100 because of rounding.

Table A-15: Percentage Distribution of Housing Units by Type of Toilet Used and Urban/Rural

Province and Sanitation System	2011-2012 PSLM			2012-2013 PSLM			2013-2014 PSLM		
	Urban	Rural	Overall	Urban	Rural	Overall	Urban	Rural	Overall
Pakistan									
Flush	97	58	72	97	57	71	98	61	74
Non-Flush	2	14	10	2	20	14	1	13	9
No Toilet	1	27	18	1	22	15	1	26	17
Total	100	100	100	100	100	100	100	100	100
Balochistan									
Flush	78	22	37	80	14	30	82	25	39
Non-Flush	17	33	29	19	66	55	17	41	34
No Toilet	4	46	35	1	20	15	1	35	26
Total	100	100	100	100	100	100	100	100	100
Khyber Pakhtunkhwa									
Flush	91	66	71	96	66	71	95	68	73
Non-Flush	3	16	14	2	18	15	4	10	9
No Toilet	2	18	15	2	16	13	1	22	18
Total	100	100	100	100	100	100	100	100	100
Punjab									
Flush	98	69	78	98	57	71	99	73	81
Non-Flush	1	3	2	1	6	5	0	1	1
No Toilet	1	29	20	2	26	18	1	26	18
Total	100	100	100	100	100	100	100	100	100
Sindh									
Flush	97	58	72	96	26	63	98	29	65
Non-Flush	2	14	10	3	57	29	2	47	23
No Toilet	1	27	18	1	17	8	1	24	12
Total	100	100	100	100	100	100	100	100	100

Source**:-** Pakistan Social & Living Standards Measurement Survey, 2013-14 PBS

Notes:- 1. Households having the type of toilets indicated, expressed as a percentage of the total number of households

2. "Flush" consists of flush connected to public sewerage, flush connected to septic tank and flush to open drain while "Non-Flush" contains dry raised latrine, dry pit latrine and other.

3. Totals may not add up to 100 because of rounding.

Table A-16: Percentage Distribution of Civilian Labour Force

Year	Total			Employed			Unemployed		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
1984-85	29.56	26.78	2.79	28.46	25.72	2.75	1.10	1.06	0.04
1985-86	28.72	25.83	2.89	27.67	24.83	2.84	1.04	0.99	0.05
1986-87	29.40	25.60	3.81	28.51	24.74	3.76	0.90	0.85	0.04
1987-88	28.83	25.54	3.28	27.92	24.67	3.25	0.90	0.87	0.03
1990-91	27.97	24.00	3.97	26.21	22.91	3.30	1.76	1.09	0.67
1991-92	28.11	23.66	4.45	26.47	22.65	3.82	1.64	1.01	0.63
1992-93	27.86	23.72	4.15	26.54	22.83	3.72	1.32	0.89	0.43
1993-94	27.88	23.59	4.29	26.53	22.67	3.86	1.35	0.92	0.43
1994-95	27.46	23.80	3.66	25.98	22.82	3.16	1.48	0.98	0.50
1996-97	28.69	24.34	4.35	26.93	23.31	3.62	1.75	1.03	0.73
1997-98	29.38	24.85	4.53	27.65	23.80	3.85	1.73	1.05	0.68
1999-00	28.97	24.45	4.52	26.70	22.96	3.74	2.27	1.48	0.78
2001-02	29.61	24.84	4.76	27.16	23.18	3.98	2.45	1.66	0.79
2003-04	30.41	24.97	5.44	28.07	23.32	4.75	2.34	1.64	0.69
2006-07	31.82	25.24	6.58	30.13	24.10	6.03	1.69	1.14	0.55
2007-08	32.17	25.36	6.81	30.50	24.27	6.23	1.67	1.09	0.58
2008-09	32.81	25.59	7.22	31.02	24.45	6.57	1.79	1.14	0.65
2009-10	32.98	25.49	7.50	31.15	24.36	6.79	1.83	1.12	0.71
2010-11	32.83	25.21	7.62	30.88	23.93	6.95	1.95	1.28	0.67
2012-13	32.88	25.30	7.57	30.83	23.94	6.89	2.05	1.36	0.68
2013-14	32.28	24.32	7.76	30.35	23.27	7.08	1.92	1.25	0.68

Source**: -** Labour Force Surveys of the respective years, PBS.

Table A-17: Percentage Distribution of Population by Economic Category

Economic category	2009-10	2010-11	2012-13	2013-14
All Areas				
Total population	100.00	100.00	100.00	100.00
Civilian labour force	45.89	45.69	45.70	45.45
i) Employed	43.34	42.97	42.84	42.74
ii) Un-employed	2.55	2.72	2.85	2.71
Not in civilian labour force	54.11	54.31	54.30	54.55
Urban Areas				
Total population	100.00	100.00	100.00	100.00
Civilian labour force	39.50	39.54	39.70	39.01
i) Employed	36.65	36.04	36.20	35.88
ii) Un-employed	2.85	3.50	3.51	3.13
Not in civilian labour force	60.50	60.46	60.30	60.99
Rural Areas				
Total population	100.00	100.00	100.00	100.00
Civilian labour force	49.40	49.05	49.02	49.19
i) Employed	47.02	46.76	46.53	46.73
ii) Un-employed	2.38	2.29	2.49	2.46
Not in civilian labour force	50.69	50.95	50.98	50.81

Source: - Labour Force Surveys of the respective years, PBS.

Table A-18: Percentage Distribution of Employed Persons by Major Industry Division

Major Industry Division	2007-08	2008-09	2009-10	2010-11	2012-13 *	2013-14*
All Areas						
Total employed persons	100.00	100.00	100.00	100.00	100.00	100.00
Agriculture, forestry, hunting and fishing	45.65	45.08	44.96	45.05	43.71	43.48
Mining and quarrying	0.12	0.12	0.10	0.15	0.14	0.20
Manufacturing	12.99	13.02	13.24	13.65	14.06	14.16
Electricity, gas, water and sanitary services	0.70	0.69	.80	0.48	0.75	0.78
Construction	6.29	6.62	6.74	6.95	7.44	7.33
Wholesale, retail trade, restaurants & hotels	14.62	16.47	16.28	16.15	15.94	16.15
Transport, storage and communication	5.46	5.23	5.24	5.11	5.48	5.45
Financing, insurance, real estate and business services	1.41	1.56	1.48	1.42	1.72	1.74
Community, social and personal services	13.66	11.20	11.08	11.00	9.79	9.55
Activities not adequately described	0.10	0.01	0.09	0.03	0.96	1.16
Urban						
Total employed persons	100.00	100.00	100.00	100.00	100.00	100.00
Agriculture, forestry, hunting and fishing	6.21	6.04	6.00	6.35	6.10	5.71
Mining and quarrying	0.07	0.10	0.13	0.12	0.12	0.08
Manufacturing	23.89	23.90	23.80	25.14	26.15	24.22
Electricity, gas, water and sanitary services	1.36	1.30	1.50	0.94	1.50	1.51
Construction	6.75	6.87	6.57	6.63	6.75	7.82
Wholesale, retail trade, restaurants & hotels	27.45	31.46	31.01	30.79	29.85	30.54
Transport, storage and communication	7.92	7.42	7.94	7.74	8.07	8.07
Financing, insurance, real estate and business services	3.70	3.96	3.80	3.62	3.97	3.84
Community, social and personal services	22.39	18.93	19.09	18.60	15.69	15.65
Activities not adequately described	0.26	0.02	0.18	0.07	1.91	2.53
Rural						
Total employed persons	100.00	100.00	100.00	100.00	100.00	100.00
Agriculture, forestry, hunting and fishing	60.94	61.84	61.64	61.4	59.93	60.34
Mining and quarrying	0.14	0.13	0.09	0.16	0.15	0.25
Manufacturing	8.37	8.35	8.72	8.80	8.84	9.67
Electricity, gas, water and sanitary services	0.42	0.43	0.51	0.28	0.44	0.45
Construction	6.09	6.51	6.81	7.09	7.74	7.11
Wholesale, retail trade, restaurants & hotels	9.19	10.03	9.96	9.97	9.95	9.73
Transport, storage and communication	4.42	4.30	4.00	4.00	4.36	4.28
Financing, insurance, real estate and business services	0.44	0.52	0.95	0.51	0.77	0.79
Community, social and personal services	9.96	7.88	7.65	7.77	7.28	6.82
Activities not adequately described	0.03	0.01	0.05	0.02	0.54	0.55

Source: - Labour Force Surveys of the respective years, PBS.

* = Adjusted according to PSCO-1994.

Table A-19: Percentage Distribution of Employed Persons by Major Occupational Group

Major Occupational Group	2008-09	2009-10	2010-11	2012-13*	2013-14*
All Areas					
Total employed persons	100.00	100.00	100.00	100.00	100.00
Legislators, Senior Officials and Managers	12.38	11.95	11.25	2.39	1.66
Professionals	1.73	1.84	1.79	4.22	4.55
Technicians and Associate Professionals	5.39	5.14	5.32	3.03	2.79
Clerks	1.36	1.39	1.25	1.37	1.52
Service Workers and Shop and Market Sale Workers	4.88	4.93	4.74	15.55	16.10
Skilled Agricultural and Fishery Workers	37.61	37.94	37.60	37.69	37.84
Craft and related Trade Workers	14.47	14.60	14.98	14.67	14.10
Plant and Machine Operators and Assemblers	4.09	3.84	3.51	4.77	5.98
Elementary (Unskilled) Occupations	18.09	18.44	19.56	16.32	15.47
Urban Areas					
Total employed persons	100.00	100.00	100.00	100.00	100.00
Legislators, Senior Officials and Managers	24.31	23.02	21.60	5.61	3.89
Professionals	3.83	3.87	3.73	7.20	8.18
Technicians and Associate Professionals	9.22	8.97	9.48	6.43	5.42
Clerks	3.03	2.97	2.77	3.09	3.47
Service Workers and Shop and Market Sale Workers	8.92	9.41	8.75	27.41	29.74
Skilled Agricultural and Fishery Workers	5.06	5.07	5.50	5.31	5.01
Craft and related Trade Workers	24.01	24.02	25.42	24.86	21.84
Plant and Machine Operators and Assemblers	5.39	5.54	4.96	7.17	9.24
Elementary (Unskilled) Occupations	16.22	17.12	17.79	12.92	13.90
Rural Areas					
Total employed persons	100.00	100.00	100.00	100.00	100.00
Legislators, Senior Officials and Managers	7.26	7.21	6.88	0.99	0.66
Professionals	0.84	0.97	0.97	2.93	2.93
Technicians and Associate Professionals	3.74	3.50	3.57	1.56	1.62
Clerks	0.64	0.61	0.61	0.63	0.64
Service Workers and Shop and Market Sale Workers	3.14	3.01	3.04	10.44	10.32
Skilled Agricultural and Fishery Workers	51.58	52.01	51.16	51.66	52.50
Craft and related Trade Workers	10.36	10.57	10.57	10.27	10.64
Plant and Machine Operators and Assemblers	3.53	3.10	2.90	3.73	4.52
Elementary (Unskilled) Occupations	18.90	19.01	20.31	17.79	11.17

Source: - Labour Force Surveys of the respective years, PBS.

* = Adjusted according to PSCO-1994.

Table A-20: Land Utilization Statistics

(Million Hectares)

Year	Total area	Total area reported col (3+4+5+6)	Forest area	Not available for cultivation	Culturable waste
	1	2	3	4	5
1999-00	79.61	59.28	3.78	24.45	9.09
2000-01	79.61	59.44	3.77	24.37	9.17
2001-02	79.61	59.33	3.80	24.31	8.95
2002-03	79.61	59.45	4.04	24.25	8.95
2003-04	79.61	59.46	4.01	24.23	9.10
2004-05	79.61	59.48	4.02	24.39	8.94
2005-06	79.61	57.22	4.03	22.87	8.21
2006-07	79.61	57.05	4.19	22.70	8.30
2007-08	79.61	57.05	4.21	23.41	8.19
2008-09	79.61	57.08	4.21	23.45	8.20
2009-10	79.61	57.10	4.23	23.49	8.09
2010-11	79.61	57.79	4.26	23.37	7.98
2011-12	79.61	57.74	4.26	23.2 5	8.19
2012-13	79.61	57.78	4.26	23.06	8.21
2013-14	79.61	57.99	4.55	23.10	8.27

year	Cultivated area Col (7+8)	Current fallow	Net area sown	Area sown more than once	Total cropped area COL(8+9)
	6	7	8	9	10
1999-00	21.96	5.67	16.29	6.45	22.74
2000-01	22.13	6.73	15.40	6.64	22.04
2001-02	22.27	6.60	15.67	6.45	22.12
2002-03	22.21	6.61	15.60	6.25	21.85
2003-04	22.12	6.23	15.89	7.05	22.94
2004-05	22.13	6.86	15.27	7.51	22.78
2005-06	22.11	6.72	15.39	7.74	23.13
2006-07	21.87	5.72	16.16	7.40	23.56
2007-08	21.17	4.93	16.25	7.51	23.85
2008-09	21.21	4.93	16.28	7.52	23.80
2009-10	21.26	5.20	16.20	7.67	23.87
2010-11	22.03	6.38	15.65	7.07	22.72
2011-12	22.04	7.05	14.98	7.52	22.50
2012-13	22.26	7.04	15.22	7.34	22.56
2013-14	22.06	6.68	15.40	7.33	22.73

Source: - Agricultural Statistics of Pakistan 2013-14

TableA-21: Area under Agricultural Crops

(000 Hectares)

Year	Rice	Wheat	Bajra	Jowar	Maize	Barley	Gram	Masoor
2001-02	2,114.2	8,057.5	417.1	357.6	941.6	110.6	933.9	44.8
2002-03	2,225.2	8,033.9	349.3	338.1	935.5	107.7	963.0	49.0
2003-04	2,460.6	8,216.2	539.3	392.5	947.1	101.6	982.3	51.6
2004-05	2,519.6	8,358.0	343.3	307.5	981.8	93.3	1,093.9	43.4
2005-06	2,621.4	8,447.9	440.7	254.4	1042.0	89.9	1,028.9	33.9
2006-07	2,581.2	8,578.2	504.1	291.6	1016.9	94.0	1,052.3	39.0
2007-08	2,515.4	8,549.8	530.6	281.4	1051.7	91.1	1,106.8	30.4
2008-09	2,962.2	9,046.0	469.7	262.7	1052.1	86.0	1,080.6	30.9
2009-10	2883.1	9131.6	475.9	248.4	935.1	84.1	1066.9	24.0
2010-11	2365.3	8900.7	548.4	228.8	974.2	77.1	1053.8	26.1
2011-12	2571.2	8649.8	458.9	213.5	1087.3	72.2	1007.5	22.8
2011-12	2571.2	8649.8	458.3	213.5	1087.3	72.2	1007.5	22.8
2012-13	2308.8	8660.2	461.1	198.5	1059.5	73.1	992.0	19.3
2013-14	2789.2	9199.4	474.6	197.8	1168.5	70.9	949.6	18.2

Year	Mash	Mung	Other Pulses (a)	Rapeseed & mustard	Sesa-mum	Linseed	Ground-nut	Cotton
2001-02	54.7	239.2	10.2	268.9	135.6	6.2	99.4	3,115.8
2002-03	55.4	257.7	7.9	280.6	87.9	5.9	86.4	2,793.6
2003-04	48.7	256.0	10.6	279.8	59.7	6.2	102.6	2,989.3
2004-05	37.5	225.4	8.0	257.2	66.5	5.4	105.8	3,192.6
2005-06	34.6	208.5	8.3	227.3	82.0	5.8	93.7	3,103.0
2006-07	33.2	217.8	9.3	265.8	71.4	5.2	93.5	3,074.8
2007-08	32.5	245.9	11.6	234.6	76.4	4.6	94.8	3,054.3
2008-09	27.6	219.7	9.1	244.9	90.7	5.4	92.8	2,820.0
2009-10	24.1	183.3	14.1	190.3	79.8	4.2	87.4	3105.6
2010-11	24.5	137.4	12.1	216.5	77.6	4.0	82.9	2689.1
2009-10	24.1	183.3	14.1	190.3	79.8	4.2	87.4	3105.6
2010-11	24.5	137.4	12.1	216.5	77.6	4.0	82.9	2689.1
2011-12	24.5	140.8	6.7	200.7	75.7	3.8	95.6	2834.5
2012-13	23.2	135.9	4.6	224.3	70.9	3.7	81.6	2878.8
2013-14	20.9	130.9	4.1	192.6	81.7	3.3	93.8	2805.7

Note: - (a) Includes “Moth and Arhar etc. pulses."

Contd…

Table A-21: Area under Agricultural Crops

(000 Hectares)

Year	Jute	Sun hemp	Sugar cane	Tobacco	Potato	Vegetables (b)	Garlic	Chilies
2001.02	0.02	3.2	999.7	49.4	105.2	224.2	7.0	48.7
2002.03	0.02	2.4	1,099.6	46.6	115.8	224.6	7.0	56.4
2003-04	0.00	2.3	1,074.5	45.6	109.7	236.6	6.9	55.8
2004-05	0.00	1.7	966.4	50.5	112.0	238.7	6.6	48.7
2005-06	0.00	1.9	907.3	56.4	117.4	246.3	7.0	64.6
2006-07	0.00	1.5	1,028.8	50.9	133.4	245.5	7.8	47.3
2007-08	0.00	1.4	1,241.3	51.4	154.3	253.8	8.1	64.2
2008-09	0.00	1.2	1,029.4	49.7	145.0	252.9	8.4	73.8
2009-10	0.00	1.0	924.8	55.8	138.5	249.7	8.4	74.7
2010-11	0.00	0.8	987.6	51.3	159.4	252.0	8.4	63.6
2011-12	0.00	0.7	1057.5	45.8	184.9	251.2	6.7	27.4
2012-13	0.00	0.5	1128.8	49.8	172.8	256.0	7.0	63.6
2013-14	0.00	0.2	1172.5	49.1	158.3	265.7	7.5	62.7

Year	Onion	Citrus Fruit	Banana	Mango	Apple	Guava	Grapes	Dates
2001-02	103.8	194.2	31.2	99.0	48.6	64.3	12.7	78.5
2002-03	108.0	181.6	29.7	102.8	47.5	62.8	12.7	77.9
2003-04	109.0	176.5	31.6	103.1	110.8	61.6	12.8	74.8
2004-05	127.8	183.8	33.1	151.5	111.6	63.5	13.0	81.7
2005-06	148.7	192.3	32.5	156.6	112.0	61.8	13.0	82.0
2006-07	131.4	193.2	34.9	164.5	112.6	62.5	13.8	84.8
2007-08	153.1	199.4	35.5	166.2	113.0	63.3	15.3	90.1
2008-09	129.6	199.9	36.0	170.1	113.0	62.2	15.3	90.7
2009-10	124.7	198.4	34.8	173.7	111.6	62.1	15.3	90.6
2010-11	147.6	194.5	29.6	171.9	110.6	64.0	15.3	90.1
2011-12	129.7	194.0	22.5	172.4	110.4	66.7	15.4	93.1
2012-13	126.0	194.0	27.2	170.4	103.4	67.2	15.3	89.6
2013-14	143.9	193.7	28.0	171.3	105.2	42.7	15.3	89.5

Source:- Agricultural Statistics of Pakistan 2013-14

Note: - (b) Excluding potato & Sugar beet.

Table A-22: Production of Agricultural Crops

(000 Tones)

Year	Rice	Wheat	Bajra	Jowar	Maize	Barley	Gram	Masoor
2001-02	3,882.0	18,226.5	216.4	221.6	1,664.4	99.8	362.1	26.2
2002-03	4,478.5	19,183.3	189.2	202.6	1,737.1	99.6	675.2	29.2
2003-04	4,847.6	19,499.8	273.7	238.1	1,897.4	97.6	611.1	31.1
2004-05	5,024.8	21,612.3	193.3	186.4	2,797.0	91.7	868.2	25.9
2005-06	5,547.2	21,276.8	220.8	152.6	3,109.6	87.5	479.5	17.9
2006-07	5,438.4	23,294.7	238.0	179.5	3,088.4	92.7	837.8	21.1
2007-08	5,563.4	20,958.8	305.0	170.1	3,604.7	87.4	474.6	14.6
2008-09	6,952.0	24,032.9	296.4	164.5	3,593.0	81.5	740.5	14.4
2009-10	6882.7	23310.8	293.0	154.1	3261.5	71.4	561.5	10.9
2010-11	4823.3	25213.8	346.0	141.2	3707.0	71.2	496.0	13.3
2011-12	6160.4	23473.4	304.1	137.1	4338.3	65.7	284.4	11.1
2012-13	5535.9	24211.4	310.6	122.5	4220.1	67.2	751.3	9.8
2013-14	6798.1	25979.4	301.0	122.9	5044.2	66.5	399.0	8.1

Year	Mash	Mung	Other Pulses (a)	Rapeseed & mustard	Sesamum	Linseed	Ground nut	Cotton (000 bales)
2001-02	27.6	115.4	5.6	221.3	69.6	3.0	101.0	10,612.6
2002-03	29.0	138.4	4.4	235.0	19.2	3.0	90.1	10,210.6
2003-04	24.6	140.8	5.7	238.2	24.7	3.1	114.7	10,047.7
2004-05	18.4	130.0	4.6	215.8	29.8	2.6	76.4	14,265.2
2005-06	16.5	113.9	4.6	180.8	35.1	2.8	69.1	13,018.9
2006-07	15.9	138.5	4.8	221.0	30.4	3.6	73.9	12,856.2
2007-08	17.3	177.7	7.2	185.1	32.8	3.1	83.4	11,655.1
2008-09	13.6	157.4	6.1	198.9	41.0	3.6	85.5	11,819.0
2009-10	10.7	118.7	14.1	162.2	33.4	2.7	53.2	12913.4
2010-11	11.3	76.2	12.1	191.9	31.1	2.8	67.8	11460.1
2011-12	10.9	93.1	7.4	161.9	30.3	2.6	87.9	13595.0
2012-13	10.9	90.0	3.5	204.9	29.1	2.6	81.3	13030.7
2013-14	10.4	92.9	3.4	213.2	32.6	2.4	100.8	12768.9

Contd..

Table A-22: Production of Agricultural Crops

(000 Tones)

Year	Jute	Sunhemp	Sugar cane	Tobacco	Potato	Vegetables (b)	Garlic	Chillies
2001-02	0.0	2.2	48,041.6	94.5	1,721.7	2,873.7	56.5	93.3
2002-03	0.0	1.7	52,055.8	88.2	1,946.3	2,880.3	57.7	98.9
2003-04	0.0	1.6	53,419.0	86.2	1,938.1	3,028.4	56.5	96.4
2004-05	0.0	1.1	47,244.1	100.5	2,024.9	3,048.4	55.9	90.5
2005-06	0.0	1.2	44,665.5	112.6	1,567.9	3,124.8	57.3	122.9
2006-07	0.0	1.0	54,741.6	103.3	2,581.6	3,138.0	62.3	69.5
2007-08	0.0	1.0	63,920.0	107.8	2,539.0	3,136.8	63.8	116.1
2008-09	0.0	1.0	50,045.4	104.9	2,941.3	3,213.9	67.2	187.7
2009-10	0.0	1.0	49372.9	119.3	3141.4	3044.8	57.3	188.8
2010-11	0.0	0.6	55308.5	102.8	3491.7	3132.8	55.3	171.8
2011-12	0.0	0.5	58396.4	97.9	3392.5	3108.2	57.3	54.1
2012-13	0.0	0.4	63749.9	108.3	3785.9	2922.0	60.6	147.2
2013-14	0.0	0.1	67460.1	129.9	2883.8	3132.7	64.5	146.3

Year	Onion	Citrus fruits	Banana	Mango	Apple	Guava	Grapes	Dates
2001-02	1,385.0	1,830.3	149.7	1,037.1	367.1	538.5	52.6	630.3
2002-03	1,427.5	1,702.3	142.9	1,034.6	315.4	531.6	51.8	625.0
2003-04	1,449.0	1,760.3	154.0	1,055.9	333.8	549.6	50.8	426.8
2004-05	1,764.9	1,943.7	158.0	1,671.2	351.9	571.8	49.1	622.4
2005-06	2,055.7	2,458.4	163.5	1,753.9	351.3	552.2	48.8	496.3
2006-07	1,816.5	1,472.4	150.5	1,719.2	348.3	555.3	46.5	426.3
2007-08	2,015.2	2,294.5	158.0	1,753.7	441.6	538.9	75.3	557.5
2008-09	1,704.1	2,132.2	157.3	1,727.9	441.0	512.3	76.1	566.5
2009-10	1701.1	2150.0	154.8	1845.5	366.4	509.2	64.7	531.2
2010-11	1939.6	1982.2	141.2	1888.5	525.9	546.6	64.4	522.2
2011-12	1692.3	2147.3	98.2	1700.1	598.7	495.2	64.4	557.3
2012-13	1660.8	2001.8	141.3	1680.4	556.4	498.0	64.4	524.6
2013-14	1740.2	2167.7	120.4	1658.6	606.1	500.3	66.2	526.8

Source**:-** Agricultural Statistics of Pakistan 2013-14
Note:- (b) Excluding Potato and Sugar beet.

Table A-23: Number of Tube wells by Province

Year	Total	Balochistan	Khyber Pakhtunkhwa	Punjab	Sindh *
2001-02	707,273	29,914	12,747	610,750	53,862
2002-03	768,962	31,794	12,758	656,898	67,512
2003-04	950,144	34,126	12,739	824,879	78,400
2004-05	984,294	34,492	12,757	845,573	91,472
2005-06	999,569	34,492	12,773	857,774	94,530
2006-07	1025836	32,222	14,382	884,228	95004
2007-08	1016125	34,054	14,412	872,444	95215
2008-09	1069991	33039	14,553	927006	95393
2009-10	1088018	33039	14779	944649	95551
2010-11	1103391	36214	16558	954706	95913
2011-12	997746	42488	17206	841819	96233
2012-13	1220403	42817	17206	1012541	147839
2013-14	1314872	42497	15939	1026046	230390

Source:- Agricultural Statistics of Pakistan 2013-14

* = Commulative

Table A-24: Overall Water Availability at Farm Gate

(MAF)

Year/Season	Surface Water		Ground Water				Total Water Availability
	At Canal Head	At Farm Gate	Public Tube Wells	Private Tube Wells	Scarp T.well	Other Pr.T well	
2003-04							
Kharif	69.59	52.86	0.96	19.81	4.00	0.00	77.63
Rabi	33.56	31.90	0.97	20.27	4.01	0.00	57.15
Total	103.15	84.76	1.93	40.08	8.01	0.00	134.78
2004-05							
Kharif	61.39	53.42	0.96	19.81	4.00	0.00	78.19
Rabi	24.53	32.24	0.97	20.27	4.01	0.00	57.49
Total	85.82	85.66	1.93	40.08	8.01	0.00	135.68
2005-06							
Kharif	73.02	52.98	0.96	19.70	4.00	0.00	77.64
Rabi	31.51	34.08	0.97	20.68	4.01	0.00	59.74
Total	104.53	87.06	1.93	40.38	8.01	0.00	137.38
2006-07							
Kharif	65.35	57.60	0.96	19.70	4.00	0.00	82.26
Rabi	32.61	29.88	0.97	20.68	4.01	0.00	55.54
Total	97.96	87.48	1.93	40.38	8.01	0.00	137.80
2007-08							
Kharif	73.05	61.12	0.96	20.20	4.00	0.00	86.93
Rabi	29.41	25.91	0.97	19.78	4.01	0.00	51.07
Total	102.46	87.68	1.93	39.98	8.01	0.40	138.00
2008-09							
Kharif	69.03	56.99	0.96	20.20	4.00	0.00	82.15
Rabi	26.38	24.20	0.97	19.78	4.01	0.40	49.36
Total	95.41	81.19	1.93	39.98	8.01	0.40	131.51
2009-10							
Kharif	69.91	58.43	0.95	20.70	3.50	0.30	83.88
Rabi	26.83	25.06	0.96	19.80	3.50	0.50	49.82
Total	96.74	83.49	1.91	40.50	7.00	0.80	133.70
2010-11							
Kharif	55.79	54.46	0.95	20.70	3.50	0.30	79.91
Rabi	36.33	32.49	.96	19.80	3.50	0.50	57.25
Total	92.12	86.95	1.91	40.50	7.00	0.80	137.16
2011-12							
Kharif	62.93	57.61	0.95	20.70	3.50	0.30	83.06
Rabi	31.53	28.04	0.96	19.80	3.50	0.50	52.80
Total	94.46	85.65	1.91	40.50	7.00	0.80	135.86
2012-13							
Kharif	60.28	56.28	0.95	20.70	3.50	0.30	81.73
Rabi	33.36	31.02	0.96	19.80	3.50	0.50	55.78
Total	93.64	87.30	1.91	40.50	7.00	0.80	137.51
2013-14 (R)							
Kharif	68.14	56.28	0.95	20.70	3.50	0.30	81.73
Rabi	34.39	31.02	0.96	19.80	3.50	0.50	55.78
Total	102.53	87.30	1.91	40.50	7.00	0.80	137.51

Source:- Agricultural Statistics of Pakistan 2013-14

R = Repeated

Table A-25: Production of Chemical Fertilizers

Year	Total	Urea	Ammonium Nitrate	Ammonium Sulphate	SSP Phosphate	Nitro Phosphate
2001-02	5,057	4,260	329	-	162	306
2002-03	5,194	4,407	335	-	147	305
2003-04	5,316	4,435	350	-	168	363
2004-05	5,444	4,611	330	-	164	339
2005-06	5,691	4,804	327	-	161	399
2006-07	5,584	4,732	332	-	151	369
2007-08	5,797	4,925	346	-	160	366
2008-09	5,776	4,922	344	-	178	332
2009-10	6368	5155	383	-	150	345
2010-11	6797	4994	576	-	199	298
2011-12	6643	4686	626	-	165	489
2012-13	5059	4216	401	-	101	341
2013-14	6008	4932	519	-	85	472

Source: **- 1.** National Fertilizer Development Centre, Islamabad
2. Agricultural Statistics of Pakistan 2013-14

Table A-26: Season-Wise Consumption of Fertilizers

(000 Nutrient Tones)

Year	Kharif				Rabi				Total			
	N	P	K	All	N	P	K	All	N	P	K	All
2001	1049	329	8	1386	1111	295	9	1415	2160	624	17	2801
2002	1117	258	9	1384	1201	422	12	1635	2318	680	21	3019
2003	1183	210	9	1402	1346	457	13	1816	2529	667	22	3218
2004	1287	329	10	1626	1435	455	14	1903	2722	784	24	3529
2005	1385	402	21	1808	1529	476	12	2018	2914	878	33	3826
2006	1258	252	9	1519	1400	686	33	2119	2658	934	42	3638
2007	1384	354	16	1754	1552	405	14	1970	2936	759	30	3724
2008	1332	158	15	1505	1580	374	11	1964	2912	532	26	3469
2009	1690	504	8	2202	1722	451	13	2186	3412	955	21	4388
2010	1472	278	16	1765	1729	468	18	2215	3201	746	34	3981
2011	1620	299	12	1931	1448	319	10	1777	3068	618	22	3708
2012	1554	308	9	1771	1562	402	12	1976	3116	710	21	3747
2013	1541	338	10	1888	1729	569	12	2310	3270	907	22	4198
2014(P)	1479	331	14	1824	1675	627	16	2318	3154	958	30	4142

Source**: -** National Fertilizer Development Centre (NDFC), Islamabad

Note: - Kharif = 1st April to 30th September
Rabi = 1st October to 31st March

(P) = Provisional

Table A-27: Usage of Fertilizers by Crops

(000 Nutrient Tones)

Year	Wheat	Rice	Maize	Cotton	Sugarcane	Others	Total
2000-01	1,344.45	159.46	66.39	684.67	314.48	394.50	2,963.95
2001-02	1,328.41	157.56	65.60	676.51	310.72	389.80	2,928.60
2002-03	1,369.76	162.46	67.64	697.57	320.40	401.93	3,019.76
2003-04	1,461.50	173.34	72.17	744.28	341.85	428.85	3,222.00
2004-05	1,874.00	221.64	55.41	923.50	295.52	184.70	3694.00
2005-06	1902.10	228.25	57.06	951.05	304.43	361.40	3804.00
2006-07	1835.80	220.29	55.07	917.90	293.72	348.80	3671.61
2007-08	1790.50	214.80	53.71	895.20	286.50	340.19	3581.00
2008-09	1855.5	222.7	55.7	927.7	296.9	352.5	3711
2009-10	2180.0	261.6	65.4	1090.0	348.8	414.2	4360
2010-11	1966.5	236.0	59.0	983.3	314.6	373.6	3933
2011-12	1930.5	231.7	57.9	965.2	308.9	366.8	3861
2012-13	1810.5	217.3	54.3	905.3	.289.7	344.0	3621
2013-14 (P)	2044.5	245.3	61.3	1022.3	327.1	388.5	4089

Source: - National Fertilizer Development Centre (NDFC), Islamabad
(P) = Provisional

Table A-28: Consumption of Pesticides

Year	Quantity (M.T)			Value (Million Rs.)
	Imports	Production	Total	
2001	20,678	26,914	47,592	7,741
2002	27,103	42,794	69,897	6,790
2003	24,028	54,105	78,133	8,138
2004	40,482	89,116	1,29,598	12,592
2005	28,371	76,792	1,05,164	10,379
2006	12,721	30,855	43,576	5,906
2007	17,939	76,326	94,265	10,534
2008	9,282	29,904	39,186	6,940
2009	5825	34818	40643	7648
2010	10899	62733	73632	13855
2011	13928	35471	49399	9395
2012	5325	1800	7125	3861
2013	15045	42706	57755	31297
2014 (Upto 30-10-2014)	57402	8848	66250	12600

Source: - Agricultural Statistics of Pakistan 2013-14

Table A-29: Estimated Livestock Population

(000 Heads)

Years → Cattle ↓	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Cattle							
1. Bulls 3 years & above							
a) For breeding	1694	1758	1824	2747	2996	3251	3515
b) For work	2772	2876	2985	2243	2182	2123	3065
c) Others	-	-	-	-	-	-	-
2. Cows 3 years & above							
a) In milk	9390	9744	10112	10493	10888	11299	11725
b) Dry	4812	4994	5182	5378	5580	5791	6009
c) Not yet calved	2118	2198	2281	2367	2456	2549	2645
3. Bulls less than 3 years	5787	6005	6232	6467	4883	6963	7226
4. Cows less than 3 years	5256	5454	5669	5873	1827	6324	6563
Total Cattle	31829	33029	34285	35568	30812	33680	39743
Buffaloes							
1. Bulls 3 years & above							
a) For breeding	361	372	383	395	407	407	417
b) For work	306	315	325	335	345	345	354
c) Others	-	-	-	-	-	-	-
2.Buffaloes 3 years & above							
a) In milk	10845	11175	11514	11864	12224	12595	12921
b) Dry	3587	3696	3808	3924	4043	4166	4274
c) Not yet calved	2078	2142	2207	2274	2343	2414	2476
3. Bulls less than 3 years	4993	5144	5301	5462	5628	5798	5949
4. Buffaloes less than 3 years	6851	7059	5896	7494	7721	7956	8162
Total Buffaloes:-	29021	29903	29434	31748	32711	33680	345+53

Contd…

Table A-29: Estimated Livestock Population

(000 heads)

Years → Cattle ↓	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Sheep							
1. Male 1 year & above	4468	4521	4574	4628	4683	4739	4795
2. Female 1 year & above	14078	14245	14414	14585	14757	14932	15109
3. Young stock less than 1 year	8565	8666	8769	8873	8978	9084	9192
Total Sheep:-	27111	27432	27757	28086	28418	28755	29095
Goats							
1. Male 1 year & above	6980	7169	7364	7563	7768	7979	8195
2. Female 1 year & above	32882	33773	34688	35628	36594	37585	38604
3. Young stock less than 1 year	16879	17337	17806	18289	18785	19294	19816
Total Goats:-	56741	58279	59858	61480	63147	64858	66615
Camels							
1. 3 years & above	716	726	735	380	385	390	395
2. Less than 3 years	229	232	235	365	370	374	379
Total Camels:-	945	958	970	238	241	244	247
Asses							
1. 3 years & above	3625	3692	296	297	3901	3973	4046
2. Less than 3 years	803	818	56	57	864	880	896
Total Asses:-	4428	4510	352	354	476	4853	4942
Horses							
1. 3 years & above	292	294	3760	297	299	301	303
2. Less than 3 years	56	56	833	57	57	57	58
Total Horses:-	348	350	4593	354	356	358	361
Mules							
1. 3 years & above	145	148	150	153	155	158	161
2. Less than 3 years	17	17	17	17	18	18	18
Total Mules:-	162	165	167	170	173	176	179
Poultry							
Total Poultry (Million)	518	562	610	663	721	785	855

Source: - Agricultural Statistics of Pakistan 2013-14

Table A-30: Estimated Livestock Products

Products	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Milk production	000 tones	42,171	43,563	44977	45622	47951	39945	41133
Milk available for human consumption	000 tones	34,041	35,160	36299	36656	38690	49512	50990
Meat Production								
Beef	000 tones	1548	1601	1655	1711	1770	1830	1888
Mutton	000 tones	578	591	603	616	629	643	657
Poultry meat	000 tones	601	651	707	767	834	907	987
Other Product								
Wool (Sheep)	000 tones	41.1	41.5	42	42.5	43.0	43.6	44.1
Hair (Goat)	000 tones	21.4	22.0	22.6	23.2	23.8	24.4	25.1
Bones	000 tones	672.4	692.4	713.4	735.1	757.5	780.5	802.9
Fat	000 tones	215.3	221.6	228.1	234.8	241.7	248.8	255.8
Blood	000 tones	54.1	55.4	56.8	58.3	59.8	61.3	62.2
Eggs	Million Nos.	10711	11258	11839	12857	13114	13813	14556
Hides	Million Nos.	12.2	12.7	13.0	13.5	13.8	14.5	14.8
Skins	Million Nos.	45.4	46.4	47.4	48.5	49.5	50.8	51.9
Casings	Million Nos.	13.0	13.4	13.9	14.3	14.8	15.3	15.8
Guts	Million Nos.	45.8	46.8	47.9	49.0	50.1	51.2	52.4

Source: - Agricultural Statistics of Pakistan 2013-14.

Table A-31: Estimated Milk Production

(000 Tones)

Years	Cows	Buffaloes	Sheep	Goats	She Camel	Total
2002-03						
Gross Production	10437	22527	31	629	-	33,624
Human Consumption	8350	18022	31	652	-	27,055
2003-04						
Gross Production	10847	24050	31	675	-	35,603
Human Consumption	8678	19240	31	675	-	28,624
2004-05						
Gross Production	11059	24855	35	682	-	36620
Human Consumption	8848	19884	35	682	-	29438
2005-06						
Gross Production	13408	24724	34	664	767	39597
Human Consumption	10726	19779	34	664	767	31970
2006-07						
Gross Production	13912	25455	35	682	776	40860
Human Consumption	11129	20364	35	682	776	32986
2007-08						
Gross Production	14435	26214	35	701	786	42171
Human Consumption	11548	20971	35	701	786	34041
2008-09						
Gross Production	14982	27028	36	719	798	43563
Human Consumption	11985	21622	36	719	798	35160
2009-10						
Gross Production	15546	27848	36	739	808	44977
Human Consumption	12437	22279	36	739	808	36299
2010-11						
Gross Production	16133	28694	36	759	818	45622
Human Consumption	12906	22955	36	759	818	36656
2011-12						
Gross Production	16741	29565	37	779	829	47951
Human Consumption	13393	23652	37	779	829	38690
2012-13						
Gross Production	13897	24370	37	801	840	39945
Human Consumption	17372	30462	37	801	840	49512
2013-14						
Gross Production	14421	25001	38	822	851	41133
Human Consumption	18027	31252	38	822	851	50990

Source: - Agricultural Statistics of Pakistan 2013-14

Table A-32: Estimated Meat and Eggs Production

Years	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
BEEF								
Cattle	729 (73)	756 (76)	785 (78)	814(81)	845(84)	877(88)	910(88)	944(94)
Buffaloes	764 (76)	787 (79)	811 (81)	83(84)	861(86)	887(89)	914(89)	938(94)
Total Beef	1493 (149)	1543 (155)	1601 (160)	1655(166)	1711 (171)	1770(178)	1830(178)	1888(189)
Mutton								
Sheep	210 (59)	212 (59)	215 (60)	217(61)	220(62)	222(62)	225(62)	228(64)
Goats	356 (100)	366 (102)	376 (105)	386(108)	396(111)	407(114)	418(114)	429(120)
Total Mutton	566 (158)	578 (161)	591 (165)	603(169)	616(173)	629(176)	643(176)	657(184)
Poultry Meat	554	601	651	707	767	834	907	987
Total Meat	2618 (308)	2727 (317)	2843 (325)	2965(335)	3094(344)	3233(353)	3380	3532
EGGS (Million No)	10197	10711	11258	11839	12857	13114	13813	14556

Source**: -** Agricultural Statistics of Pakistan-2013-14
Note: - Figures in parentheses are of edible offal's.

Table A-33: Fish Production

(000 Tones)

Year	Category	Pakistan	Balochistan	Khyber Pakhtunkhwa(a)	Punjab (b)	Sindh
2004	Inland	170.5	-	2.5	63.0	105.0
	Marine	403.0	128.0	-	-	275.0
	Total	573.5	128.0	2.5	63.0	380.0
2005	Inland	174.6	-	2.6	65.0	107.0
	Marine	406.0	130.0	-	-	276.0
	Total	580.6	130.	2.6	65.0	383.0
2006	Inland	179.9	-	2.9	68.0	109.0
	Marine	425.0	140.0	-	-	285.0
	Total	604.9	140.0	2.9	68.0	394.0
2007	Inland	250.0	18.0	12.0	85.0	135.0
	Marine	390.0	140.0	-	-	250.0
	Total	640.0	158.0	12.0	85.0	385.0
2008	Inland	208.0	-	3.0	85.0	120.0
	Marine	477.0	138.0	-	-	339.0
	Total	685.0	138.0	3.0	85.0	459.0
2009	Inland	214.5	-	4.0	85.5	125.0
	Marine	480.0	140.0	-	-	340.0
	Total	694.5	140.0	4.0	85.5	465.0
2010	Inland	219.2	-	5.0	86.2	128.0
	Marine	485.0	143.0	-	-	342.0
	Total	704.2	143.0	5.0	86.2	470.0
2011	Inland	225.4	-	6.0	88.4	131.0
	Marine	487.0	144.0	-	-	343.0
	Total	712.4	144.0	6.0	88.4	474.0
2012	Inland	235.0	-	9.0	90.0	136.0
	Marine	490.0	145.0	-	-	345.0
	Total	725.0	145.0	9.0	90.0	481.0
2013	Inland	238.0	-	10.0	91.0	137.0
	Marine	491.0	145.5	-	-	346.0
	Total	729.0	145.5	10.0	91.0	483.0
2014 (E)	Inland	242.0	-	11.0	93.0	138.0
	Marine	493.0	147.0	-	-	346.0
	Total	735.0	147.0	11.0	93.0	484.0

Source: - Directorate of Marine Fisheries Karachi

Note: - (a) Includes Northern Areas (b) Includes Mangla Dam (E) Estimated

Table A-34: Total Catch of Fish and their Indices

Year	Total Catch of Fish (000 Metric Tons)			Index (Base: 2004 = 100)		
	Total	Inland	Marine	Total	Inland	Marine
2004	552.1	165.5	386.7	100.0	100.0	100.0
2005	516.2	176.3	339.8	93.5	106.5	87.9
2006	524.0	174.5	349.4	94.9	105.4	90.4
2007	524.0	181.7	342.6	94.9	109.8	88.6
2008	530.0	185.3	344.7	96.0	112.0	89.1
2009	531.5	192.8	338.8	96.3	116.5	87.6
2010	533.4	195.5	337.9	96.6	118.1	87.4
2011	533.3	198.6	334.8	96.6	120.0	86.6
2012	550.9	201.9	349.1	99.8	122.0	90.3
2013	556.6	204.8	351.7	100.8	123.7	90.9
2014	563.4	207.5	355.6	102.0	125.4	92.0

Source**:-** Directorate of Marine Fisheries, Karachi

Table A-35: Fishermen Engaged in Marine and Inland Fisheries

(Number)

Year	Marine			Inland	Grand total
	Karachi and Sindh coasts	Balochistan coast	Total		
2004	98,237	41,786	140,023	164,839	304,862
2005	99,828	42,295	142,123	163,560	305,683
2006	101,596	42,995	144,591	167,191	311,782
2007	102,875	43,865	146,740	166,261	313,001
2008	103,946	44,760	148,706	170,314	319,020
2009	106,552	46,335	152,887	173,593	326,480
2010	116,133	48,779	164,912	186,271	351,183
2011	118,437	52,812	171,249	190,261	361,510
2012	120,180	56,887	177,067	192,717	369,784
2013	123,531	58,912	182,443	198,537	380,980
2014	123,856	59,635	183,491	199,326	382,817

Source: Marine Fisheries Department, Karachi

Table A-36: Number of Fishing Crafts in Pakistan

Year	Sindh and Balochistan Coasts					Inland Sail boat (a)	Grand Total
	Trawlers	Gill netter	Mechanized cum Sail boats	Sail Boat (a)	Total		
2004	2,800	4,150	8,960	6,220	22,130	11,586	33,716
2005	2,913	3,646	8,237	9,822	24,618	13,241	37,859
2006	2,933	3,821	8,370	9,463	24,587	13,338	37,925
2007	2,956	4,317	8,936	9,423	25,632	13,511	39,143
2008	2,965	4,374	8,950	6,943	23,232	13,672	36,904
2009	3,044	4,588	9,022	7,008	23,597	13,911	37,508
2010	3,102	4,592	9,270	7,112	23,972	14,174	38,146
2011	3,215	4,809	9,564	7,165	24,700	13,241	37,941
2012	3,265	4,970	9,626	7,200	25,026	13,316	38,342
2013	3,336	5,238	9,700	7,220	25,474	13,987	39,461
2014	3,439	5,227	9,856	8,286	25,742	13,998	39,740

Source: Marine Fisheries Department, Karachi

Table A-37: Forest Products of Pakistan

Year	Total		Timber		Firewood	
	Quantity 000 Cu.m	Value Million Rs.	Quantity 000 Cu.m	Value Million Rs.	Quantity 000 Cu.m	Value Million Rs.
Major Products						
2004-05	282	1,569.9	169	1,283.7	113	286.2
2005-06	265	1,765.4	139	1,384.3	126	381.1
2006-07	373	1,521.4	217	1,244.4	156	277.0
2007-08	204	1,537.9	139	1,149.4	65	388.5
2008-09	414.7	1,590.52	161.3	1,167.06	253.4	423.46
2009-10	440.5	1,605.20	137.7	1,439.14	302.8	166.06
2010-11	319.6	1,594.74	166.0	1,401.40	153.6	193.34
2011-12	396.0	1,743.35	129.1	1,666.30	266.9	77.05
2012-13 (R)	839.4	2,888.53	349.0	2,826.31	490.4	62.22
2013-14 (P)	119.5	1,537.68	97.7	1,536.25	21.8	1.43

Year	Resin	Mazri	Ephedra
Minor Products (Tones)			
2004-05	34	56	-
2005-06	-	929	-
2006-07	-	935	-
2007-08	-	172	-
2008-09	-	-	460
2009-10	-	-	1144
2010-11	-	-	1115
2011-12	-	-	1029
2012-13(R)	-	-	965
2013-14(P)	-	-	988

Source:- Pakistan Forest Institute, Peshawar

Note:- Figures/Forest Product consist only State Control Forest excluding forest product of Gilgit Baltistan & AJK

(R) = Revised

(P) = Provisional

Table A-38: Uses of Forest Resources (Estimated Wood Consumption in Various End-uses)

(000 Cub. Meters)

Year	Total	Pulp and Paper Industries (a)	Construction (b)	Furniture (b)	Fuel wood (b)	Others (b)
2003	30,141	310	1,466	599	25,.303	2,463
2004	30,994	322	1,530	625	26,000	2,517
2005	31,649	335	1,593	651	26,500	2,570
2006	31,762	347	1,657	676	26,459	2,623
2007	34,980	360	1,721	702	29,520	2,677
2008	35,274	372	1,785	727	29,660	2,730
2003	30,141	310	1,466	599	25,.303	2,463
2004	30,994	322	1,530	625	26,000	2,517
2005	31,649	335	1,593	651	26,500	2,570
2006	31,762	347	1,657	676	26,459	2,623
2007	34,980	360	1,721	702	29,520	2,677
2008	66,826	898	1,574	804	62,521	1,029
2009	68,280	925	1,625	845	63,822	1,063
2010	69,739	953	1,677	887	65,124	1,098
2011	71,196	980	1,729	929	66,425	1,133
2012	72,652	1,008	1,781	970	67,726	1,167
2013	74,112	1,036	1,834	1,012	69,028	1,202
2014	75,736	1,068	1,894	1,064	70,465	1,245
2015	77,362	1,100	1,955	1,116	71,902	1,289

Source**: -** Pakistan Forest Institute, Peshawar.

Note: - (a) The local paper-industry is based on non-woody raw materials, whereas it uses Imported wood pulp. The figures are the round wood equivalent of the wood pulp imports.
(b) Estimated wood consumption in various uses.

Table A-39: Production of Manufacturing Items

Year → / Production ↓	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
(i) Vegetable Products (a)								
No. of Reporting Factories	87	87	87	87	87	87	87	87
Production (000 Tones)	1180	1137	1069	1075	1092	1103	1139	1180
(ii) Sugar (b)								
No. of Reporting Factories	76	76	76	76	78	78	78	78
Production (000 Tones)	3526	4733	3190	3143	4169	4634	5073	5582
(iii) Tea Blended (c)								
No. of Reporting Factories	5	5	5	5	5	5	5	5
Production (000 Tones)	61	69	66	64	66	76	90	102
(iv) Beverages (c)								
No. of Reporting Factories	…	…	…	…	…	…	…	…
Production (000 Liters)	1150	1841	1894	1554	1490	1812	2077	2520
v) Cigarettes (d)								
No. of Reporting Factories	14	14	14	14	14	14	14	14
Production (Million No.)	65980	67446	75609	65292	65403	61954	67377	64482
(vi) Cotton Textiles (Mills Sector)								
No. of Reporting Mills	427	427	369	439	433	-	373	-
Production of Cotton Cloth (Million sq. meter)	1013	1016	1020	1010	1020	1024	1029	1036
(vii) Jute Textiles								
No. of Reporting Mills	12	12	12	10	10	..	..	..
Total Production (000 Tones)	119	129	137	106	93	94	103	102
(viii) Paper and Board								
No. of Factories of Papers	19	19	19	19	19	19	19	19
Production Paper (000 Tones)	162	192	252	248	229	246	232	214
Production Board (000 Tones)	280	228	169	179	206	283	381	468
(ix) Chemicals								
No. of Reporting Factories	12	12	12	12	12	12	12	12
Soda Ash (a) (000 Tones)	331	365	365	409	377	370	366	409
Caustic Soda (a) (000 Tones)	242	248	245	182	172	179	183	167
Sulphuric Acid (a) (000 Tones)	96	103	98	85	115	100	89	86
Chlorine Gas (b) (000 Tones)	17	18	17	16	15	16	15	15
(x) Chemicals Fertilizers (a)								
No. of Reporting Factories		11	11	11	11	11	11	11
Urea (000 Tones)	4732	4925	4918	5056	4552	4470	4215	4930
Super phosphate (000 Tones)	149	158	187	148	173	115	79	88
Ammonium Sulphate	-	-	-	-	-	-	-	-
Ammonium Nitrate(000 Tones)	331	344	344	345	275	432	401	519
Nitro Phosphate(000 Tones)	326	330	306	304	252	338	292	447
Dai Ammonium phosphate(000 Tones)	398	356	530	626	664	622	730	693
(xi) Paints & Varnishes (By weight)								
No. of Reporting Factories	102	102	102	102	102	102	102	102
Production (000 Tones)	24	26	30	31	26	23	28	36

Contd…

Table A-39: Production of Manufacturing Items

Year → Production ↓	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
(xii) Paints & Varnishes (By Volume)								
No. of Reporting Factories	169	169	169	169	169	169	169	169
Production (Million Liters)	53	57	63	66	49	38	41	44
(xiii) Cycle Tires (a)								
No. of Reporting Factories	9	9	9	9	9	9	9	9
Production (000 Nos.)	5182	4243	3214	3405	2879	3431	3429	4067
(xiv) Cycle Tubes (a)								
No. of Reporting Factories	9	9	9	9	9	9	9	9
Production (000 Nos.)	10420	9224	6867	7273	6534	6846	7746	8033
(xv) Motor Tires (a)								
No. of Reporting Factories	4	4	4	4	4	4	4	4
Production (000 Nos.)	7027	6990	7089	8672	9222	7011	7864	8770
(xvi) Motor Tubes (a)								
No. of Reporting Factories	4	4	4	4	4	4	4	4
Production (000 Nos.)	10277	9627	14515	20152	19108	20338	20269	20837
(xvii) Cement (b)								
No. of Reporting Factories	22	22	22	21	21	21	21	21
Production (000 Tonnes)	22739	26751	28380	31358	28716	29557	31055	31303
(xviii) Steel Products (000 Tonnes)								
Coke	326	291	424	343	302	193	204	32
Pig Iron	1009	993	791	483	433	249	201	89
Billets	3677	2873	1943	1664	1629	1616	1639	2128
H.R Sheets/Strips/ Plates/Coils	442	534	418	336	359	181	15	12
C.R Sheets/Strips/ Plates/Coils (000 numbers)	141	146	118	93	88	26	2	2
Galvanize Sheets (000 numbers)	37	26	25	5	5	-	-	-
(xix) Sewing Machines (a)								
No. of Reporting Factories	7	7	7	7	7	7	7	7
Production (000 Nos.)	52	57	51	49	47	40	33	20
(xx) Electric Motors (a)								
No. of Reporting Factories	23	23	23	23	23	23	23	23
Production (000 Nos.)	13	11	9	11	10	9	7	10
(xxi) Transformers (a)								
No. of Reporting Factories	10	10	10	10	10	10	10	10
Production (000 Nos.)	54	37	29	30	14	24	26	11

Contd..

Table A-39: Production of Manufacturing Items

Year → Production ↓	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
(xxii) Television								
No. of Reporting Factories	14	14	14	14	14	14	14	14
Production (000 Nos.)	609	716	402	343	426	269	463	426
(xxiii) Electric Bulbs (a)								
No. of Reporting Factories	5	5	5	5	6	6	6	6
Production (000 Nos.)	145	130	92	75	80	79	80	76
(xxiv) Electric Tubes (a)								
No. of Reporting Factories	2	2	2	2	2	2	2	2
Production (000 Meters)	21,400	19,524	11,101	2,914	11,800	1,266	-	-
(xxv) Manufacture/Assembly of Automobiles(Nos.)								
Cars (a)	176,016	164,710	84,308	121,647	133,972	154,255	120,332	116,281
Jeeps (4x4) (a)	3,298	1,590	932	1,172	883	451	1,475	1,217
Light Commercial Vehicles (a)	19,672	21,354	16,158	15,568	19,142	20,929	14,517	17,477
Trucks (a)	4,410	4,993	3,135	3,425	2,810	2,597	1,923	2674
Buses (a)	993	1,146	657	628	490	568	522	559
Motorcycles (a)	839,224	1,057,751	912,067	1,389,047	1,638,457	1,649,532	1,675,071	1,728,137
(xxvi) Tractors (a)								
No. of Reporting Factories	..	..	..					
Production (Nos.)	54,610	53,607	60,107	71,730	70,855	48,152	50,871	34,524
(xxvii) Bicycles (b)								
No. of Reporting Factories	5	5	5	5	5	5	5	5
Production (000 Nos.)	486	536	420	447	345	262	233	205

Source:- 1. Pakistan Economic Survey 2014-15
2. Monthly Statistical Bulletin, PBS

Table A-40: Mineral Production in Pakistan

(Tones)

Year	Aragonite/ marble	Barytes	Bauxite	Celestite	China clay
2000-01	619,662	28,252	3,728	807	46,574
2001-02	685,258	21,484	12,233	382	53,542
2002-03	1,142,113	40,745	4,098	402	39,575
2003-04	980,671	44,207	4,847	570	25,204
2004-05	1,280,304	42,087	6,504	1,855	37,732
2005-06	1,828,513	49,221	7,831	3,160	53,051
2006-07	1,980,368	46,759	18,082	1,530	30,979
2007-08	1,536,808	49,933	35,635	1,310	31,512
2008-09	1,144,818	62,997	13,618	470	17,169
2009-10	1,065,000	57,166	9,031	160	22,769
2010-11	1,133,000	31,836	9,033	-	16,055
2011-12	1,751,000	48,510	30,223	-	21,555
2012-13	2,360,000	118,471	25,288	-	22,917
2013-14	2,591,000	132,379	31,156	-	16,191

Year	Chromite	Ebry	Fire clay	Flourite	Fuller's Earth
2000-01	21,683	45	163,723	1,091	12,926
2001-02	24,185	75	171,056	1,288	15,521
2002-03	30,657	-	116,515	1,305	14,723
2003-04	28,529	680	192,728	1,166	13,986
2004-05	56,359	430	253,501	1,060	17,001
2005-06	64,572	40	332,528	1,966	16,209
2006-07	104,141	..	346,689	1,505	11,378
2007-08	114,884	..	330,072	2,612	10,998
2008-09	89,739	2,150	389,493	1,261	10,213
2009-10	257,148	..	329,055	290	11,219
2010-11	148,034	..	274,042	3,156	4,180
2011-12	179,203	..	408,187	6,859	6,906
2012-13	136,443	..	454,645	13,344	4,259
2013-14	83,507	..	458,037	7,500	6,397

Contd.

Table A-40: Mineral Production in Pakistan

(Tones)

Year	Dolomite	Gypsum	Lime stone	Magnesite	Manganese
2000-01	352,689	364,449	10,868,167	4,645	1,500
2001-02	312,886	401,740	10,819,571	4,637	-
2002-03	340,864	420,413	11,880,275	2,645	1,551
2003-04	297,419	467,065	13,150,127	6,074	40
2004-05	199,653	552,496	14,857,479	3,029	511
2005-06	183,952	601,027	18,391,364	1,151	3,522
2006-07	342,463	624,120	25,512,304	3,445	2,919
2007-08	359,994	660,473	31,789,073	3,940	1,229
2008-09	249,918	800,084	33,186,359	2,639	1,254
2009-10	130,408	854,000	37,137,000	5,159	1,655
2010-11	240,111	885,000	32,021,000	4,908	785
2011-12	198,392	1,260,000	35,016,000	5,444	345
2012-13	335,819	1,250,000	38,932,000	6,705	290
2013-14	5,912,918	1,322,000	36,463,000	3,725	3,945

Year	Ochres	Rock Salt	Silica sand	Soap stone	Sulphur
2000-01	4,691	1,393,688	154,867	46,989	17,428
2001-02	5,064	1,423,478	156,599	38,780	22,580
2002-03	6,733	1,426,067	185,415	65,797	19,402
2003-04	7,861	1,639,516	259,009	52,483	23,873
2004-05	18,686	1,648,223	308,901	20,564	24,158
2005-06	34,320	1,858,931	411,047	21,065	24,695
2006-07	61,665	1,872,664	402,324	44,886	27,710
2007-08	46,215	1,849,199	403,124	37,999	29,485
2008-09	56,617	1,917,486	369,773	13,923	25,784
2009-10	55,352	1,944,000	411,000	53,991	26,641
2010-11	36,078	1,954,000	301,000	47,561	27,645
2011-12	42,107	2,136,000	270,000	55,515	25,560
2012-13	37,769	2,160,000	356,000	93,314	20,610
2013-14	32,634	2,220,000	268,000	72,234	35,672

Source:- Provincial Directorate of Industries & Mineral Development
Monthly Statistical Bulletin, PBS

Table A-41: Crude Oil Production by Field

US Barrels

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Punjab							
Rodho	38,832	65,451	41,071	75,693	68,858	61141	49,541
Guauri	-	-	-	-	-	-	2,145
Halini	-	-	-	-	103,255	242,042	182,387
Khost	-	-	-	-	-	4,064	1,531
Balkassar	140,231	138,672	154,630	155,468	145,076	157,339	149,029
Bela	-	-	4,902	45,979	8,737	1,163	1,528
Dhulian	36,725	50,075	51,227	49,282	54,437	55,927	55,841
Domial	-	-	-	12,088	102,710	31,917	15,295
Joyamair	9,644	9,832	9,293	8,388	8,928	9,980	4,537
Khaur	2,135	2,114	2,015	2,061	2,062	2,043	1,965
Meyal	244,425	187,574	161,405	147,840	130,633	122,941	114,960
Minwal	22,962	23,925	23,607	221,212	22,313	23,784	32,258
Pariwali	728,495	562,748	448,999	328,202	265,318	231,443	221,405
Pindori	1,081,567	296,539	570,020	415,731	229,026	133,297	101,484
Turkwal	51,823	36,874	33,779	27,147	22,666	16,033	11,057
Baloch	-	-	32,040	103,830	-	47,124	150,108
Bhalsyedan	8,531	5,483	14,802	-	-	604	3,446
ChakNaurang	124,115	121,940	147,021	135,167	122,080	121,910	114,700
Dakhni	464,623	572,765	627,564	567,385	477,320	424,281	393,888
Dhodak	569,031	149,881	72,538	54,884	41,643	39,775	24,940
Fimkassar	126,361	123,660	112,745	79,032	60,965	46,285	44,157
Kal	181,265	122,595	114,870	155,580	163,209	145,655	123,332
MissaKeswal	68,559	39,275	45,605	79,966	116,631	61,597	27,545
Rajian	520,940	480,995	470,340	513,700	518,405	559,721	598,426
Sadkal	36,917	30,128	27,030	28,393	47,039	22,585	17,186
Toot	92,473	74,732	6,678	31,784	67,574	133,251	130,952
Bhangali	29,900	30,608	11,011	-	-	-	-
Dhurnal	104,329	89,577	66,823	57,338	60,385	47,306	45,500
Ratana	29,468	29,751	138,081	191,001	257,941	183,653	179,423
Adhi	1,804,204	1,664,123	1,733,255	1,875,559	2,303,231	2,336,211	2,260,047
Punjab Total	**6,517,555**	**4,909,307**	**5,121,351**	**5,163,710**	**5,400,442**	**5,263,072**	**5,058,633**
Sindh							
Zamzama	959,616	991,429	1,037,326	791,717	835,439	713,370	508,424
Kadanwari	1,363	6,205	6,895	11,494	9,042	11,990	13,280
Lundali	-	-	-	-	-	-	542
Bhit	123,237	134,135	117,436	110,044	112,689	104,690	114,945
Haseeb	-	-	-	-	12	-	-
Mari	-	-	799	6,406	25,680	29,218	24,269

Contd..

Table A-41: Crude Oil Production by Field

US Barrels

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Sujawal	-	-	-	-	-	8,035	23,859
Bhullan Shan	6,148	2	-	-	-	-	-
Bobi	1,389,220	1,075,805	759,675	653,435	549,850	517,375	463,240
Chak-2	-	-	-	-	-	39,726	110,963
Chak-7A	-	-	-	-	-	134,215	50,050
Chak-66 NE	91,458	134,240	-	-	-	-	-
Gopang	-	-	-	167,329	-	-	-
Jakhro	-	-	-	-	-	-	61,807
Kunnar	2,034,803	2,534,205	2,399,158	1,979,533	1,930,203	2,040,940	1,509,226
Kunnar Pasakhi Deep	-	-	-	-	-	-	162,897
Lashari Centre	798,939	526,180	467,975	359,518	254,968	233,335	173,405
Missan	88,650	86,180	75,190	73,045	69,994	56,184	53,455
Moolan N	83,777	264,150	69,640	50,790	35,719	21,166	24,285
Noora iJagir	44,455	15,984	1,180	840	5,433	820	10,109
Nur/Bagla	-	-	-	-	-	18,656	43,666
Pakhro	-	-	194	-	-	-	-
Pasakhi	1,026,005	1,419,342	1,451,706	1,200,112	1,314,730	1,313,920	1,271,420
Pasakhi North	335,205	303,091	236,162	228,385	228,872	260,916	284,440
Pasakhi North East	437,010	323,010	181,564	187,955	144,385	140,967	122,270
Qadirpur	358,582	349,698	337,974	312,376	316,815	300,925	292,425
Sono	1,330,653	1,131,058	701,759	637,110	562,188	485,881	411,860
Shekhan	-	-	-	6,034	1,146	142	-
TandoAlam	648,022	566,641	523,663	341,725	282,840	298,116	235,730
Thora	492,292	370,547	428,045	380,922	288,579	263,636	218,295
Latif	-	-	-	-	-	-	6,291
Miano	34,449	24,431	23,116	19,039	16,728	14,494	10,341
Bilal	83,136	18,042	4,443	-	-	-	-
Bilal North	19,144	3,737	-	-	-	-	-
Kamal North	250,547	354,998	409,283	395,427	366,282	306,273	105,457
kausar	241	185	-	-	-	-	-
Naimat Basal	66,805	33,398	11,172	8,565	4,402	813	4,293
Naimat West	-	-	-	-	-	17,121	111,935
Nando	-	-	-	-	-	-	9
Rahim	10,390	1,748	-	-	-	-	-

Contd..

Table A-41: Crude Oil Production by Field

US Barrels

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Rahim North	-	-	-	-	-	237,606	269,241
Umer	98,986	53,921	36,276	23,197	12,255	278	-
Usman	387	294	-	-	-	-	-
Mehar	-	-	-	-	-	-	-
Rehmat	25,200	12,614	46,513	-	-	-	-
Saqib	-	-	-	39,369	23,887	14,604	7,376
Adam	-	-	166,173	363,264	97,498	31,572	54,661
Kandhkot	13,339	15,619	14,234	23,165	8,754	6,420	5,461
Mazarani	21,151	22,038	21,103	16,043	13,711	8,256	5,587
Akri North	82,379	69,645	49,333	39,327	36,541	57,241	33,567
Ali	4,770	-	12,146	13,146	10,277	9,861	5,354
Ali Zaur	42,290	17,177	4,137	1,268	-	129	-
Aassu	-	-	-	-	-	-	349,168
Bachal	-	-	-	-	-	-	107,260
Bakhsh Deep	-	-	-	-	-	-	18,197
Baqar Deep			12,168	6,522	2,969	658	
Bhatti/Nakurji	50,315	42,425	45,048	25,982	12,968	3,855	186
Bijoro	-	-	-	-	-	70,830	138,346
Bukhari	13,763	6,884	2,950	-	-	-	-
Bukhari Deep	15,725	16,074	10,903	6,099	5,032	3,319	878
Buzdar	68,329	62,441	54,306	29,967	637	-	-
Buzdar South	3,669	21,070	8,347	-	-	-	-
Buzdar South/Deep	72,372	55,929	110,495	68,902	66,150	231,891	191,073
Dabhi,Dabhi N.& S	125,500	87,867	26,270	1,478	21,660	31,188	108,284
Duphri	110,758	90,982	79,623	67,114	27,950	5,923	325
Fateh Shah	50	-	791	-	-	-	-
Fateh Shah North	356	59	1,288	1	-	-	-
Gagani	-	-	-	-	-	-	1,687
Gharo	-	-	-	-	55,335	85,089	39,479
Ghungro	99,627	69,528	133,623	103,836	76,414	57,679	45,984
Golarchi	931	7,291	4,125	3,884	3,133	76	57
Halipota	69,757	67,200	64,344	49,095	38,694	34,849	58,585
Jabo	260,780	385,264	427,703	204,403	161,504	269,557	142,917
Jagir	68,842	74,091	73,060	84,384	98,508	58,391	45,434
Jalal	34,425	52,058	17,462	8,074	1,481	14,902	703
Jara Deep	-	-	-	-	-	-	127,671

Contd..

Table A-41: Crude Oil Production by Field

US Barrels

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Jogwani	20,748	3,663	3,044	3,604	6,777	8,623	5,016
Jhaberi, Jhaberi South	13,219	23,460	6,075	2,865	95	-	28,343
Kakejani	-	-	-	-	5		
Kato	12,171	5,873	2,770	878	201	-	-
Keyhole-G	5,975	11,840	204	-	-	-	-
Khaskheli	89,040	97,255	96,158	55,507	59,151	54,722	69,041
Khaskheli Downthrown	-	-	-	8,868	10,469	24,415	18,234
Khaskheli North	-	-		-	-	7,764	13
Khorewah& K. Deep	36,646	46,171	1,139	50,549	54,545	39,814	30,182
Koli-	-	-	47,643	-	-	6,611	76,468
Laghari	40,382	49,924	49,660	44,910	38,674	34,707	35,521
Liari	40,347	18,368	2,466	5,030	1,581	-	-
Liari Deep	8,317	518	124	64	660	13,298	64
Lodano	-	-	-	-	-	5,265	1,93,364
Lodano Deep	-	-	-	-	-	-	2,23,301
Makhdumpur	8,266	947	9	325	785	553	14,898
Malah	-	-	-	-	-	14,389	7,918
Matli	-	202	25,688	40	277	3,700	5,113
Mazari	45,991	49,634	46,296	38,639	34,511	54,774	59,158
Mazari South	208,267	197,930	189,429	198,981	184,837	153,570	1,43,669
Mazari South Deep	440,306	440,065	416,892	272,612	221,811	214,379	2,20,791
Mewa	-	-	-	-	-	192	132
Mohano	-	-	-	-	21,258	26,660	26,386
M.Ismail& M. Ismail Deep	34,224	53,766	17,319	10,096	13,703	42,663	13,985
Missri	3,397	65,642	235,235	229,254	109,961	57,422	33,754
Muban	27,473	22,018	14,596	21,417	28,553	48,603	97,143
Mulaki	-	-	-	-	27,211	744	-
Murid	-	-	-	-	-	-	79,254
Paniro Deep	-	-	-	-	12,983	18,610	4,779
Paniro	61,227	48,185	40,412	34,528	18,812	85,187	79,426
Pir Apan	-	-	-	-	50,220	67,135	-
Qabul	-	-	-	-	-	2,812	2,062
Rajo	371	-	195	-	-	5,744	-
Rind	111,004	59,060	38,767	19,858	33,249	12,603	149
Sakhi, Sakhi S & S Deept	132,321	240,610	224,479	95,233	38,523	28,918	52,103
Shah Dino	14,681	6,018	3,314	-	-	-	-

Contd..

Table A-41: Crude Oil Production by Field

US Barrels

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Shekhano	-	-	-	-	-	95,954	53,311
Shekhano Deep	-	-	-	-	-	103,794	96,901
Shorab Deep	-	-	-	-	-	-	7,005
Sutiari Deep	-	-	-	-	-	-	12,449
Sumar Deep	-	-	-	-	-	-	181,912
Sonro	407,798	453,222	464,684	340,217	272,898	1,247,739	819,102
Tajedi	57,509	49,971	42,621	38,225	32,715	45,024	43,943
Tangri	117,473	119,093	74,097	66,227	46,264	46,159	43,283
Tangri Deep	-	-	197	53,109	22,331	11,572	9,588
Tando Ghulam Ali	45,000	31,106	38,723	24,724	16,550	10,323	10,826
Thebo	-	-	-	-	-	-	66,565
Turk&Turk deep	54,556	27,083	25,402	15,596	23,945	33,157	48,367
Zaur	191,985	255,115	461,765	273,099	158,022	115,091	88,390
Zaur Deep	6,797	6,392	3,706	2,771	9,439	3,589	282
Zaur South & West	135,385	67,983	20,525	4,542	379	-	-
Sindh Total	**14,370,147**	**14,330,026**	**13,260,411**	**11,012,109**	**9,682,759**	**11,311,377**	**11,641,150**
Balochistan							
Sui	13,399	12,524	11,992	13,742	13,730	14,599	17,490
Uch	12,714	11,697	9,683	8,286	6,643	5,555	10,493
Balochistan Total	**26,113**	**24,221**	**21,675**	**22,028**	**20,373**	**20,154**	**27,983**
Khyber Pakhtunkhwa							
Chanda	2,058,926	1,818,588	1,691,088	1,523,822	1,436,673	199,736	965,494
Mela	1,721,515	2,125,126	2,044,641	1,684,676	1,734,178	1,333,192	281,383
Nashpa	-	-	219,472	1,901,739	3,233,789	4,843,059	6,297,992
Makori	771,595	676,310	297,578	597,641	520,776	144,132	52,893
Makori East	-	-	-	12,370	17,351	1,560,855	3,703,935
Mamikel	-	-	-	-	557,765	555,827	816,820
Manzalai	137,231	149,717	1,049,932	2,123,062	1,325,083	917,454	432,906
Maramzai	-	-	-	-	643,809	682,117	1,305,536
Tolanj	-	-	-	-	313	-	-
KP Total	**4,689,267**	**4,769,741**	**5,302,711**	**7,843,310**	**9,469,737**	**11,246,372**	**14,856,959**
Grand Total	**25,603,082**	**24,033,295**	**23,706,147**	**24,041,156**	**24,573,312**	**27,840,975**	**31,584,725**
TOE	-	**3,224,215**	**3,180,326**	**3,225,269**	**3,296,661**	**3,735,038**	**4,237,285**
Barrels Per Day	-	**65,845**	**64,948**	**65,866**	**67,140**	**76,277**	**86,533**

Source:-Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan

Table A-42: Petroleum Energy Products Consumption by Sector

(Tones)
(TOE)

Sector/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Domestic	120,961	97,332	90,312	85,449	79,448	97,847	100,679
	124,781	100,403	93,157	88,148	81,957	100,937	103,859
Industrial *	1,071,191	969,193	984,690	1,355,443	1,419,125	1,379,096	1,297,035
	1,082,885	977,451	998,396	1,356,404	1,423,423	1,384,433	1,305,675
Agriculture **	109,351	69,793	58,072	40,597	23,297	31,828	46,655
	113,889	72,710	60,449	42,294	24,271	33,158	48,605
Transport	9,384,482	8,837,197	8,860,880	8,892,268	9,265,883	9,817,546	10,299,718
	9,881,537	9,306,722	9,338,001	9,373,686	9,777,775	10,367,969	10,883,469
Power	7,083,933	7,570,418	8,814,274	8,138,956	7,594,663	7,749,007	9,006,085
	6,910,062	7,384,157	8,601,831	7,932,662	7,409,913	7,561,343	8,791,738
Other Government	310,501	367,266	323,472	373,794	295,847	317,805	358,512
	325,631	385,328	339,403	392,406	310,362	333,444	376,403
Total:	18,080,419	17,911,199	19,131,700	18,886,507	18,678,263	19,393,129	21,108,684
	18,438,785	18,226,771	19,431,286	19,185,600	19,027,701	19,781,283	21,509,748
Annual Growth Rate	7.32%	-0.94%	6.81%	-1.28%	-1.10%	3.83%	8.85%

Source**: -** Pakistan Energy Year Book 2014 published by Hydrocarbon Development Institute of Pakistan

Note: - * Include consumption in cement manufacturing industry.

** HSD consumption for tractors in agriculture sector is not separately available and is included in the transport sector. Agriculture sector represents LDO only.

Table A-43: Petroleum Energy Products Consumption by Province

(TOE)

Province	Year						
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Balochistan	1,845,742	2,184,332	2,157,487	2,182,333	2,062,221	2,145,291	1,986,648
Khyber Pakhtunkhwa	1,649,405	1,390,361	1,324,510	1,261,333	1,296,838	1,165,213	1,112,208
Punjab	10,174,269	10,680,792	11,523,209	10,926,861	11,386,694	11,979,554	13,272,086
Sindh	4,619,081	3,785,017	4,159,298	4,600,108	4,082,082	4,155,522	4,801,705
A.J. Kashmir	150,288	186,269	266,781	214,965	199,865	193,615	193,478
Gilgit Baltistan	-	-	-	-	-	56,290	57,582
FATA	-	-	-	-	-	85,799	86,041
Total:	18,438,785	18,226,771	19,431,286	19,185,600	1,902,701	19,781,283	21,509,748
Annual Growth Rate	7.57%	-1.15%	6.61%	-1.26%	-0.82%	3.96%	8.74%

Source: - Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan

Table A-44: Consumption of Petroleum (Energy) Products by Fuel

Unit : Tones
(TOE)

Product	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Aviation Fuels	575,493	624,600	651,553	700,719	633,903	620,059	648,802
	596,674	647,729	675,496	726,278	656,900	642,660	672,453
Motor Spirit 87RON	1,449,864	1,518,381	1,924,890	2,244,910	2,752,760	3,340,537	3,865,113
	1,549,035	1,622,238	2,056,552	2,398,462	2,941,049	3,569,030	4,129,487
HOBC	9,706	9,572	10,788	12,212	12,083	12,597	12,871
	10,319	10,177	11,470	12,984	12,847	13,393	13,684
HSD	8,225,663	7,562,882	7,268,915	6,700,436	6,800,778	6,820,149	6,888,980
	8,647,640	7,950,858	7,641,810	7,044,168	7,149,658	7,170,023	7,242,385
E-10	-	-	4,926	15,829	14,717	9,141	2,644
	-	-	5,067	16,282	151,998	9,402	2,720
LDO	115,197	76,010	67,342	44,904	27,793	35,742	49,767
	120,012	79,187	70,157	46,781	28,955	37,236	51,847
Furnace Oil	7,475,886	7,940,530	9,039,313	8,921,327	8,284,272	8,388,598	9,464,150
	7,279,270	7,731,694	8,801,579	8,686,696	8,066,396	8,167,978	9,215,243
Kerosene	228,610	179,224	163,973	246,170	151,957	166,306	176,357
	235,834	184,887	169,155	253,949	156,759	171,561	181,930
Total	**18,080,419**	**17,911,199**	**19,131,700**	**18,886,507**	**18,678,263**	**19,393,129**	**21,108,684**
	18,438,785	**18,226,771**	**19,431,286**	**19,185,600**	**19,027,701**	**19,781,283**	**21,509,748**
Annual Growth Rate	7.32%	-0.94%	6.81%	-1.28%	-1.10%	3.83%	8.85%

Source: **-** Pakistan Energy Year Book 2014 Published by Hydrocarbon Development Institute of Pakistan

Table A-45: Consumption of Indigenous Coal by Sector

(Tones)

Sector	Power (WAPDA)	Brick-Kiln Industry*	Domestic	Cement/ Other Industry**	Pak Steel***	Total
2000-01	205,782	2,837,872	998	-	-	3,044,652
2001-02	249,421	2,577,546	1,069	-	-	2,828,036
2002-03	203,623	2,606,852	1,111	957,169	1,121,000	4,889,755
2003-04	184,992	2,589,445	1,047	2,508,238	781,000	6,064,722
2004-05	179,887	3,906,738	-	2,535,168	1,272,000	7,893,793
2005-06	149,334	4,221,825	-	2,778,379	564,450	7,713,988
2006-07	164,397	3,277,472	994	4,140,986	310,209	7,894,058
2007-08	162,200	3,760,707	1,000	5,720,972	465,968	10,110,847
2008-09	112,520	3,274,789	813	3,801,751	1,200,000	8,389,873
2009-10	125,482	3,005,192	-	4,577,007	430,822	8,138,503
2010-11	96,488	3,003,603	-	4,187,935	429,123	7,717,149
2011-12	104,604	3,108,199	-	4,181,897	275,000	7,669,700
2012-13	63,039	2,696,022	-	3,865,942	263,998	6,889,001
2013-14	160,710	2,727,587	-	3,559,178	109,977	6,557,452

Source: - Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan

Note: - * Estimated by deducting other uses of indigenous coal from the total production.
** Include indigenous as well as imported coal.
*** Imported coal/cock used as cock in Pak Steel.

Table A-46: Associated Gas Production by Field

(Million cubic feet)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Chanda (KP)	3,032	2,682	2,754	2,612	2,812	2,604	2,048
Bhalsyedian (Punjab)	-	-	-	-	-	-	-
Filmkassar (Punjab)	-	-	-	-	29	48	44
Jakhro (Sindh)	-	-	-	-	-	-	1,285
Kal (Punjab)	-	-	-	-	12	28	26
Kunar (Sindh)	-	-	-	-	1,191	3,077	4,292
Missa Keswal (Punjab)	-	-	-	-	71	139	80
Pasalhi (Sindh)	-	-	-	-	73	243	243
Rajan (Punjab)	-	-	-	-	103	254	265
Toot (Punjab)	-	-	-	-	108	371	292
Bhangali (Punjab)	156	161	68	-	-	-	-
Dhurnal (Punjab)	468	429	335	316	284	214	168
Balkassar (Punjab)	20	20	22	22	21	22	21
Dhulian (Punjab)	984	876	856	847	848	849	858
Meyal (Punjab)	1,439	1,328	1,139	1,074	899	966	1,047
Pariwali (Punjab)	7,025	5,789	5,113	3,942	3,229	2,709	2,786
Pindori (Punjab)	3,246	929	1,680	1,214	638	356	278
Turkwal (Punjab)	51	28	18	18	18	18	18
Aassu (Sindh)	-	-	-	-	-	-	36
Akri North (Sindh)	10	28	20	14	12	18	16
Ali Zaur (Sindh)	214	44	125	25	12	10	-
Bachal (Sindh)	-	-	-	-	-	-	231
Bijoro (Sindh)	-	-	-	-	-	23	22
Dabhi N (Sindh)	728	361	12	0	24	17	206
Dabhi Dabhi S (Sindh)	2,506	715	533	130	132	115	367
Duphuri (Sindh)	357	548	1,487	1,329	1,047	561	455
Halipota (Sindh)	232	166	229	95	104	228	375
Jagir (Sindh)	11	32	31	34	32	23	16
Jhaberi South (Sindh)	27	214	531	647	163	136	24
Khaskeli (Sindh)	47	156	166	71	55	58	110
Laghari (Sindh)	15	55	61	59	57	49	57
Liari (Sindh)	611	339	136	43	69	6	-
Mazari (Sindh)	25	66	160	145	74	172	115
Mazari S & S Deep (Sindh)	586	498	594	443	367	1,833	2,822
Meyun Ismail Deep	2,163	4,070	5,196	2,721	2,794	1,329	449
Murid (Sindh)	-	-	-	-	-	-	27
Qabul (Sindh)	-	-	-	-	-	3	1
Rajo (Sindh)	-	-	-	-	-	2	0
Sakhi Deep & S Deep(Sindh)	8,732	6,401	4,233	2,034	1,264	744	578
Shekhano Deep (Sindh)	-	-	-	-	-	16	58
Tangri (Sindh)	95	97	71	44	41	47	40
Zaur & West (Sindh)	1,724	1,012	1,133	439	171	540	303
Zaur Deep (Sindh)	447	269	222	135	660	374	88
Zaur South (Sindh)	219	158	146	91	47	-	-
Others (Sindh)**	189	246	174	91	85	96	93
Total: Million CFt	**35,357**	**27,717**	**27,245**	**18,636**	**17,545**	**18,296**	**20,239**
TOE	1,061,935	851,967	831,021	831,022	517,452	490,732	532,382
Annual Growth Rate	-13.54%	-21.61%	-1.70%	-31.60%	-5.86%	4.28%	10.62%

Source**:-** Pakistan Energy Year Book 2014 Published by Hydrocarbon Development Institute of Pakistan
Note: - ** Includes Ghungro, Gharo, Mohano, Muban & Tajedi.

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)
(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Zamzama (Sindh)	138,872	163,028	185,048	143,127	161,899	147,726	104,570
	2,666,344	3,260,564	3,700,658	2,862,533	3,108,461	2,821,567	1,997,287
Kadanwari (Sindh)	19,786	19,453	20,551	35,471	34,199	44,939	52,472
	431,335	424,069	448,007	748,438	721,599	948,213	1,107,159
Bhit & Badhra (Sindh)	121,683	133,968	140,548	139,088	142,116	137,259	124,958
	2,445,828	2,692,757	2,825,015	2,795,669	2,856,532	2,758,906	2,511,656
Lundali (Sindh)	-	-	-	-	-	-	1,182
	-	-	-	-	-	-	21,863
Haseeb (Sindh)	-	-	-	-	2,632	3,765	4,063
	-	-	-	-	50,958	71,150	76,786
Halini (Punjab)	-	-	-	-	-	-	100
	-	-	-	-	-	-	2,336
Mari (Sindh)	171,418	169,705	180,695	186,098	205,455	209,302	212,259
	2,999,821	2,969,844	3,162,159	3,200,888	3,533,830	3,662,791	3,714,530
Koonj (Sindh)	-	-	-	-	481	747	628
	-	-	-	-	9,966	15,465	13,063
Sujawal (Sindh)	-	-	-	-	-	1,306	3,462
	-	-	-	-	-	31,734	84,119
Makori (KP)	10,314	9,349	3,837	8,594	8,144	3,036	1,206
	268,174	243,072	99,759	223,434	211,738	78,938	31,359
Makori East (KPK)	-	-	-	49	70	5,528	14,255
	-	-	-	1,147	1,642	129,365	333,559
Manzalai (KP)	12,550	13,392	61,513	102,697	79,619	61,493	36,480
	307,480	329,437	1,513,219	2,526,339	1,958,619	1,512,726	897,411
Mamikhel (KPK)	-	-	-	-	10,032	11,563	17,844
	-	-	-	-	256,812	296,018	456,808
Maramzai (KPK)	-	-	-	-	16,550	18,227	35,053
	-	-	-	-	425,329	468,422	900,862
Tolanj (KPK)	-	-	-	-	200	-	-
	-	-	-	-	4,680	-	-
Bahu (Punjab)	-	-	-	2,245	7,371	7,923	9,916
	-	-	-	28,512	93,617	100,621	125,936
Baloch (Sindh)	-	-	-	-	-	191	619
	-	-	-	-	-	5,233	16,947
Bhullan Shah (Sindh)	265	-	-	-	-	-	-
	6,837	-	-	-	-	-	-
Bobi (Sindh)	4,566	5,322	4,527	4,880	5,798	5,832	5,895
	142,003	165,514	140,790	151,768	180,312	181,369	183,329

Contd.

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)

(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
chak 2 (Sindh)	-	-	-	-	-	1,333	2,835
	-	-	-	-	-	35,845	76,275
chak 7A (Sindh)	-	-	-	-	-	794	418
	-	-	-	-	-	22,310	11,758
Dakhni (Punjab)	12,260	17,328	17,913	16,747	16,800	16,978	17,076
	310,178	438,398	453,199	423,699	425,048	431,243	433,730
Dachrapur	-	-	-	-	-	-	1,349
	-	-	-	-	-	-	29,950
Dhodak (Punjab)	9,836	2,169	1,149	759	1,728	1,971	1,716
	239,015	52,707	27,921	18,298	42,000	53,795	46,858
Gopang (Sindh)	-	-	-	112	-	-	2
	-	-	-	3,349	-	-	60
Loti (Balochistan)	10,864	11,437	11,731	11,172	9,967	8,729	8,187
	218,366	229,884	235,793	224,557	200,337	174,578	163,741
Maru-Reti (Sindh)	-	-	-	-	-	-	1,781
	-	-	-	-	-	-	41,670
Mela (KP)	3,809	5,936	6,265	4,804	6,699	6,561	4,038
	106,271	165,614	174,794	134,032	186,913	183,058	112,662
Nashpa (KPK)	-	-	583	6,504	11,503	17,222	24,205
	-	-	15,799	176,258	311,725	464,984	653,546
Nandpur/Panjpir	12,155	17,006	15,036	11,727	11,294	6,665	4,181
(Punjab)	65,637	91,832	81,194	63,326	60,988	35,989	15,471
NooraiJagir (Sindh)	1,205	717	56	90	224	172	357
	34,584	20,578	1,607	2,583	6,434	4,939	10,255
Nur/Bagla (Sindh)	-	-	-	-	-	1,204	2,842
	-	-	-	-	-	29,130	68,787
Pakhro (Sindh)	-	-	405	913	459	203	240
	-	-	9,558	21,547	10,827	4,828	5,721
Pasakhi Deep/ Kunar (Sindh)	-	-	-	-	17,811	41,390	41,357
	-	-	-	-	381,164	885,748	885,030
Pirkoh (Balochistan)	6,521	5,250	4,040	3,221	6,243	5,780	5,426
	135,637	109,200	84,032	66,997	129,852	117,919	110,700
Qadirpur (Sindh)	193,174	199,817	180,861	177,172	195,788	185,907	180,792
	4,095,289	4,236,120	3,818,453	3,756,046	4,150,710	3,941,225	3,832,786

Contd..

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)
(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Sadkal (Punjab)	783	744	730	691	804	680	519
	21,689	20,609	20,221	19,141	22,284	19,442	14,844
Sari/Hundi (Sindh)	766	973	679	629	292	525	766
	15,703	19,947	13,920	12,895	5,987	11,029	16,089
Shekhan (Sindh)	-	-	-	914	509	98	-
	-	-	-	21,388	11,921	2,299	-
Uch (Balochistan)	70,812	71,166	67,452	69,486	88,768	80,713	104,485
	715,201	718,777	681,265	701,809	896,553	903,987	1170,226
Miano (Sindh)	36,431	30,055	29,179	27,265	27,537	25,087	23,121
	801,489	670,227	560,684	608,009	614,075	559,440	547,968
Latif (Sindh	-	1,307	8,716	15,083	23,592	15,877	36,192
	-	30,839	205,701	355,951	556,771	374,697	854,131
Tajjal (Sindh)	-	3,944	7,666	8,167	8,352	11,486	4,272
	-	93,080	180,909	192,732	197,107	271,070	100,819
Sawan (Sindh)	152,889	137,379	115,526	111,371	82,940	63,986	49,395
	3,332,987	2,994,859	2518,458	2427,885	1,808,092	1,394,895	1165,722
Ahmad (Sindh)	-	-	9	21	8	-	-
	-	-	191	475	174	-	-
Ali (Sindh)	611	11	1,128	1,404	1,476	1,595	1,153
	15,202	274	27,744	34,549	36,301	40,022	28,701
Rahim (Punjab)	21	6	-	-	-	-	-
	546	165	-	-	-	-	-
Ratana (Punjab)	519	501	3101	4,567	5,964	4,689	3,263
	13,283	13,177	81,556	120,578	155,071	119,095	84,507
Block-22 (Sindh)	5,412	5,613	5,321	4,635	3,657	3,027	2,422
	82,808	85,883	81,408	70,909	55,957	46,307	37,049
Badar (Sindh)	5,723	5,494	5,168	5,174	5,223	4,821	4,712
	78,402	75,274	70,800	70,881	71,549	66,047	64,552
Rehman (Sindh)	-	-	-	-	-	-	3,726
	-	-	-	-	-	-	75,256
Bela (Punjan)	-	-	67	508	380	83	134
	-	-	1,788	13,671	10,184	2,024	3,266
Domial (Punjab)	-	-	-	122	1,083	395	216
	-	-	-	2,861	25,343	9,242	5,049
Mehar (Sindh)	-	-	-	-	-	-	4,216
	-	-	-	-	-	-	108,782

Contd..

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)
(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Rahmat (Sindh)	8,800	5,106	5,863	-	-	-	-
	218,241	126,634	145,410	-	-	-	-
Saqib (Sindh)	-	-	-	4,834	4,609	3,369	2,298
	-	-	-	113,118	107,851	78,844	53,784
Adhi (Punjab)	14,771	15,053	15,879	14,127	13,142	12,081	13,562
	440,184	448,566	473,198	420,996	391,632	360,017	404,139
Adam (Sindh)	-	-	1,690	4,836	1,949	754	3,778
	-	-	46,815	133,960	53,987	20,886	104,652
Chachar (Sindh)	4,695	3,560	2,825	2,332	2,037	1,541	1,186
	89,197	66,568	52,819	43,600	38,092	28,817	22,180
Kandhkot (Sindh)	52,646	58,051	59,717	56,118	70,536	60,086	56,802
	1,047,654	1,155,210	1,188,378	1,116,750	1,403,666	1,195,711	1,130,362
Mazarani (Sindh)	3,996	4,089	4,129	3,925	3,478	2,474	2,088
	96,308	98,546	99,518	94,584	83,820	59,623	50,311
Sui (Balochistan)	231,381	217,506	205,170	196,193	190,825	181,371	159,030
	5,391,180	5,067,892	4,780,454	4,571,290	4,446,223	4,225,944	3,705,395
Sara & Suri (Sindh)	1,753	893	560	137	-	-	-
	33,475	17,056	10,699	2,624	-	-	-
Rodho (Punjab)	8,066	1,3921	6,411	10,425	9,686	8,462	6,684
	192,769	332,706	153,211	249,156	231,503	202,243	159,754
Amdani (Sindh)	-	-	-	-	-	-	3
	-	-	-	-	-	-	49
Bakhsh Deep (Sindh)	-	-	-	-	-	-	2,943
	-	-	-	-	-	-	63,283
Bhatti (Sindh)	3,013	2,331	1,883	1,143	584	338	322
	76,528	59,209	47,830	29,038	14,824	8,893	8,458
Baqar Deep (Sindh)	-	-	2,443	2,485	784	235	-
	-	-	59,864	60,885	19,217	5,745	-
Bilal (Sindh)**	2,124	1,119	300	-	-	-	-
	46,096	24,276	6,512	-	-	-	-
Bilal North (Sindh)**	643	150	-	-	-	-	-
	13,761	3,536	-	-	-	-	-
Bukhari (Sindh)	1,222	863	353	40	-	-	-
	35,429	25,023	10,243	1,153	-	-	-
Bukari Deep (Sindh)	2,299	3,418	2,070	2,431	1,326	830	713
	58,612	87,152	52,777	61,995	33,811	21,245	18333

Contd..

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)
(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Buzdar (Sindh)	19,537	17,973	15,591	8,526	299	0	67
	439,583	404,383	350,793	191,844	6,738	5	1,516
Buzdar S & S Deep (Sindh)	1,721	2,221	2,451	795	1,348	4,245	5,776
	38,714	49,977	55,145	17,898	30,337	95,516	135,730
Fateh Shah (Sindh)	344	304	109	-	-	-	-
	8,644	7,628	2,724	-	-	-	-
Fateh Shah North (Sindh)	549	318	514	384	216	192	230
	13,778	7,986	12,911	9,643	5,415	4,832	5,790
Gagani (Sindh)	-	-	-	-	-	-	91
	-	-	-	-	-	-	1,962
	1,507	2,912	2,793	1,669	1,019	337	295
Golarchi (Sindh)	36,773	71,055	68,147	40,731	24,857	8,216	7,174
Haider Deep (Sindh)	-	-	-	154	155	98	54
	-	-	-	3,593	3,624	2,284	1,268
Khaskeli North (Sindh)	-	-	-	-	-	490	25
	-	-	-	-	-	13,660	705
	888	654	434	281	209	520	68
Liari Deep (Sindh)	23,360	17,193	11,407	7,402	5,493	14,660	1,851
Lodano (Sindh)	-	-	-	-	-	489	1,879
	-	-	-	-	-	12,367	47,735
Lodano Deep(Sindh)	-	-	-	-	-	-	2,330
	-	-	-	-	-	-	56,614
	474	3,283	1,010	330	284	523	182
Jabo(Sindh)	10,187	70,585	21,705	7,105	6,102	11,916	3,977
Jalal (Sindh)	2,156	3,619	2,195	849	170	2,227	614
	53,905	90,477	54,880	21,214	4,251	55,674	15,106
Jarar Deep (Sindh)	-	-	-	-	-	-	4,345
	-	-	-	-	-	-	104,277
Jhok (Sindh)	-	-	-	-	-	-	67
	-	-	-	-	-	-	1,752
Kamal North	773	728	1,117	1,166	873	811	499
(Sindh)	22,790	18,117	27,814	29,032	21,737	25,289	15,454
Kausar (Sindh)	6,736	4,111	3,985	2,810	1,972	1,413	1,006
	152,228	93,328	90,460	63,785	44,769	32,082	22,845
Malah (Sindh)	-	-	-	-	-	447	52
	-	-	-	-	-	11,970	1,436
Mewa (Sindh)	-	-	-	-	-	322	189
	-	-	-	-	-	7,877	4,674

Contd..

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)
(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Jhaberi (Sindh)	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
Naimat Basal (Sindh)**	4,373	3,744	2,915	2,383	1,983	1,782	2,040
	101,902	89,110	69,378	56,006	46,593	38,491	48,968
Naimat West (Sindh)	-	-	-	-	-	1,004	13,253
	-	-	-	-	-	17,773	238,560
Nando (Sindh)	-	-	-	-	-	-	7
	-	-	-	-	-	-	194
Jogwani (Sindh)	9,008	9,025	8,918	7,720	6,225	3,395	836
	201,788	202,168	199,767	172,926	139,445	80,461	19,567
Kato (Sindh)	432	160	43	64	25	33	30
	12,603	4,676	1,242	1,857	738	953	883
Khorewah (Sindh)	4,539	4,314	3,872	3,868	3,709	2,516	2,055
	115,734	110,006	98,740	98,646	94,572	66,914	53,835
Khorewah Deep (Sindh)	303	966	185	274	220	398	477
	7,585	24,140	4,621	6,842	5,496	10,068	11,914
Koli (Sindh)	-	-	-	-	-	20	145
	-	-	-	-	-	489	3,514
Makhpur&Deep (Sindh)	3,609	1,294	1,632	1,529	1,188	797	377
	74,347	26,654	33,627	31,507	24,481	16,408	8,858
Matli (Sindh)	89	256	429	58	85	73	40
	2,159	6,187	10,375	2,062	2,068	1,771	983
Missri (Sindh)	1,909	2,513	3,731	1,025	564	914	53
	34,369	45,226	67,154	18,447	10,157	16,460	962
Mulaki (Sindh)	-	-	-	-	3,488	639	212
	-	-	-	-	84,062	16,795	5,549
Nurpur Deep (Sindh)	-	-	-	-	139	1,109	558
	-	-	-	-	3,262	25,957	13,064
Pir (Sindh)	206	153	155	99	54	12	3
	5,132	3,821	3,847	2,476	1,342	287	63
Pir Apan (Sindh)	-	-	-	-	2,071	3,060	-
	-	-	-	-	41,839	61,816	-
Piaro Deep (Sindh)	-	-	-	-	801	1,442	401
	-	-	-	-	18,741	33,740	9,381
Qasim Deep (Sindh)	-	-	-	-	-	-	3,187
	-	-	-	-	-	-	71,391

Contd..

Table A-47: Non-Associated Gas Production by Field

(Million cubic feet)
(TOE)

Field/Province	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2103-14
Ragni Deep (Sindh)	-	-	-	-	-	-	30
	-	-	-	-	-	-	666
Rehim North (Sindh)	-	-	-	-	-	2,646	1,758
	-	-	-	-	-	57,144	37,095
Raj (Sindh)	-	-	-	-	-	-	-
	-	1	5	6	3	2	-
Rajpari (Sindh)	-	-	-	-	-	-	1
	-	-	-	-	-	-	42
Rind (Sindh)	60	51	37	8	69	21	-
	1,299	1,089	802	166	1,489	547	-
Shekhano (Sindh)	-	-	-	-	-	7,099	40
	-	-	-	-	-	170,382	949
Sonro (Sindh)	3,025	2,819	2,671	1,618	1,708	1,420	586
	65,033	60,618	57,433	34,797	36,717	32,806	13,350
Sohrab Deep (Sindh)	-	-	-	-	-	-	3,583
	-	-	-	-	-	-	87,437
Sumar Deep (Sindh)	-	-	-	-	-	-	5,434
	-	-	-	-	-	-	142,904
Sutiari Deep (Sindh)	-	-	-	-	-	-	2,543
	-	-	-	-	-	-	43,223
Tangri Deep (Sindh)S	-	-	86	3,804	1,971	1,430	834
	-	-	2,167	96,247	49,873	36,189	21,107
Thebo (Sindh)	-	-	-	-	-	-	576
	-	-	-	-	-	-	15,270
Turk (Sindh)	1,540	1,423	1,400	1,355	1,266	981	13,350
	41,115	38,007	37,388	36,179	33,793	26,083	18,607
Turk Deep (Sindh)	3,159	3,054	2,699	2,276	2,566	3,246	3,627
	70,452	68,093	60,180	50,748	65,958	85,368	94,671
Umar (Sindh)**	925	603	571	499	292	-	-
	25,816	16,152	15,313	13,373	7,814	-	-
Usman (Sindh)**	10,765	7,807	5,641	3,713	2,608	1,947	1,469
	244,372	177,217	128,058	84,274	59,212	44,195	33,347
Others * (Sindh)	1,554	1,528	1,628	1,141	1,160	1,104	876
	38,849	38,194	40,704	28,536	29,003	27,596	21,902
	-	1,432,962	1,455,602	1,452,954	1,541,414	1,487,544	1,473,269
Total	-	29,407,165	29,981,416	30,109,662	31,522,071	30,660,717	30,419,795

Source:-Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan

* Others Include Paniro, Shah Dino, Tando Ghulam Ali.

Table A-48: Natural Gas Consumption by Sector

(Million cubic feet)
(TOE)

Sector	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Domestic	204,035	214,113	219,382	232,244	261,915	291,917	269,135
	4,774,412	5,010,247	5,133,540	5,434,507	6,128,822	6,830,868	6,297,770
Commercial	33,905	35,536	36,955	36,466	39,627	40,689	38,117
	793,367	831,547	864,747	853,313	927,272	952,115	891,927
General Industries *	305,662	305,042	320,476	279,717	286,055	274,450	250,490
	7,152,491	7,137,980	7,499,138	6,545,378	6,693,679	6,422,139	5,861,460
Pakistan Steel Mills	16,901	13,961	13,032	11,951	10,125	9,827	8,542
	395,483	326,687	304,949	279,653	236,925	229,952	199,883
Cement	12,736	7,305	1,944	1,378	1,266	586	522
	298,025	170,927	45,490	32,240	29,629	13,720	12,215
Fertilizer (as Feedstock)	160,062	162,028	175,631	175,912	168,694	148,782	164,378
	3,145,626	3,186,253	3,421,523	3,350,683	3,157,367	2,754,794	3,024,845
Fertilizer (as fuel use)	40,001	39,072	44,493	52,548	43,134	39,237	52,139
	782,979	765,787	860,424	990,662	817,280	727,491	963,123
Power	429,892	404,140	366,906	337,401	358,381	362,262	349,535
	8,491,536	7,830,065	7,106,962	6,493,766	6,732,876	7,084,177	6,602,422
Transport (CNG)	72,018	88,236	99,002	113,055	119,000	100,228	87,634
	1,685,232	2,064,722	2,316,646	2,645,493	2,784,591	2,345,331	2,050,646
Total	**1,275,212**	**1,269,433**	**1,277,821**	**1,240,671**	**1,288,198**	**1,267,980**	**1,220,493**
	27,519,152	**27,324,216**	**27,553,419**	**26,625,696**	**27,508,442**	**27,360,587**	**25,904,292**
Annual Growth Rate	4.45%	-0.45%	0.66%	-2.91%	3.83%	-1.57%	-3.75%

Source**:-** Pakistan Energy Year Book, 2014 published by Hydrocarbon Development Institute of Pakistan.
Note:- * Includes 5,091 MMcft as shrinkages at JJVL in 2005-06.

Table A-49: Natural Gas Consumption 2013-14 by Province

Unit: Million CFT
TOE

Sector	Punjab	Khyber Pakhtunkhwa	Sindh	Balochistan	Total
Domestic	159,303	28,443	72,075	9,315	269,135
	3,727,682	665,563	1,686,555	217,971	6,297,770
Commercial	25,287	2,555	9,539	735	38,117
	591,720	59,795	223,213	17,199	891,927
Gen-Industry*	93,678	14,259	136,321	6,232	250,490
	2,192,069	333,651	3,189,911	145,829	5,861,460
Pakistan Steel Mills	-	-	8,542	-	8,542
	-	-	199,883	-	199,883
Cement	-	200	322	-	522
	-	4,680	7,535	-	12,215
Fertilizer (as Feedstock)	108,943	-	55,436	-	164,378
	1,955,232	-	1,069,613	-	3,024,845
Fertilizer (as Fuel use)	27,081	52	25,007	-	52,139
	489,512	1,207	472,404	-	963,123
Power	61,573	-	202,431	85,531	349,535
	1,174,255	-	4,451,243	976,925	6,602,422
Transport	32,464	25,321	28,519	1,330	87,634
	759,663	592,516	667,345	31,122	2,050,646
Total	**508,329**	**70,830**	**538,192**	**103,143**	**1,220,493**
	10,890,133	**1,657,411**	**11,967,701**	**1,389,046**	**25,904,290**

Source:- Pakistan Energy Year Book 2014 published by Hydrocarbon Development Institute of Pakistan.

Table A-50: Gas Supplies to Fertilizer and Power Sectors by Source

(Million cubic feet)
(TOE)

Sector/Source	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Fertilizer Sector							
SNGPL	45,953	46,472	45,405	**42,327**	33,461	13,748	16,764
	1,075,299	1,087,447	1,062,478	99,045	782,995	321,702	392,278
SSGCL	26,504	26,881	27,439	24,100	19,957	18,785	16,950
	620,194	629,015	642,073	563,940	466,994	439,569	396,630
Mari Gas Field	127,606	127,747	147,280	162,032	158,410	155,487	182,803
	2,233,112	2,235,578	2,577,397	2,786,954	2,724,658	2,721,014	3,199,060
Total Fertilizer Sector	200,063	201,100	220,124	228,459	211,828	188,019	216,517
	3,928,605	3,952,040	4,281,947	4,341,346	3,974,647	3,482,285	3,987,968
Power Sector							
SNGPL	134,814	105,927	100,620	117,127	121,175	118,587	108,080
	3,154,657	2,478,694	2,354,515	2,740,773	2,835,503	2,774,939	2,529,082
SSGCL	126,766	131,540	115,110	79,610	68,883	73,063	66,598
	2,966,324	3,078,036	2,693,574	1,862,874	1,611,862	1,709,674	1,558,393
Bhalsyedan Gas Field	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
Kandhkot Gas Field	35,836	36,163	37,081	36,288	38,206	25,483	30,183
	713,134	719,653	737,909	722,131	760,292	507,119	600,647
Mari Gas Field	43,394	41,548	31,465	23,571	41,760	40,884	20,604
	759,397	727,081	550,631	405,416	718,280	715,478	360,574
Nandpur/Panjpir Gas Field	12,033	16,912	14,599	11,660	18,184	13,923	13,531
	64,980	91,326	78,835	62,967	98,196	75,184	50,064
Sara/Suri Gas Field	6,300	841	487	138	-	-	-
	118,486	16,065	9,305	2,643	-	-	-
Uch Gas Field	70,748	71,209	67,544	69,006	70,173	61,303	83,975
	714,558	719,209	682,194	696,962	708,743	686,599	940,514
Qadirpur Gas Field	-	-	-	-	-	29,018	26,564
	-	-	-	-	-	615,185	563,147
Total Power Sector	**429,892**	**404,140**	**366,906**	**337,401**	**358,381**	**362,262**	**349,535**
	8,491,536	**7,830,065**	**7,106,962**	**6,493,766**	**6,732,876**	**7,084,177**	**6,602,422**

Source:- Pakistan Energy Year Book 2014 blished by Hydrocarbon Development Institute of Pakistan.

Table A-51: Installed Capacity of Electricity Generation as on 30th June

Unit:MW

Type/Power Station	2008	2009	2010	2011	2012	2013	2014
A- Hydel (WAPDA)							
Tarbela	3478	3478	3478	3478	3478	3478	3478
Ghazi Barotha	1450	1450	1450	1450	1450	1450	1450
Mangla	1000	1000	1000	1000	1000	1000	1000
Warsak	243	243	243	243	243	243	243
Chashma	184	184	184	184	184	184	184
Jinah	-	-	-	-	-	96	96
AKHP	-	-	-	-	-	121	121
Dargai	20	20	20	20	20	20	20
New Jabban	-	-	-	-	-	-	22
Gomal Zam	-	-	-	-	-	-	17
Rasul	22	22	22	22	22	22	22
Shadiwal	14	14	14	14	14	14	14
Chichoki Malian	13	13	13	13	13	13	13
Nandipur	14	14	14	14	14	14	14
Kurram Garhi	4	4	4	4	4	4	4
Renala	1	1	1	1	1	1	1
Chitral	1	1	1	1	1	1	1
KKHP	-	-	-	-	72	72	72
A. 2 Hydel (AJKHEB)							
Jagran	30	30	30	30	30	30	30
Leepa	-	-	-	-	-	-	-
Others	6	7	7	7	10	10	7
A. 3 Hydel (Pravate sector)							
New Bong Escape Hydro	-	-	-	-	-	-	84
Hydel Sub-Total	**6479**	**6481**	**6481**	**6481**	**6556**	**6773**	**6893**
B. 1 Thermal (WAPDA)							
GTPS Shahdra	59	59	59	59	44	44	59
SPS Faisalabad	132	132	132	132	132	132	132
GTPS Faisalabad	244	244	244	244	244	244	244
NGPS Multan	195	195	195	195	130	130	195
TPS Muzaffar Garh	1350	1350	1350	1350	1350	1350	1350
TPS Guddu	1655	1655	1655	1655	1655	1655	1655
GTPS Kotri	174	174	174	174	174	174	174
TPS Jamshoro	850	850	850	850	850	850	850
FBC Lakhra	150	150	150	150	50	50	150
TPS Quetta	35	35	35	35	35	35	35
GTPS Panjgur	39	39	39	39	39	39	39
TPS Pasni	17	17	17	17	17	17	17
Thermal WAPDA Sub-Total	**4900**	**4900**	**4900**	**4900**	**4720**	**4720**	**4900**

Contd…

Table A-51: Installed Capacity of Electricity Generation as on 30th June

Unit:MW

Type/Power Station	2008	2009	2010	2011	2012	2013	2014
B.2. Thermal (KESC)							
TPS Korangi	316	250	250	250	125	88	-
GTPS Korangi Town	80	125	125	108	108	0	88
GTPS Site	100	100	100	108	108	88	88
TPS Bin Qasim	1260	1260	1260	1260	1260	1260	1260
Korangi CCP	-	220	220	220	220	220	220
TPS Bin Qasim-II	-	-	-	-	560	560	560
Thermal (KESC) Sub-Total	**1756**	**1955**	**1955**	**1946**	**2381**	**2216**	**2216**
B.3. Thermal (IPPs)							
AES Lalpir	362	362	362	362	362	362	362
AES Pak Gen	365	365	365	365	365	365	365
Altern Energy	-	**	29.0	29.0	31.2	31.2	31
Attock Gen.	165.0	165.0	165.0	165.0	165.0	165.0	165.0
Atlas Power	-	-	213.9	213.9	225	225	214
Engro Energy	-	-	216.8	227.3	221.0	221.0	217
Fauji Kabirwala	157	157	157	157	157	157	157
Foundation Power	-	-	-	185	185	185	185
Gul Ahmed	136	136	136	136	136	136	136
Habibullah	129	129	129	129	129	129	140
Halmore Power	-	-	-	207	207	207	225
HUBCO	1292	1292	1292	1292	1292	1292	1292
Hub Power, Narowal	-	-	-	220	225	225	225
Japan Power	136	136	136	136	135	135	135
KAPCO	1466	1466	1466	1466	1466	1466	1466
Kohinoor Energy	131	131	131	131	131	131	131
Liberty Tech Power	-	-	-	202	200	200	200
Nishat Chunian	-	-	200	200	200	200	200
Nishat Power	-	-	-	200	200	200	200
Orient Power	-	-	229	229	213	213	213
Rousch Power	450	450	450	450	450	450	450
Saba Power	134	134	134	134	134	134	134
Saif Power	-	-	229	229	229	229	229
Southern Electric	117	117	135	135	135	135	135
Sapphire Electric	-	-	-	225	212	212	212
Tapal Energy	126	126	126	126	126	126	126
TNB Liberty Power	235	235	235	235	235	235	235
Uch Power	586	586	586	586	586	586	586
Uch-II Power	-	-	-	-	-	-	404
Thermal Private Sub-Total	**5822**	**5987**	**7123**	**8363**	**8353**	**8353**	**8771**
C. NUCLEAR							
KANUPP	137	137	137	137	137	100	100
CHASNUPP-I	325	325	325	325	325	325	325
CHASNUPP-II	-	-	-	325	325	325	325
Nuclear Sub-Total	462	462	462	787	787	750	750
Grand Total	19420	19786	20922	22477	22797	22812	23531
Of which: Thermal- Total	**12478**	**12842**	**13978**	**15209**	**15454**	**15289**	**15887**

Source**:-** Pakistan Energy Year Book 2014 published by Hydrocarbon Development Institute of Pakistan.
** Plant Shutdown.

Table A-52: Gross Generation of Electricity by Source

Unit: GWh

Source	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Hydel (WAPDA) **	28707	27784	28093	31811	28517	29857	31873
Thermal (WAPDA)	20427	19521	19593	14112	13605	14148	14236
KESC	8219	8262	7964	7826	8029	8567	8709
IPPs	35231	34431	36814	37214	39674	38996	43761
Thermal-Total	**63877**	**62214**	**64371**	**59153**	**61308**	**61711**	**66707**
Nuclear (KANUPP)	424	475	637	221	514	606	328
CHASNUPP-I	2653	1142	2257	2731	2294	2295	2376
CHASNUPP-II	0	0	0	468	2458	1652	2386
Nuclear-Total	**3077**	**1618**	**2894**	**3420**	**5265**	**4553**	**5090**
Total Generation	**95661**	**91616**	**95358**	**94385**	**95091**	**96122**	**103670**
Imported *	199	277	249	269	274	375	419
Total Electricity Supply	**95860**	**91843**	**95608**	**94653**	**95365**	**96497**	**104089**
Of which WAPDA	49134	47305	47687	45924	42122	44005	46109
Annual Growth Rate	-2.60%	-4.23%	4.08%	-1.02%	0.75%	1.08%	7.85%

Source:- Pakistan Energy Year Book,2014 published by Hydrocarbon Development Institute of Pakistan.
* WAPDA imported electricity from Iran since October, 2002.
** AJKHEB generation data is for nine months (July 2011 to Februray 2012)

Table A-53: Electricity Consumption by Sector (Public Utilities Only)

Unit (GWh)
(TOE)

Sector	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Domestic	33704	32282	34272	35885	35589	36116	39549
	2744868	2629079	2791112	2922446	2898379	2941308	3220860
Commercial	5572	5252	5605	5782	5754	6007	6375
	453782	427686	456506	470899	468612	489207	519195
Industrial	20729	19330	19823	21207	21801	22313	24356
	1688171	1574199	1614415	1727068	1775501	1817171	1983592
Agriculture	8472	8795	9689	8971	8548	7697	8290
	689948	716297	789095	730636	696122	626827	675099
Street Light	415	430	458	456	478	457	458
	33789	35006	37288	37142	38888	37231	37274
Traction	8	5	2	1	1	0	0
	625	425	186	71	81	0	0
Bulk Supplies	4342	4177	4417	4715	4502	4137	4313
	353620	340146	359753	384014	366676	336931	351271
Other Govt.	158	101	81	82	88	61	68
	12893	8194	6564	6671	7161	4999	5503
Total: GWh	**73400**	**70371**	**74348**	**77099**	**76761**	**76789**	**83409**
TOE	**5977697**	**5731032**	**6054921**	**6278947**	**6251421**	**6253675**	**6792794**
Annual Growth Rate	0.95%	-4.13%	5.65%	3.70%	-0.44%	0.04%	8.62%

Source:- Pakistan Energy Year Book 2014 published by Hydrocarbon Development Institute of Pakistan.

Table A-54: Electricity Consumption by Province (Public Utilities Only)

(GWh)
(TOE)

Sector	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Punjab	45,040	43465	45906	47638	46981	46467	52088
	3,668,071	3539759	3738598	3879663	3826133	3784272	4242047
Sindh	14,726	14518	15293	15876	16325	17193	17839
	1,199,300	1182380	1245487	1292923	1329497	1400184	1452812
Khyber Pakhtunkhwa	8,223	7560	8259	8712	8528	8455	8837
	669,650	615672	672646	709478	694520	688575	719685
Balochistan	4,089	4110	4099	4048	4086	3812	3744
	333,015	334678	333827	329676	332764	310449	304911
AJK	1,322	719	790	825	841	862	901
	107,662	58543	64364	67206	68507	70194	73338
Total:	**73400**	**70371**	**74348**	**77099**	**76761**	**76789**	**83409**
	5977697	**5731032**	**6054921**	**6278947**	**6251421**	**6253675**	**6792794**

Source:- Pakistan Energy Year Book,2014 published by Hydrocarbon Development Institute of Pakistan.

Table A-55: Fuel Consumption for Thermal Power Generation

(TOE)

Fuel	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Coal	72568	50341	56141	43169	46800	28204	71902
Furnace Oil	6741614	7210211	8339330	7827500	7206839	7342755	8486744
Diesel Oil	168449	173947	262499	105160	203072	218584	304994
Gas	8492919	7830065	7106962	6493766	6732876	7084177	6602422
Total:	**15475550**	**15264564**	**15764932**	**14469595**	**14189587**	**14673721**	**15466061**
Annual Growth Rate	1.28%	-1.36%	3.28%	-8.22%	-1.94%	3.41%	5.40%

Source:- Pakistan Energy Year Book,2014 published by Hydrocarbon Development Institute of Pakistan.

Table A-56: Thermal Electricity Generation by Fuel

(TOE)

Fuel	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Coal	136	113	116	88	96	61	157
Oil	30818	32423	36175	33186	33562	34534	39880
Gas	32923	29678	28079	25879	27650	27116	26670
Total:	63877	62214	64371	59153	61308	61711	66707
Annual Growth Rate	-0.15%	-2.60%	3.47%	8.11%	3.64%	0.66%	8.09%

Source:- Pakistan Energy Year Book,2014 published by Hydrocarbon Development Institute of Pakistan.

Table A-57: Field-wise Production of Coal in Pakistan

(Tones)

Province\Field	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Balochistan							
Sor Range	117681	115802	101715	101989	81582	74726	151509
Degari	43175	41632	36419	22305	25521	21868	22750
Sharigh	184989	140370	169793	193671	220393	170336	240577
Sinjidi	120515	117118	114020	73614	57931	44240	34138
Mach	293340	236274	185574	131158	112700	75635	112684
Harnai-Khost Nasaka-Zardalu	93931	103358	102702	112024	141322	152291	161346
Duki	564944	469524	226325	211941	275219	242358	273230
Pir Ismail Ziarat	318166	294567	176808	156340	183594	139933	170005
Abegum	11697	17623	6623	28939	13527	7425	10633
Barkhan/ Chamalang	520185	521041	383034	310178	223598	221420	173372
Sub Total	**2268623**	**2057309**	**1503013**	**1342059**	**1335387**	**1150232**	**1350244**
Khyber Pakhtunkhwa							
Makerwal/ Gula Khel	242969	52969	56424	85566	93222	68209	84186
Kohat, FATA	-	215825	129786	301721	301721	197957	156828
Sub Total	**242969**	**268794**	**186210**	**387287**	**394943**	**266166**	**241014**
Punjab							
Makerwal/Salt Range	553453	571493	591420	620245	624285	604875	683689
Sub Total	**553453**	**571493**	**591420**	**620245**	**624285**	**604875**	**683689**
Sindh							
Lakhra	1038926	825860	1189211	1097348	1252747	1152898	1158575
Jhimpir	19936	14666	10820	3152	5441	4890	4775
Sub Total	**1058862**	**840526**	**1200031**	**1100500**	**1258188**	**1157788**	**1163350**

Source:- Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan

Table A-58: Energy Consumption by Sector

Unit: TOE

Sector	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Domestic							
Oil	124781	100403	93157	88148	81957	100937	103859
Gas	4774412	5010247	5133540	5434507	6128822	6830868	6297770
LPG	401786	352039	342207	279690	251356	245902	259494
Electricity	2744868	2629079	2791112	292246	2898379	2941308	3220860
Coal	447	364	0	0	0	0	0
Sub-Total	**8046294**	**6092132**	**8360016**	**8724790**	**9360514**	**10119014**	**9881983**
Annual Growth Rate	**5.80%**	**0.57%**	**3.31%**	**4.36%**	**7.29%**	**8.10%**	**-2.34%**
* @ 3412 Btu/k Wh.							
Commercial							
LPG	208378	200584	208901	196959	189614	203523	244393
Gas	793367	831547	864747	853313	927272	925115	891927
Electricity *	453782	427686	456506	470899	468612	489207	519195
Sub-Total	**1455527**	**1459817**	**1530154**	**1521171**	**1585498**	**1644845**	**1655515**
Annual Growth Rate	**5.68%**	**0.29%**	**4.82%**	**-0.59%**	**4.23%**	**3.74%**	**0.65%**
* @ 3412 Btu/k Wh.							
Industrial							
Oil	1082885	977451	998396	1356404	1423423	1384433	1305675
Gas*	8628979	8401383	8710000	7847934	7777514	7393301	7036680
Electricity**	1688171	1574199	1614415	1727068	1775501	1817171	1983592
Coal	5404268	3892637	4282061	4025380	4057678	3661193	3446131
Sub-Total	**16804303**	**14845670**	**15604871**	**14956785**	**150341160.**	**14,256099**	**13772078**
Annual Growth Rate	**6.41%**	**-11.66%**	**5.11%**	**-4.15%**	**0.52%**	**-5.18%**	**-3.40%**
*Includes energy consumption in fertilizer production. ** @ 3412 Btu/k Wh.							
Agricultural							
Oil*	148008	72710	60499	42294	24271	33158	48605
Electricity**	569143	716297	789095	730636	696122	626827	675099
Sub-Total	**717151**	**789008**	**849595**	**772930**	**720393**	**659986**	**723704**
Annual Growth Rate	**-2.32%**	**-1.64%**	**7.68%**	**9.02%**	**6.80%**	**-8.39%**	**9.65%**

Contd…

Table A-58: Energy Consumption by Sector

Unit: TOE

Sector	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Transport							
Aviation Fuel	436,928	467,605	494,888	533,026	489,454	481,611	501,906
Motor Spirit	1,522,251	1,595,910	2,022,125	2,351,670	2,893,980	3,505,959	4,057,635
HOBC	8,335	7,111	8,384	8,767	8,682	9,632	11,641
E-10	0	0	5,067	16,282	15,138	9,402	2,720
Kerosene	497	466	339	86,933	354	185	78
HSD	7,907,464	7,229,266	6,801,941	6,372,840	6,367,407	630,708	6,308,838
LOD	140	-	1,236	540	620	96	0
Furnace Oil	5,921	6,365	4,019	3,629	2,140	377	651
Electricity*	625	425	186	71	81	0	0
Natural Gas**	1,685,232	2,064,722	2,316,646	2,645,493	2,784,591	2,345,331	2,050,646
Sub-Total	11,567,394	11,371,869	11,654,834	12,019,250	12,562,448	12,713,300	12,934,115
Annual Growth Rate	18.99%	-1.69%	2.49%	3.13%	4.52%	1.20%	1.74%
* @ 3412 Btu/k Wh. Includes railway traction. ** Compressed Natural Gas (CNG)							
Other Government Sector							
Oil	325,631	385,328	339,403	392,406	310,362	333,444	376,403
Electricity*	400,302	383,346	403,605	427,828	412,725	379,161	394,047
LPG	9,779	17,371	25,523	26,623	40,096	78,993	81,674
Sub-Total	735,712	786,045	768,531	846,857	763,183	791,598	852,124
Annual Growth Rate	-0.90%	6.84%	-2.23%	10.19%	-9.88%	3.72%	7.65%
* @ 3412 Btu/kWh Also include bulk supplies and street light							
Sector							
Domestic	8,046,294	8,092,132	8,360,016	8,724,790	9,360,514	10,119,014	9,881,983
Commercial	1,455,527	1,459,817	1,530,154	1,521,171	1,585,498	1,644,845	1,655,515
Industrial	16,804,303	14,845,670	15,604,871	14,956,785	15,034,116	14,256,099	13,772,078
Agricultural	803,837	789,008	849,595	772,930	720,393	659,986	723,704
Transport	11,567,394	11,371,869	11,654,834	12,019,250	12,562,448	12,713,300	12,934,115
Other Govt.	735,712	786,045	768,531	846,857	763,184	791,598	852,124
Total	39,413,069	37,344,540	38,768,001	38,841,783	40,026,151	40,184,842	39,819,518

Source:- Pakistan Energy Year Book,2014 published by Hydrocarbon Development Institute of Pakistan.

* @ 3412 Btu/KWh includes railway traction.

** Compressed Natural Gas (CNG)

Table A-59: International Shipping-Entered and Cleared at Karachi Port/Port Qasim

Port/Year	Vessels Entered			Vessels Cleared		
	Number	Net registered tonnage		Number	Net registered tonnage	
		In ballast	With cargo		In ballast	With cargo
Karachi Port						
2002-03	1,583	1,108	14,859	1,586	7,525	8,726
2003-04	1,555	1,112	14,588	1,546	7,192	8,411
2004-05	1,770	1,335	15,284	1,766	7,501	9,191
2005-06	2,039	1,342	17,910	1,968	9,031	9,889
2006-07	2,336	1,684	1,625	2,814	7,592	9,610
2007-08	2,343	3,345	17,211	2,245	7,561	12,275
2008-09	2,487	2,930	19,791	1,693	4,168	11,346
2009-10	2,376	2,394	21,939	1,595	3,613	12,390
2010-11	2,142	1,873	24,527	1,506	2,636	14,791
2011-12	1,635	1,483	20,199	1,194	2,505	21,383
2012-13	1,671	1,906.7	21,193	1,478	3,473	14,396
2013-14	1,657	1,562	24,343	1,277	3,722	14,839
2014-15	1,663	2,250	23,677	1,148	3,890	47,283
PORT QASIM						
2001-02	562	1,420	12,390	566	1,048	3,343
2002-03	674	2,397	15,626	681	7,824	9,757
2003-04	810	140	17,879	800	8,261	10,387
2004-05	970	171	25,905	978	12,719	14,726
2005-06	1,029	322	26,283	1,050	12,653	15,382
2006-07	1,110	552	28,177	1,141	13,132	16,625
2007-08	1,094	377	29,108	1,127	13,210	17,092
2008-09	1,196	1,062	33,028	1,222	14,342	20,670
2009-10	1,173	909	32,974	1,201	12,793	20,437
2010-11	1,184	890	34,420	1,228	12,283	22,021
2011-12	1,050	828	31,202	1,089	12,127	18,474
2012-13	1,045	791	31,977	1,079	12,025	19,352
2013-14	1,053	845	30,683	1,076	10,579	19,430
2014-15	1,259	996	37,128	1,278	13,301	22,901

Source:- i. Karachi Port Trust and Port Qasim Authority ii. Pakistan Statistical Year Book-2013

Table A-60: Number and Registered Tonnage of Native Crafts by Nationalities, which Entered/Cleared in Coastal Shipping with Cargo into/From Karachi Port

Year	Pakistani (Entered &Cleared)		Arabian(Entered)		Arabian (Cleared)	
	No.of Country Crafts	Net Tonnage of Country Crafts	No.of Country Crafts	Net Tonnage of Country Crafts	No.of Country Crafts	Net Tonnage of Country Crafts
2002-03	376,877	1094	552	188,337	542	188,540
2003-04	315,319	1007	499	157,669	508	157,650
2004-05	360,899	948	499	185,003	449	175,896
2005-06	297,217	766	377	148,461	389	148,756
2006-07	272,603	821	417	138,237	404	134,366
2007-08	177,912	552	274	90,474	278	87,438
2008-09	301,683	773	391	152,697	382	148,986
2009-10	388,876	958	479	194,732	479	194,144
2010-11	373,186	711	360	218,705	351	154,481
2011-12	193,401	517	262	97,080	255	96,321
2012-13	309,905	969	486	151,680	483	158,225
2013-14	168,070	494	242	81,687	252	86,383
2014-15	115,677	353	176	57,960	177	57,717

Source:- Karachi Port Trust.

Table A-61: Total Passengers Handled at Civil Airports in Pakistan (Scheduled and Non-scheduled)

(Numbers)

Year	Domestic				International			
	Embarked	Disembark	Transit	Total	Embarked	Disembark	Transit	Total
2005-06	3,696,185	3,696,185	103,355	7,495,725	3,514,924	3,404,192	235,962	7,155,078
2006-07	3,436,065	3,436,065	113,739	6,985,869	3,642,781	3,493,851	228,636	7,365,268
2007-08	3,259,785	3,259,785	107,957	6,627,527	3,865,780	3,548,007	168,695	7,582,482
2008-09	3,086,871	3,086,871	96,233	6,269,975	6,254,908	5,837,371	216,246	12,308,525
2009-10	3,355,041	3,355,041	70,501	6,780,583	4,165,886	3,945,034	193,779	8,304,699
2010-11	3,522,167	3,522,167	108,908	7,153,242	4,363,434	3,837,854	259,357	8,460,645
2011-12	3,248,362	3,248,362	98,241	6,594,965	4,826,746	4,330,294	255,232	9,412,272
2012-13	3,356,523	3,356,523	78,231	6,791,277	5,009,386	4,569,044	209,188	9,787,618
2013-14	3,590,213	3,590,213	44,515	7,224,941	5,544,499	5,254,225	122,497	10,921,221

Year	Total (Domestic + International)			
	Embarked	Disembarked	Transit	Total
2005-06	7,211,109	7,100,377	339,317	14,650,803
2006-07	7,078,846	6,929,916	342,375	14,351,137
2007-08	7,125,565	6,807,792	276,652	14,210,009
2008-09	9,341,779	8,924,242	312,479	18,578,500
2009-10	7,520,927	7,300,075	264,280	15,085,282
2010-11	7,885,601	7,360,021	368,265	15,613,887
2011-12	8,075,108	7,578,656	353,473	16,007,237
2012-13	8,365,909	7,925,567	287,419	16,578,895
2013-14	9,134,712	8,844,438	167,012	18,146,162

Source:- Civil Aviation Authority, Karachi.

Table A-62: Air Traffic of Passengers, Freight and Mail of Pakistan International Airlines

Year	Kilometers Flown	Passenger Kilometers performed	Tone kilometers performed			
			Passengers	Freight	Mail	Total
Domestic Scheduled						
2002-03	15,054	1,651,540	149,243	37,909	426	187,578
2003-04	16,056	1,769,313	159,620	36,470	471	196,561
2004-05	15,988	1,710,023	154,136	39,093	506	193,735
2005-06	16,518	1,989,274	179,329	40,053	586	219,968
2006-07	15,606	1,909,876	175,162	36,649	515	212,326
2007-08	16,687	1,808,827	162,923	37,833	379	201,135
2008-09	16,839	1,769,896	159,293	28,935	279	188,507
2009-10	16,648	1,731,644	155,849	27,793	251	183,893
2010-11	17,295	1,903,405	171,912	26,747	158	198,818
2011-12	14,521	1,604,687	143,087	22,853	133	166,073
2012-13	11,651	1,422,081	128,715	18,569	69	147,353
2013-14	10,488	1,212,607	110,399	10,547	49	120,995
International Scheduled						
2002-03	48,831	9,551,824	866,496	319,391	7,475	1,193,362
2003-04	57,048	10,882,007	987,687	323,427	7,475	1,318,589
2004-05	64,046	11,800,688	1,074,919	376,730	5,994	1,457,643
2005-06	70,378	13,255,050	1,198,501	393,562	4,470	1,596,533
2006-07	69,107	12,772,506	1,148,021	348,112	4,311	1,500,444
2007-08	60,031	11,278,558	1,020,288	296,049	2,607	1,318,944
2008-09	62,833	12,456,115	1,121,655	252,542	2,132	1,376,329
2009-10	62,688	12,047,441	1,086,439	242,397	2,373	1,331,209
2010-11	64,294	13,753,191	1,242,163	302,538	2,227	1,546,928
2011-12	68,858	13,779,858	1,219,396	264,641	2,742	1,486,779
2012-13	61,229	12,269,073	1,094,011	250,561	2,397	1,346,969
2013-14	50,901	10,690,710	973,657	145,738	1,544	1,120,939

Source**:-** Civil Aviation Authority, Karachi.

Table A-63: Major Traffic Flows by Airlines during the July, 2014 to June, 2015 (Location All)

Airline	Passenger (Number)					Cargo (M. Tones				
	Embarked	Dis-Embarked	Terminal	Transit	Total	Loaded	Un-loaded	Terminal	Transit	Total
DOMESTIC										
Air Blue Ltd (ABQ)	355,839	355,839	711,678	0	711,678	1,382	1,382	2,763	0	2,763
Indus Air (MPK)	244,146	244,146	488,292	0	488,292	904	904	1,807	0	1,807
Pakistan Int' Airlines (PIA)	1,593,011	1,593,011	3,186,022	31,062	3,217,084	10,649	10,649	21,298	0	21,298
Shaheen Air International (SAI)	868,386	868,386	1,736,772	0	1,736,772	5,678	5,678	11,356	0	11,356
Sub Totals	**3,061,382**	**3,061,382**	**6,122,764**	**31,062**	**6,153,826**	**18,613**	**18,613**	**37,224**	**0**	**37,224**
INTERNATIONAL										
Air Arabia (ABY)	87,270	82,155	169,425	0	169,425	1,942	223	2,165	0	2,165
Air Blue Ltd (ABQ)	500,511	448,411	948,922	0	948,922	2,635	75	2,710	0	2,710
Air China (CCA)	8,098	6,787	14,885	0	14,885	80	12	92	0	92
Cargolux Airlines Int. (CLX)	0	0	0	0	0	1,708	1,633	3,341	0	3,341
China Southern Airlines (CSN)	22,594	23,278	45,872	0	45,872	539	221	760	0	760
Emirates Airlines (UAE)	1,054,008	918,587	1,972,595	0	1,972,595	47,268	19,554	66,822	0	66,822
Etihad Airways (ETD)	325,818	288,829	614,647	0	614,647	13,717	5,426	19,143	0	19,143
Fly Dubai (FDB)	103,291	87,207	190,498	0	190,498	1,646	275	1,920	0	1,920
Gulf Air (GFA)	171,657	167,811	339,468	0	339,468	6,996	1,174	8,169	0	8,169
Iran Air (IRA)	6,001	5,761	11,762	0	11,762	16	11	27	0	27
Kuwait Airways (KAC)	52,309	48,923	101,232	0	101,232	1,862	41	1,903	0	1,903
Oman Air (OMA)	105,992	88,593	194,585	0	194,585	2,745	750	3,495	0	3,495
Pakistan Int' Airlines (PIA)	1,371,049	1,317,709	2,688,758	56,950	2,745,708	22,457	6,835	29,292	0	29,292
Qatar Airways Company (QTR)	314,452	319,473	633,925	0	633,925	15,904	7,988	23,892	0	23,892
Saudi Arabian Airlines (SVA)	517,881	536,246	1,054,127	0	1,054,127	15,269	593	15,861	0	15,861
Shaheen Air International (SAI)	768,797	684,153	1,452,950	0	1,452,950	5,009	17	5,026	0	5,026
Srilankan Airlines Ltd (SLK)	45,326	46,870	92,196	0	92,196	995	692	1,686	0	1,686
Thai Airways International Ltd. (THA)	199,485	237,853	437,338	24,041	461,379	9,706	9,718	19,424	538	19,962
Turkish Airlines (THY)	52,932	47,096	100,028	0	100,028	1,294	532	1,826	0	1,826
Sub Totals	**5,707,471**	**5,355,742**	**11,063,213**	**80,991**	**11,144,204**	**151,788**	**55,770**	**207,554**	**538**	**208,092**
Grand Totals	**8,768,853**	**8,417,124**	**17,185,977**	**112,053**	**17,298,030**	**170,401**	**74,383**	**244,778**	**538**	**245,316**

Contd..

Table A-63: Major Traffic Flows by Airlines during the July, 2014 to June, 2015 (Location All)

Airline	Mail (Tons)				
	Loaded	Un-loaded	Terminal	Transit	Total
DOMESTIC					
Air Blue Ltd (ABQ)	0	0	0	0	0
Indus Air (MPK)	0	0	0	0	0
Pakistan Int' Airlines (PIA)	82	82	164	0	164
Shaheen Air International (SAI)	93	93	185	0	185
Sub Totals	**175**	**175**	**349**	**0**	**349**
INTERNATIONAL					
Air Arabia (ABY)	0	0	0	0	0
Air Blue Ltd (ABQ)	0	0	0	0	0
Air China (CCA)	0	0	0	0	0
Cargolux Airlines Int. (CLX)	0	0	0	0	0
China Southern Airlines (CSN)	0	0	0	0	0
Emirates Airlines (UAE)	114	219	333	0	333
Etihad Airways (ETD)	2	163	164	0	164
Fly Dubai (FDB)	0	0	0	0	0
Gulf Air (GFA)	183	17	200	0	200
Iran Air (IRA)	0	3	3	0	3
Kuwait Airways (KAC)	1	26	27	0	27
Oman Air (OMA)	0	1	1	0	1
Pakistan Int' Airlines (PIA)	152	77	229	0	229
Qatar Airways Company (QTR)	0	107	107	0	107
Saudi Arabian Airlines (SVA)	0	37	37	0	37
Shaheen Air International (SAI)	7	0	7	0	7
Srilankan Airlines Ltd (SLK)	0	0	0	0	0
Thai Airways International Ltd. (THA)	269	177	446	18	464
Turkish Airlines (THY)	1	54	54	0	54
Sub Totals	**729**	**880**	**1,609**	**18**	**1,627**
Grand Totals	**904**	**1,054**	**1,958**	**18**	**1,976**

Source: Civil Aviation Authority
Note: Provisional data.

Table A-64: Major Traffic Flows by Airports during the July, 2014 to June, 2015 (Location All)

Airline	Passenger (Number)				
	Commercial			Non-commercial	Grand Total
	Domestic	International	Total		
Bahawalpur	460	0	460	1,590	2,050
Bhit/Dadu	256	0	256	0	256
Chitral	108	0	108	24	132
D.G Khan	258	0	258	18	276
D.I.Khan	62	0	62	0	62
Dalbandin	86	0	86	4	90
Faisalabad	411	51	462	739	1,201
Gilgit	384	0	384	98	482
Gwader	296	96	392	4	396
Hyderabad (Sindh)	0	0	0	88	88
Islamabad	7,277	9,097	16,374	4,993	21,367
BBIAP Kadanwari Khairpur	215	0	215	0	215
Karachi Jiap	17,563	17,201	34,764	4,392	39,156
Khuzdar	0	0	0	8	8
Lahore Aiiap	5,798	10,572	16,370	893	17,263
Mohenjodaro	326	0	326	66	392
Multan	1,461	1,001	2,462	14,106	16,568
Nawabshah	0	0	0	1,657	1,657
Panjgur	152	0	152	6	158
Pasni	2	2	4	44	48
Peshawar	1,412	4,533	5,945	0	5,945
Quetta	1,799	105	1,904	108	2,012
Rahim Yar Khan	551	72	623	166	789
Sawan	188	0	188	0	188
Sialkot	12	2,918	2,930	459	3,389
Skardu	566	0	566	348	914
Sukkur	1,174	0	1,174	573	1,747
Turbat	790	258	1,048	23	1,071
Walton	0	0	0	9,463	9,463
Zamzama Oil Field Dadu	166	0	166	0	166
Zhob	120	0	120	6	126
Grand Total	**41,893**	**45,906**	**87,799**	**39,876**	**127,675**

Contd..

Table A-64: Major Traffic Flows by Airports during the July, 2014 to June, 2015 (Location All)

Airline	Cargo (M. Tones			Mail (Tons)					
	Domestic	International	Total	Domestic	International	Total	Domestic	International	Total
Bahawalpur	23,821	0	23,821	3	0	3	0.00	0.00	0.00
Bhit/Dadu	8,287	0	8,287	1	0	1	0.00	0.00	0.00
Chitral	5,359	0	5,359	5	0	5	0.00	0.00	0.00
D.G Khan	16,327	0	16,327	17	0	17	0.00	0.00	0.00
D.I.Khan	4,074	0	4,074	0	0	0	0.00	0.00	0.00
Dalbandin	4,368	0	4,368	0	0	0	0.00	0.00	0.00
Faisalabad	62,245	4,338	66,583	103	0	103	0.32	0.00	0.32
Gilgit	22,458	0	22,458	6	0	6	0.23	0.00	0.23
Gwader	5,619	2,889	8,508	3	3	6	0.08	0.00	0.08
Hyderabad (Sindh)	0	0	0	0	0	0	0.00	0.00	0.00
Islamabad	1,387,135	2,781,812	4,168,947	7,828	38,970	46,798	24.18	404.92	429.10
BBIAP Kadanwari Khairpur	6,121	0	6,121	0	0	0	0.00	0.00	0.00
Karachi Jiap	2,593,641	3,420,796	6,014,437	17,641	91,472	109,113	165.00	1018.14	1183.14
Khuzdar	0	0	0	0	0	0	0.00	0.00	0.00
Lahore Aiiap	1,104,303	3,373,256	4,477,559	10,375	66,696	77,070	146.55	197.41	343.96
Mohenjodaro	19,992	840	20,832	0	0	0	0.05	0.00	0.05
Multan	181,856	149,321	331,177	257	142	399	0.97	0.00	0.97
Nawabshah	0	0	0	0	0	0	0.00	0.00	0.00
Panjgur	7,773	0	7,773	2	0	2	0.00	0.00	0.00
Pasni	0	0	0	0	0	0	0.00	0.00	0.00
Peshawar	157,528	1,081,877	1,239,405	291	7,038	7,329	2.03	6.33	8.35
Quetta	350,943	22,362	373,305	649	3	651	8.18	0.00	8.18
Rahim Yar Khan	44,563	9,528	54,091	4	4	8	0.02	0.00	0.02
Sawan	5,470	0	5,470	0	0	0	0.00	0.00	0.00
Sialkot	5,994	282,393	288,387	13	3,759	3,772	0.34	0.03	0.37
Skardu	22,144	0	22,144	2	0	2	0.53	0.00	0.53
Sukkur	81,755	82	81,837	10	0	10	0.02	0.00	0.02
Turbat	23,578	14,710	38,288	15	6	21	0.52	0.00	0.52
Walton	0	0	0	0	0	0	0.00	0.00	0.00
Zamzama Oil Field Dadu	3,882	0	3,882	0	0	0	0.00	0.00	0.00
Zhob	4,590	0	4,590	0	0	0	0.00	0.00	0.00
Grand Total	**6,153,826**	**11,144,204**	**17,298,030**	**37,225**	**208,093**	**245,316**	**349.02**	**1626.83**	**1975.84**

Source: Civil Aviation Authority
Note: Provisional data.

Table A-65: Transport Statistics

Year	Railways						Length of Roads (Km.)		
	Route kilometers	Number of Passengers Carried (Million)	Freight Carried (M.Tons)	Freight Tone kilometers (Million)	Locom-otives (Nos.)	Freight Wagons (Nos.)	Total	High Type	Low Type
2002-03	7,791.00	72.40	6.18	4,820	577	23,722	252,168	153,225	98,943
2003-04	7,791.00	75.70	6.14	4,796	592	21,812	256,070	158,543	97,527
2004-05	7,791.00	78.18	6.41	5,014	557	21,556	258,214	162,841	95,373
2005-06	7,791.00	81.43	6.03	4,971	544	20,809	259,021	167,530	91,491
2006-07	7,791.00	83.89	6.42	5,453	544	19,638	261,821	172,891	88,930
2007-08	7,791.00	79.99	7.23	6,187	555	18,638	258,350	174,320	84,030
2008-09	7,791.00	82.54	6.94	5,896	551	17,259	358350	176589	81761
2009-10	7791.00	74.93	5.83	4847	541	16499	560760	180910	79850
2010-11	7791.00	64.90	2.61	1757	526	18468	259463	180866	78597
2011-12	7791.00	41.90	1.30	403	552	17611	261595	181940	79665
2012-13	7791.00	41.95	1.01	419	493	16635	263415	182900	80515
2013-14	7791.00	47.69	1.61	1090	421	16179	263755	184920	79635
2014-15 (Jul-March)	7791.00	38.68	2.49	2259	452	15948	263942	185063	78879

Source:- Pakistan Economic Survey, 2014-15

Table A-66: Number of Motor Vehicles Registered

(000 Numbers)

Year	Motor Cars Jeeps & Station Wagons	Motor Cabs/ Taxis	Buses/ Mini Buses	Trucks	Motor Cycle (2 wheels)	Motor Cycle/ Motor Rickshaws (3 Wheels)	Others	Total
1996	966.7	54.5	114.4	123.7	1842.5	69.8	666.5	3838.2
1997	1068.1	83.2	119.4	131.3	1995.4	76.2	700.3	4173.9
1998	1086.0	83.7	125.9	132.9	2068.7	81.8	724.3	4303.3
1999	1162.9	83.8	150.1	145.1	2175.5	95.3	746.7	4559.5
2000	1182.3	83.9	154.4	148.6	2260.8	99.4	772.3	4701.6
2001	1198.9	90.1	161.5	155.8	2283.4	107.6	786.9	4784.1
2002	1279.4	90.1	155.6	169.3	2341.1	120.6	814.2	4970.1
2003	1289.9	90.4	165.8	177.5	2379.3	127.4	834.4	5064.6
2004	1298.4	90.5	166.1	179.7	2609.4	138.2	848.7	5331.0
2005	1318.5	91.9	168.7	182.5	2649.9	101.1	861.9	5374.4
2006	1372.2	105.4	175.6	190.0	2757.8	136.4	896.0	5633.4
2007	1440.8	103.4	184.4	199.4	2895.7	143.2	940.9	5907.8
2008	1549.9	104.4	187.4	202.6	3039.8	156.1	961.6	6201.8
2009	1657.9	106.5	195.2	210.9	3215.6	167.9	1005.4	65594
2010	1726.3	122.9	198.8	216.1	4305.1	201.8	1081.9	7853.0
2011	1881.6	124.7	202.5	225.1	5781.9	266.4	1178.9	9661.0
2012	2094.3	143.9	215.4	240.9	7500.1	323.2	1270.8	11788.6
2013	2281.1	145.2	220.3	247.2	9064.5	378.0	1334.3	13670.8
2014 (P)	2400.7	145.4	223.6	251.3	10341.3	429.3	1376.4	15168.1

Source:- Pakistan Economic Survey, 2014-15
P = Provisional

Table A-67: Motor Vehicles on Road

(000 Number)

Year	Motor Cycles/ Scooters	Motor Cars	Jeeps	Station Wagons	Tractors	Buses
2001-02	2,481.1	1040.0	43.4	122.7	630.5	96.6
2002-03	2,656.2	1,110.0	44.4	126.4	663.2	98.3
2003-04	2,882.5	1,193.1	47.8	132.4	722.7	100.4
2004-05	3,063.0	1,264.7	51.8	140.5	778.1	102.4
2005-06	3,791.0	1,999.2	65.7	140.8	822.3	103.6
2006-07	4,463.8	1,682.2	85.4	169.1	877.8	108.4
2007-08	5,037.0	1,853,5	82.9	163.2	900.5	109.8
2008-09	5,368.0	2,029.1	79.0	155.6	911.7	111.1
2009-10	5,412.1	2,387.2	78.3	171.4	940.8	123.3
2010-11	5,468.8	2,822.2	78.5	175.2	970.9	125.6
2011-12	4,463.6	3,205.0	78.6	178.3	1,008.7	129.2
2012-13	5,550.0	3,600.0	78.7	180.1	1,128.7	130.2
2013-14	6,100.0	4,600.0	60.0	185.0	1,228.0	140.0
(July-March) 2014-15	6450.0	4,820.0	64.0	193.0	1283.0	145.0

Year	Taxi Cabs Taxis	Rickshaws	Delivery Vans	Trucks	Others	Total
2001-02	96.4	80.8	116.9	145.2	162.4	5,016.8
2002-03	104.1	80.9	120.3	146.7	164.8	5,315.0
2003-04	112.6	81.0	121.3	149.2	168.6	5,711.2
2004-05	120.3	81.3	121.9	151.8	170.1	6,048.3
2005-06	122.1	77.8	143.3	151.8	166.8	7,084.5
2006-07	119.1	79.0	148.9	173.3	156.3	8,063.6
2007-08	129.8	89.3	163.5	177.8	171.1	8,878.5
2008-09	138.6	88.4	167.2	181.9	183.2	9,413.7
2009-10	146.4	89.1	170.4	200.5	167.2	9866.4
2010-11	154.6	89.8	173.6	209.5	175.2	10443.8
2011-12	158.7	102.4	176.6	212.3	207.5	10960.7
2012-13	160.7	120.5	180.0	220.5	226.7	11576.1
2013-14	168.8	108.0	181.0	240.0	231.6	13242.4
(July-March) 2014-15	178.0	113.0	190.0	249.0	241.1	13881.1

Source:- Pakistan Economic Survey, 2014-2015

Table A-68: Post and Telecommunications

Year	Inter net connection (Million)	No. of PCO *	Telephones (000 Nos)	TV Sets (000 Nos)	Mobile Phone (000 Nos)	No. of Internet Cities Connected	No. of Post Offices			Broad Band subscribers (000 Nos)
							Urban	Rural	Total	
1996-97	-	10,040	2,558	2,522	135.0	-	2,024	11,192	13,216	-
1997-98	0.01	10,071	2,756	2,736	196.1	-	2,044	11,250	13,294	-
1998-99	0.2	10,107	2,861	3,034	265.6	-	2,103	10,751	12,854	-
1999-00	0.5	10,400	3,124	4,015	306.5	-	2,103	10,751	12,854	-
2000-01	0.8	66,968	3,340	3,432	742.6	-	2,302	9,932	12,234	-
2001-02	1.0	97,751	3,656	3,598	1,698.5	-	1,983	10,284	12,267	-
2002-03	1.6	139,493	4,940	3,716	2,404.4	1,350	1,808	10,446	12,254	-
2003-04	2.0	180,901	4,460	3,828	5,022.9	1,898	2,267	9,840	12,107	-
2004-05	2.1	217,597	5,191	6,763	12,771.2	2,210	1,831	10,499	12,330	-
2005-06	2.4	353,194	5,128	7,972	34,506.6	2,389	1,845	10,494	12,339	26.6
2006-07	3.5	387,490	4,806	9,004	63,160.9	2,419	1,849	10,494	12,343	45.2
2007-08	3.7	449,121	4,546	9,940	88,019.8	3,002	1,849	10,793	12,342	168.0
2008-09	3.5	405,359	3,523	10,557	94,342.0	**	1,852	10,514	12,366	413.8
2009-10	3.5	..	3,417	11,136	99,185.8	**	1,846	10,495	12,340	688.4
2010-11	..	**	5,720*	11,704	108,894.5	**	1,580	10,455	12,035	1491.5
2011-12	**	**	5,803*	12,491	120,151.2	**	1,797	10,238	12,035	2101.3
2012-13	**	**	6,371*	13,729	128,933.6	**	2,178	10,650	12,828	2723.7
2013-14	**	..	5,632*	14,245	139,974.8	**	1,813	10,264	12,077	3795.9 @

Source:- Pakistan Economic Survey 2014-15

* Included Card pay phones ** All over country .. Not available

@ Includes dial-up and broadband conection.

Table A-69: Traffic Accidents

(Number)

Year	Total number of accident	Accident		Persons		Total Number of Vehicles Involved
		Fatal	Non- Fatal	Killed	Injured	
Pakistan						
1996-97	9,610	4,191	5,419	5,027	11,149	10,849
1997-98	9,663	4,041	5,622	4,858	11,597	10,892
1998-99	10,080	4,340	5,740	5,240	11,413	12,061
1999-00	9,735	4,193	5,542	5,130	11,469	11,083
2000-01	10,651	4,491	6,160	5,532	13,307	11,722
2001-02	10,033	4,379	5,654	5,248	11,922	10,765
2002-03	9,377	4,045	5,332	4,813	10,643	10,100
2003-04	10,308	4,184	6,124	5,199	12,927	10,852
2004-05	9,896	4,250	5,646	5,112	12,401	10,912
2005-06	9,492	4,115	5,377	4,868	11,415	10,565
2006-07	10,466	4,535	5,931	5,465	12,875	11,481
2007-08	10,466	4,610	5,856	5,615	12,096	11,456
2008-09	9,496	4,145	5,351	4,907	11,037	10,322
2009-10	9,747	4,378	5,369	5,280	11,173	10,496
2010-11	9,723	4,280	5,443	5,271	11,383	10,822
2011-12	9,140	3,966	5,174	4,758	10,145	9,986
2012-13	8,787	3,777	5,010	4,610	9,530	9,664
2013-14	8,103	3,380	4,723	4,216	9,571	9,167

Contd…

Table A-69: Traffic Accidents

(Number)

Year	Total number of accidents	Accident		Persons		Total Number of vehicles involved
		Fatal	Non- Fatal	Killed	Injured	
Balochistan						
1996-97	399	150	249	156	331	435
1997-98	315	103	212	128	303	364
1998-99	339	120	219	141	303	389
1999-00	373	131	242	150	297	412
2000-01	430	127	303	140	388	469
2001-02	345	101	244	129	351	395
2002-03	406	132	274	138	359	451
2003-04	415	141	274	148	420	469
2004-05	481	194	287	217	638	513
2005-06	520	206	314	254	741	594
2006-07	551	233	318	284	840	612
2007-08	490	236	254	314	914	578
2008-09	431	206	225	248	747	545
2009-10	379	193	186	245	496	444
2010-11	311	158	153	191	350	382
2011-12	324	139	185	161	480	374
2012-13	297	136	161	163	362	381
2013-14	342	173	169	247	480	434
Khyber Pakhtunkhwa						
1996-97	2,193	645	1,548	825	2,927	2,442
1997-98	2,310	600	1,710	730	2,977	2,502
1998-99	2,374	649	1,725	774	2,859	2,535
1999-00	2,448	653	1,795	738	2,745	2,544
2000-01	2,705	695	2,010	839	3,330	2,973
2001-02	2,459	641	1,818	720	2,790	2,633
2002-03	2,402	583	1,819	708	2,662	2,783
2003-04	2,728	652	2,076	919	3,735	2,956
2004-05	2,666	682	1,983	830	3,979	3,133
2005-06	2,732	716	2,016	875	4,006	3,366
2006-07	2,942	779	2,163	1,006	4,421	3,756
2007-08	2,893	755	2,138	942	3,884	3,634
2008-09	2,392	644	1,748	786	3,340	2,975
2009-10	2,559	712	1,847	921	3,560	3,128
2010-11	2,722	773	1,949	986	4,153	3,479
2011-12	2,772	785	1,897	953	3,913	3,501
2012-13	2,968	846	2,122	1,059	4,016	3,736
2013-14	3,120	877	2,243	1,033	4,257	3,934

Contd…

Table A-69: Traffic Accidents

(Number)

Year	Total number of accidents	Accident		Persons		Total Number of vehicles involved
		Fatal	Non- Fatal	Killed	Injured	
Punjab						
1996-97	4,577	2,170	2,407	2,609	5,448	5,286
1997-98	4,916	2,270	2,646	2,703	5,898	5,858
1998-99	5,251	2,481	2,770	3,001	6,204	6,438
1999-00	4,826	2,324	2,502	2,954	6,341	5,127
2000-01	5,277	2,518	2,759	3,174	6,954	5,491
2001-02	5,270	2,641	2,629	3,214	6,804	5,523
2002-03	4,771	2,386	2,385	2,884	6,159	5,008
2003-04	5,015	2,407	2,608	2,977	6,714	5,195
2004-05	4,969	2,447	2,522	2,988	6,418	5,175
2005-06	4,431	2,105	2,326	2,500	5,408	4,571
2006-07	5,355	2,591	2,764	3,096	6,311	5,355
2007-08	5,522	2,721	2,801	3,293	6,163	5,522
2008-09	5,240	2,471	2,769	2,912	5,790	5,240
2009-10	5,344	2,590	2,754	3,083	5,856	5,344
2010-11	5,420	2,591	2,829	3,167	5,809	5,420
2011-12	4,990	2,361	2,629	2,888	5,071	4,990
2012-13	4,587	2,213	2,374	2,692	4,515	4,587
2013-14	3,696	1,717	1,979	2,145	3,941	3,696
Sindh						
1996-97	2,441	1,226	1,215	1,437	2,443	2,686
1997-98	2,122	1,068	1,054	1,297	2,419	2,168
1998-99	2,116	1,090	1,026	1,324	2,047	2,699
1999-00	2,088	1,085	1,003	1,288	2,086	3,000
2000-01	2,239	1,151	1,088	1,379	2,635	2,789
2001-02	1,959	996	963	1,185	1,977	2,214
2002-03	1,798	944	854	1,083	1,463	1,858
2003-04	2,150	984	1166	1,155	2,058	2,232
2004-05	1,780	926	854	1,077	1,366	2,091
2005-06	1,809	1,088	721	1,239	1,260	2,034
2006-07	1,618	932	686	1,079	1,303	1,758
2007-08	1,561	898	663	1,066	1,135	1,722
2008-09	1,433	824	609	961	1,160	1,562
2009-10	1,465	883	582	1,031	1,261	1,580
2010-11	1,270	758	512	927	1071	1,541
2011-12	1,054	681	373	756	681	1,121
2012-13	935	582	353	696	637	960
2013-14	945	613	332	791	893	1,103

Source:- Crime Branch of Provincial Police Departments.

Table A-70: River In-flow at Rim Stations in Pakistan

(Million Acre Feet)

Year	Indus at Tarbela U/S			Jhelum at Mangla U/S			Chenab at Marala U/S		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
1992-93	55.22	10.15	65.37	25.18	6.82	32.00	22.60	5.18	27.78
1993-94	44.48	8.58	53.06	18.69	4.01	22.70	19.53	3.45	22.98
1994-95	65.12	8.83	73.95	20.82	5.67	26.49	24.55	5.65	30.20
1995-96	53.17	9.38	62.55	21.91	6.17	28.08	26.40	5.47	31.87
1996-97	59.25	9.04	68.28	24.93	4.11	29.04	27.48	4.41	31.89
1997-98	46.27	8.99	55.26	16.96	7.06	24.02	21.74	6.55	28.29
1998-99	55.26	9.01	64.27	18.11	3.61	21.72	23.16	4.78	27.94
1999-00	56.15	8.82	64.97	11.24	3.19	14.43	18.70	4.35	23.05
2000-01	45.61	7.17	52.78	10.27	2.28	12.55	17.20	2.73	19.93
2001-02	41.47	6.62	48.10	8.23	3.66	11.89	16.00	2.90	18.90
2002-03	48.28	7.94	56.22	12.31	5.10	17.41	18.02	5.47	23.49
2003-04	55.09	8.54	63.63	17.67	5.00	22.67	21.50	4.36	25.86
2004-05	42.06	9.51	51.57	11.74	6.72	18.46	14.90	6.41	21.31
2005-06	56.00	9.54	65.54	17.71	5.46	23.17	21.12	4.02	25.14
2006-07	55.07	9.98	65.04	16.43	6.78	23.21	21.38	6.33	27.71
2007-08	49.16	8.25	57.41	13.51	4.18	17.69	16.98	3.62	20.60
2008-09	46.92	9.06	55.98	13.38	5.88	19.26	16.21	3.61	19.82
2009-10	46.77	9.27	56.04	16.48	4.57	21.05	14.46	3.39	17.85
2010-11	62.10	9.97	72.07	20.31	5.42	25.73	20.02	4.78	25.80
2011-12	48.78	8.92	57.70	15.28	4.17	19.45	18.84	3.60	22.44
2012-13	44.99	9.05	54.03	14.70	5.38	20.08	17.14	4.43	21.57
2013-14	53.26	9.60	62.86	15.22	5.07	20.29	18.70	4.45	23.15
2014-15	42.97	8.63	51.60	19.93	6.39	26.32	21.14	5.47	26.61

Year	Ravi Component at Balloki (a)			Sutlej Component at Sulemanki (b)		
	Kharif	Rabi	Total	Kharif	Rabi	Total
1992-93	4.96	0.70	5.66	3.48	0.33	3.81
1993-94	3.47	0.11	3.58	2.81	0.05	2.86
1994-95	4.80	0.43	5.23	7.31	0.34	7.65
1995-96	6.89	0.79	7.68	6.88	0.70	7.58
1996-97	5.14	0.47	5.61	2.48	0.46	2.94
1997-98	3.91	1.99	5.90	1.79	1.68	3.47
1998-99	3.40	1.20	4.60	4.08	3.58	7.66
1999-00	0.97	0.26	1.23	1.15	0.17	1.32
2000-01	0.56	0.11	0.67	0.30	0.10	0.40
2001-02	0.93	0.43	1.36	0.01	0.01	0.02
2002-03	0.41	0.45	0.86	0.00	0.03	0.03
2003-04	0.93	0.09	1.02	0.02	0.09	0.11
2004-05	0.39	0.40	0.79	0.00	0.04	0.04
2005-06	0.70	0.14	0.84	0.31	0.04	0.35
2006-07	1.16	0.32	1.48	0.07	0.08	0.15
2007-08	0.81	0.23	1.04	0..16	0.04	0.20
2008-09	1.58	0.26	1.84	2.17	0.02	2.19
2009-10	0.11	0.18	0.29	0.00	0.01	0.01
2010-11	1.39	0.66	2.05	1.87	0.38	2.25
2011-12	1.48	1.06	2.54	3.57	0.22	3.79
2012-13	0.97	0.64	1.61	0.15	0.02	0.17
2013-14	3.79	0.98	4.77	2.10	0.05	2.15
2014-15	2.60	1.10	3.70	0.13	0.07	0.20

Source:-Water and Power Development Authority (WAPDA).
(a) Ravi at Balloki (Above)-UCC Tail-MR Tail-QB Trail.
(b) Sutlej at Suleimanki (Above)- BS-I & II Tails.

Table A-71: Population Served with Water Supply and Sanitation Facilities in WASA Area, District Lahore

Description	Unit	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Population in WASA area	Million	6.011	6.152	6.312	6.486	6.665	7.000
Population served with pipe water supply	Million	5.351	5.474	5.611	5.751	5.932	6.200
Percentage of Total Population within WASA area I	%	89.0	89.0	88.9	88.7	89.0	-
Quantum of Water Supply(Daily)	Million Gallons	418	395	385	414	410	-
Population Served with Sewerage & Drainage	Million	5.169	5.352	5.611	5.751	5.955	6.200
Facilities Percentage of Total population	%	86.0	87.0	88.9	88.7	89.3	-
Per Person Supply	GPCD	78	72	69	72	69	-

Source:- Water and Sanitation Agency (WASA), Lahore

Table A-72: Population Served with Water Supply, Sewerage and Drainage Facilities of Various Cities

Particulars	Unit	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Rohri							
1. Total Population(approx.)	Thousand	70.674	73.501	76.441	79.499	82.679	85.859
2. Population Served with Pipe Water Supply	Thousand	70.674	73.501	76.441	79.499	82.679	82.679
3. Percentage of Total Population	%	100	100	100	100	100	96.296
4. Quantum of water Supply (daily)	Million Gallons	2.120	2.205	2.293	2.385	2.480	2.48
5. Population Served with Sewerage & Drainage Facilities.	Thousand	70.674	73.501	76.441	79.499	82.679	82.679
6. Percentage of Total Population	%	100	100	100	100	100	100
Tando Allahyar							
1. Total Population(approx.)	Thousand	137.775	143.286	149.017	154.978	161.177	168.562
2. Population Served with Pipe Water Supply	Thousand	90.500	90.500	90.500	90.500	90.500	90.5
3. Percentage of Total Population	%	66	63	60	59.9	59.9	53.689
4. Quantum of water Supply (daily)	Million Gallons	2.715	2.715	2.715	2.715	2.715	2.715
5. Population Served with Sewerage & Drainage Facilities.	Thousand	137.775	143.286	149.017	154.978	161.177	168.562
6. Percentage of Total Population	%	100	100	100	100	100	100
Umar Kot							
1. Total Population(approx.)	Thousand	56.291	58.543	60.884	63.320	65.853	68.386
2. Population Served with Pipe Water Supply	Thousand	56.291	58.543	60.884	63.320	65.853	68.853
3. Percentage of Total Population	%	100	100	100	100	100	100
4. Quantum of water Supply (daily)	Million Gallons	1.689	1.756	1.827	1.900	1.976	2.052
5. Population Served with Sewerage & Drainage Facilities.	Thousand	39.404	39.404	39.404	39.404	39.404	39.404
6. Percentage of Total Population	%	70	70	70	70	70	70

Contd…

* Water supply scheme Rohri was completed by PHED and was designed upto 1994.The access to water is provided to the complete population whereas the access to safe clean drinking water is not provided to the population as no treatment plant is constructed in the scheme to satisfy the parameters of settled water. Presently NSUSC (North Sindh Urban Services Corporation) is the operator of scheme
* Water supply scheme Tando Allahyar is designed for 90500 persons up to 2014 @ 15 gallons/ Capita/ day only Brackish Zone city as rest of people are using underground water
* Drainage scheme Tando Allahyar is designed for 151100 persons up to 2019 and scheme is in advance stage of completion.
* Water supply scheme Umer Kot is designed for 92800 Persons upto Year 2020.The access to water is provided to the complete population whereas the access to safe clean drinking water will be provided after completion of treatment plant. The scheme is phased in the ADP 2014-2015
* Drainage scheme Umer Kot is designed for 92800 persons upto 2020. Scheme is in advance stage of completion, and at present 70% of population is being served through so far item of works completed n the scheme.
* Drainage scheme Thull is designed for 78200 persons upto 2020. Scheme is completed by PHED. TMA/Municipal Thull is operator of Scheme
* Water supply scheme Thull is designed for 78200 Persons upto Year 2020.The access to water is provided to the complete population whereas the access to safe clean drinking water will be provided after completion of treatment plant.

Table A-72: Population Served with Water Supply, Sewerage and Drainage Facilities of Various Cities

Particulars	Unit	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Thull							
1. Total Population(approx.)	Thousand	45.988	47.828	49.741	51.730	53.799	53.868
2. Population Served with Pipe Water Supply	Thousand	45.988	47.828	49.741	51.730	53.799	53.868
3. Percentage of Total Population	%	100	100	100	100	100	100
4. Quantum of water Supply (daily)	Million Gallons	1.380	1.435	1.492	1.552	1.614	1.676
5. Population Served with Sewerage & Drainage Facilities.	Thousand	45.988	47.828	49.741	51.730	53.799	53.868
6. Percentage of Total Population	%	100	100	100	100	100	100
Kotri							
1. Total Population(approx.)	Thousand	97.870	101.785	105.856	110.090	114.494	118.898
2. Population Served with Pipe Water Supply	Thousand	97.870	101.785	105.856	110.090	114.494	118.898
3. Percentage Of Total Population	%	100	100	100	100	100	100
4. Quantum Of Water Supply (Daily)	Million Gallons	2.936	3.054	3.176	3.303	3.435	3.567
5. Population Served With Sewerage and Drainage Facilities	Thousand	97.870	101.785	105.856	110.090	114.494	118.898
6. Percentage Of Total Population	%	100	100	100	100	100	100
Faisalabad							
1. Total Population(approx.)	Thousand	2800	2900	3000	31000	3200	3240
2. Population Served with Pipe Water Supply	Thousand	1400	1450	1500	1550	19200	19500
3. Percentage Of Total Population	%	50	50	50	50	60	60.18
4. Quantum Of Water Supply (Daily)	Million Gallons	45	49	54	58	62	66
5. Population Served With Sewerage and Drainage Facilities	Thousand	1960	2030	2100	2232	2304	2350
6. Percentage Of Total Population	%	70	70	70	70	72	72.53

Source:- 1. Public Health Engineering Research Laboratory, Hyderabad.
2. Faisalabad Development Authority

Note: Water supply scheme Kotri, Filtration is designed for 84335 persons upto 2020 and is in operation since June 2010

Table A-73: Distance to Water Source by Province and Source, PSLM 2011-12

Province and Water source	Percentage of Households					
	Inside The House	0-0.5 Km	0.5-1 km	1-2 Km	2-5 Km	Over 5 Km
Punjab						
Tap water	100	0	0	0	0	0
Hand pump/ M PUMP	92	6	2	0	0	0
Dug well	47	45	8	0	0	0
River/cANAl/Stream/Pond	8	85	5	2	0	0
Others	25	66	5	2	1	1
Total	89	8	2	0	0	0
Sindh						
Tap water	100	0	0	0	0	0
Hand pump/ M PUMP	79	18	2	0	0	0
Dug well	11	62	13	12	3	0
River/cANAl/Stream/Pond	11	61	11	11	5	0
Others	34	51	8	1	0	4
Total	82	14	2	1	0	0
Khyber Pakhtunkhwa						
Tap water	100	0	0	0	0	0
Hand pump/ M PUMP	85	14	1	0	0	0
Dug well	73	26	2	0	0	0
River/cANAl/Stream/Pond	16	70	9	4	0	0
Others	8	78	6	5	0	0
Total	78	20	2	1	0	2
Balochistan						
Tap water	100	0	0	0	0	0
Hand pump/ M PUMP	39	32	18	8	2	0
Dug well	61	33	5	0	0	0
River/cANAl/Stream/Pond	6	68	13	3	10	0
Others	8	15	10	19	46	0
Total	54	26	8	55	7	2
Pakistan						
Tap water	100	0	0	0	0	0
Hand pump/ M PUMP	88	9	2	0	0	0
Dug well	52	39	6	2	1	0
River/cANAl/Stream/Pond	13	70	10	5	3	0
Others	24	60	6	4	4	0
Total	85	12	2	1	0	2

Source**:-** Pakistan So9cial & Living Standards Measurement Survey 2011-2012 PBS.

Note:-

1. Households traveling the distance indicated to the water source as a percentage of all households using the specified source "Total" gives the households traveling the distance included as percentage of all households in the province.
2. Categories: "Tap water "consist of both tap water inside and outside house "Handpump/ M.pump includes and pump both inside and outside; moterpump and tube well outside the house; "Dug well" includes well open and well closed both inside and outside house; River/Canal/Stream"includes canal, river, spring, stream, pond.
3. Totals for columns may not add up to 100 because of rounding

Table A-73: Distance to Water Source by Province and Source, PSLM 2013-14

Province and Water source	Percentage of Households					
	Inside The House	0-0.5 Km	0.5-1 km	1-2 Km	2-5 Km	Over 5 Km
Punjab						
Tap water	94	6	0	0	0	0
Hand pump	89	6	3	1	0	0
Dug well	61	33	5	0	0	0
M PUMP	61	79	10	0	0	0
Others	3	49	7	2	3	8
Total	87	9	3	1	0	1
Sindh						
Tap water	98	2	0	0	0	0
Hand pump	76	18	4	1	1	0
Dug well	6	64	15	5	6	4
M PUMP	0	59	27	7	5	2
Others	47	39	4	4	1	5
Total	79	15	3	1	1	1
Khyber Pakhtunkhwa						
Tap water	88	11	1	0	0	0
Hand pump	85	13	2	0	0	0
Dug well	85	15	0	0	0	0
M PUMP	5	83	8	4	0	0
Others	39	16	11	14	0	0
Total	69	27	3	1	11	10
Balochistan						
Tap water	97	3	0	0	0	0
Hand pump	31	52	14	1	1	2
Dug well	33	31	33	3	0	0
M PUMP	0	60	33	4	2	2
Others	81	6	9	4	0	0
Total	51	30	15	2	1	1
Pakistan						
Tap water	95	5	0	0	0	0
Hand pump	86	10	3	1	0	0
Dug well	53	34	9	2	0	1
M PUMP	3	73	17	4	2	1
Others	45	40	7	4	1	3
Total	81	14	3	1	2	0

Source**:-** Pakistan Social & Living Standards Measurement Survey 2013-2014 FBS.

Note:-

1. Households traveling the distance indicated to the water source as a percentage of all households using the specified source "Total" gives the households traveling the distance included as percentage of all households in the province
2. Categories: "Tap water "consist of both tap water inside and outside house "Handpump/M.pump includes hand pump both inside and outside; moterpump and tube well outside the house; "Dug well" includes well open and well closed both inside and outside house; River/Canal/Stream"includes canal, river, spring, stream, pond.
3. Totals for columns may not add up to 100 because of rounding

Table A-74: Municipal Solid Waste Disposal System (Transportation) at Selected Cities during

Type of Vehicles	Selected cities by number of vehicles						
	2014						
	Hyderabad	Peshawar	Bannu	Faisalabad	Gujranwala	Lahore	Bahawalpur
Donkey Carts	-	107	-	-	-	-	8
Bullock Carts	05	-	-	-	-	-	4
Compactor	-	-	-	-	-	214	-
Chain Arm Roll	-	7	-	28	25	46	-
Mini Dumper	-	-	-	-	-	203	
Dumper	02	-	2	-	1	68	-
Trailer	-	-	-	-	-	15	-
Excavators	02	-	-	-	-	3	-
Mechanical Washer	-	-	-	-	-	7	-
Suzuki Pickup	-	98	1	-	35	53	-
Bolan	-	-	-	-	-	34	-
Mini Bus	-	-	-	-	37	12	11
Tractor Trolleys	16	28	6	6	-	14	-
Truck	21	11	1	-	-	1	-
Tractor Loader/Loader	07	-	-	-	-	47	-
Vacum Sweeper	01	-	-	-	-	2	-
Mec. Road sweeper	-	12	-	4	4	94	2
Mazda Compactor	-	45	1	2	-	5	-
Showel	01	4	-	2	-	1	-
Water Lorries	01	3	2	13	3	9	-
Dumpers	-	-	-	24	-	68	-
Mech Loader	-	2	1	11	-	5	-
Multi Loader	-	5	-	-	-	-	-
Master High land pickup	One Mini	4	-	8	-	53	-

Source**:-** Tehsil Municipal Administration of each district

Table A-75: Municipal Solid Waste Disposal System (by Number of Employees) at selected cities during 2014

Name of cities	Zone/Sectors	Super-visory Staff	Super-visors	Working Staff	Sweeper/ Sanitary workers	Total staff Col.(3+5)
1	2	3	4	5	6	7
Hyderabad	-	2	1	45	50	98
Peshawar	4	46	65	1974	1906	3995
Bannu	7	9	3	299	75	393
Faisalabad	33	41	105	3090	106	3130
Gujranwala	8	12	74	16	1859	1961
Lahore	27	51	288	204	9000	9543
Bahawalpur	2	34	34	718	718	1504

Source**:-** Tehsil Municipal Administration of each district

Table A-76: Municipal Solid Waste Disposal System (Sanitary Landfill/Dumps) at selected cities during 2014

Name of City	Existing Dumps		Proposed land, fill/site
	Number	Size	
Hyderabad	1	Private Land	Proposal Regarding allotment Land for Landfill is under consideration with the Government of Sind Local Government Department.
Peshawar	1	60 Acre	Maryam zai Badaber Peshawer
Bannu	1	4 Acre	Maryam zai
Bahawalpur	1	8 Acres	Tibba Badar Sher
2014 Gujranwala	1	6 Acres	Bakhreywala
Faisalabad	1	55 Acres	150 Acres (Lakhowana)
Lahore	330	52 Hectars	Lakhodair

Source**:-** Tehsil Municipal Administration of each district

Table A-77: Garbage Collection System from the Household by Province 2013-14

Province and Garbage Collection Syste	2011-12			2013-14		
	Urban	Rural	Overall	Urban	Rural	Overall
Punjab						
Municipality	45	1	15	48	2	17
Privately	19	6	10	9	4	6
No System	36	93	75	43	94	77
Total	100	100	100	100	100	100
Sindh						
Municipality	28	1	15	33	2	18
Privately	37	1	19	23	2	13
No System	35	98	66	44	97	69
Total	100	100	100	100	100	100
Khyber Pakhtunkhwa						
Municipality	29	0	13	66	1	13
Privately	1	0	0	2	0	1
No System	30	99	87	32	99	86
Total	100	100	100	100	100	100
Balochistan						
Municipality	26	0	7	21	1	6
Privately	9	1	3	5	6	5
No System	65	99	90	74	93	89
Total	100	100	100	100	100	100
Pakistan						
Municipality	40	1	14	43	2	17
Privately	24	4	11	14	3	7
No System	36	95	75	43	95	76
Total	100	100	100	100	100	100

Source**:-** PSLM 2013-14 PBS.

Note:-

1. Household reporting the garbage collection system indicated for their household expressed as percentage of the total number of households.
2. Total may not add to 100 because of rounding

Table A-78: Type of Sanitation System Used-by Province, 2007-08 2011-12

Province and Sanitation System	2011-12PSLM			2013-14		
	Urban	Rural	Overall	Urban	Rural	Overall
Punjab						
Underground Drains	53	5	20	56	5	23
Covered Drains	6	4	5	4	5	5
Open Drains	38	53	48	35	48	44
No system	3	39	27	5	41	29
Total	100	100	100	100	100	100
Sindh						
Underground Drains	69	1	36	72	5	41
Covered Drains	1	1	1	1	0	1
Open Drains	27	15	21	23	10	17
No system	3	83	42	3	84	41
Total	100	100	100	100	100	100
Khyber Pakhtunkhwa						
Underground Drains	9	1	3	6	0	1
Covered Drains	4	15	1	2	1	1
Open Drains	83	53	59	83	39	47
No system	4	45	37	9	60	51
Total	100	100	100	100	100	100
Balochistan						
Underground Drains	8	1	3	33	1	10
Covered Drains	14	0	4	7	2	3
Open Drains	60	12	24	40	13	20
No system	17	87	69	21	84	67
Total	100	100	100	100	100	100
Pakistan						
Underground Drains	55	3	21	59	4	24
Covered Drains	5	3	3	3	3	3
Open Drains	37	45	42	34	38	36
No system	4	49	33	5	55	37
Total	100	100	100	100	100	100

Source:- PSLM 2013-14 Pakistan Bureau of Statistics.

Note:- 1. Households connected to the drainage system indicated, expressed as a percentage of the total number of households.

2. Totals may not add to 100 because of rounding

Table A-79: Summary Report for National Greenhouse Gases (Giga gram), 2008

Source/GHGs	CO_2 Emission	CO_2 Removals	CH4	N_2O	NO_x	CO	NM VOCs	Halo-carbons
Energy	142900.0	NA	824.4	0.9	612.3	952.3	182.5	NA
A- Fuel Combustion activities	142900.0	NA	13.5	0.9	611.6	951.3	175.1	NA
1.Energy industries	41274	NA	1.2	0.2	112.5	11.5	3.2	NA
2. Manufacturing industries & construction	44900	NA	4.2	0.4	131.5	45.4	6.6	NA
3.Transport	34028	NA	6.5	0.24	346.7	876.3	164.0	NA
4. Other sectors	16398	NA	1.6	0.035	15.4	18.1	1.3	NA
B-Fugitive emissions from fields	NA	NA	810.9	NA	0.7	1.0	7.4	NA
1. Solid fuels	NA	NA	73.4	NA				NA
2. Oil & natural gas	NA	NA	737.5	NA				NA
3.Ozone precursors & SO2 from refining	NA	NA	NA	NA	0.7	1.0	7.4	NA
Industrial processes	30593.3	NA	NA	1.1	3.5	9.4	1417.3	2.4
A. Mineral products	15294.3	NA	NA				1373.0	NA
B. Chemical industries	436.8	NA	NA	1.1	3.0	4.8	9.1	NA
C. Metal production	14862.2	NA	NA		0.5	4.6	0.5	2.0
D. Other production		NA	NA				35.3	NA
E. Production of halocarbons & sulfur hexafluoride	NA	NA	NA	NA	NA	NA	NA	NA
F. Consumption of halocarbons & sulfur hexafluoride	NA	NA	NA	NA	NA	NA	NA	0.4
Solvent & other product use	-	-	-	-	-	-	-	-
Agriculture & Livestock	NA	NA	3835.4	183.0	12.3	361.1	NA	NA
A. Enteric fermentation								
B. Manure management	NA	NA	3667.4		0.02	NA	NA	NA
C. Rice cultivation	NA	NA	155.0	NA	NA	NA	NA	NA
D. Agricultural soils	NA	NA	NA	182.6	NA	NA	NA	NA
E. Prescribed burning of savannas	NA	NA	NA	NA	NA	NA	NA	NA
F. Field burning of agricultural residues	NA	NA	12.9	0.34	12.3	361.1		NA
Forestry & land use change	18730	87284	NA	NA	NA	NA	NA	NA
A. Change in forest & other woody biomass stocks	18730	87284	NA	NA	NA	NA	NA	NA
B. Forest & grassland conversion	NA	NA	NA	NA	NA	NA	NA	NA
C. Abandonment of managed lands	NA	NA	NA	NA	NA	NA	NA	NA
D. Emission from soils	NA	NA	NA	NA	NA	NA	NA	NA
Waste	NA	NA	472.5	8.1	NA	NA	NA	NA
A. Solid waste disposal on land	NA	NA	447.5	NA	NA	NA	NA	NA
B. Waste water handling	NA	NA	25.0	NA	NA	NA	NA	NA
C. waste incineration	-	-	-	-	-	-	-	-
D. Other (human sewage)	NA	NA		8.1	NA	NA	NA	NA
Net National Emissions		104939.3	5132.3	193.1	628.1	1322.8	1599.8	2.4

Source:-SUPARCO, Karachi
P= Potential emissions
N.A= Not Applicable
- = Not Available

Table A-80: Month Wise Analysis of Air Quality at Shahidra Metro Bus Stop, Lahore- 2014

Time (Hours)	NO ug/m^3	NO_2 ug/m^3	CO mg/m^3	SO_2 ug/m^3	O_3 ug/m^3
10	-	-	-	16.99	-
11	-	-	3.63	17.2	4.00
12	64.64	154.43	3.63	22.00	3.00
13	-	-	-		-
14	67.17	151.14	3.19	41.71	5.14
15	71.42	151.76	3.40	32.29	6.00
16	72.49	157.30	3.50	24.00	7.07
17	76.61	162.64	4.39	20.29	9.21
18	129.41	187.70	5.58	17.71	8.57
19	218.39	247.25	7.36	15.43	5.57
20	283.02	287.71	6.25	13.14	3.21
0.0	27.80	25.87	0.5	13.14	5.57
1	28.73	31.01	4.375	8.57	14.14
6	0.00	0.00	5.9	7.43	4.07
8	7.18	11.71	2.875	5.14	3.21
9	-	-	-	5.43	9.43
Averages	87.24	130.71	4.66	17.41	14.14

Source: Environment Protection Department, Govt. of Punjab, Lahore
A.N.O= Analyzer not operational
*(Proposed) NAAQS: National Ambient Air Quality Standard

Table A- 81: State of Air Quality in Urban Centers of Punjab (From 2008 to Jan 2010)

Name of City	Location	Type of site	Date	Ozone Ug/m³	SO_2 Ug/m³	Co mg/m³	No Ug/m³	NO_x Ug/m³	PM2.5 ug/m3	Humi-dity %	W. Speed M/sec	NMHC ppb
1	2	3	4	5	6	7	8	9	10	11	12	13
Lahore	Gulberg Area	Urban Area	12.01.10	18	26.8	1.5	33.9	48.8	259.1	91.3	0.85	-
Lahore	Township	Residential near Industrial	15.01.10	-	-	0.91	32.4	70.9	138.3	69.4	1.5	-
Lahore	Defence Road	Near Air port	19.01.10	15	31	1.2	14	54	202	89	1	-
Lahore	Lytton Road	Busy Road side/Commercial	20.01.10	24	52	1.9	94	146	294	84	1.07	-
Multan	Shah Rukn-e-Alam	Residential/ Road side	12.01.10	18.04	26.83	1.56	34	76	-	91.41	0.86	1321
Multan	Hussain Agahi Chowk	Busy road side/Commercial	12.01.10	15	29	1.78	33	77	170	91	1	1588
Multan	Shafiabad	Residential	13.01.10	30	35	0.75	18	40	90	82	1	550
Bahawalpur	Fawara Chowk	Busy Road side/Commercial	15.01.10	17.2	20.4	3.0	108.7	151.6	298.6	88.8	0.6	2399
Bahawalpur	Fareed Gate	Busy Road Side	16.01.10	18.2	38.9	2.0	47.0	94.4	209.4	84.1	0.8	1961
Muzaffargarh	Thermal Power Station Colony	Industries	17.01.10	36	18	1.0	20	62	189	84	1	606
Muzaffargarh	Kachehry Chowk	Busy Road side/Commercial	18.01.10	18	24	1.9	72	131	242	87	0.8	-
Rawalpindi	Westridge Colony	Residential Area	23.01.10	14.9	49	2.12	90	189	183	55.1	0.93	2159
Rawalpindi	Dist. Hospital Raja Bazaar	Urban Area	24.01.10	37	41	1.8	80	162	167	51	0.84	-
Rawalpindi	RDA Office	Urban Area near Murree Road	25.01.10	23	31	2.3	107	191	166	52	0.8	-
Rawalpindi	Attock Oil Refinery	Industrial	26.01.10	46	74	2	109	177	128	55	0.8	2721
Faisalabad	Peoples Colony	Residential Area	25.11.08	60	161	4.8	-	472	240	56.6	1.6	2900
Faisalabad	Katchery Bazar	Commercial	27.11.08	58	140	5.52	-	380	235	55	1.52	3700
Faisalabad	Bus Stand	Busy Road Side	29.11.08	57	176	3.03	-	450	230	55.9	1.2	3500

Contd…

Table A-81: State of Air Quality in Urban Centers of Punjab (From 2008 to Jan 2010)

Name of City	Location	Type of site	Date	Ozone Ug/m³	SO_2 Ug/m³	Co mg/m³	No Ug/m³	NO_x Ug/m³	PM2.5 ug/m3	Humi-dity %	W. Speed M/sec	NMHC ppb
1	2	3	4	5	6	7	8	9	10	11	12	13
Sheikhu-pura	Civil line near DCO Office	Residential	20.01.09	24.46	26.40	0.12	27	78	90	80	1.1	451
Sheikhupura	Lahore Sheikhupura Road	Busy Road Side	24.01.09	35.8	106	0.30	55	153	177	68.8	2.2	720
Gujran-wala	DCO Office Road	Busy Road Side	07.02.10	103	103	0.25	-	28	70	50	1.42	500
Gujran-wala	Baghbaan Pura	Residential	10.02.09	78	52	0.85	-	82	201	84.1	1.14	722
Gujrat	G.T road	Busy Road Side	11.02.09	73	42	0.30	-	70	130	75	1.10	1050
Gujrat	Fawara Chowk	Residential	12.02.09	101	35	0.31	-	36	78	50	1.10	727

Source:- Environment Protection Agency Laboratories Govt. of Punjab, Lahore.

*NAAQS National Ambient Air Quality Standard (Proposed)

Ozone	180 for 1 Hrs
SO_2	120 for 24 Hrs
CO	5 for 8 Hrs
NO	40 for 24 Hrs
NO_x	80 for 24 Hrs
$PM_{2.5}$	40 for 24 Hrs
NMHC	240US Standards

Note:-

Ppb=	Part per Billion	SO_2	Sulfur dioxide
Ug/m^3	Microgram per Cubic meter	CO	Carbon monoxide
DB	Decibel	NO_2	Nitrogen dioxide
No_x	Oxide of Nitrogen	$PM_{2.5}$	Particulate matter below 2.5 micron size

Table A-82: Month wise Analysis of Air Quality at Townhall, Lahore

Units	CH4	NMHC	THC	CO	NO	NO2	NOx	O3
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
* NAAQs						40 Ug/m3 24 hrs	80 Ug/m3 24 hrs	
July, 2014	2.076583	0.681467	2.75925	1.047978	0.001	0.007194	0.009724	0.0055
Aug, 2014	3.4692	0.561163	4.030125	-	0.008555	0.015823	0.024395	0.01165
Sep, 2014	3.382	0.019	1.819	-	0	0	0	0.011304
Oct, 2014	6.288875	1.500492	7.789375	-	0.028133	0.008325	0.036463	0.0124
Nov, 2014	3.853487	0.94506	4.79838	-	0.019855	0.017368	0.037223	0.005636
Dec, 2014	-	-	-	-	0.004354	0.009496	0.013571	0.026367
Jan, 2015	2.985696	0.022035	3.007652	-	0.011904	0.025996	0.0379	-
Feb, 2015	8.426553	-0.00171	8.301793	-	0.01057	0.02732	0.03789	-
Mar, 2015	3.017083	-0.08588	2.931208	-	0.011558	0.026367	0.037942	-
Apri, 2015	9.124938	0.961988	10.07306	-	0.014365	0.021594	0.035971	0.005781
May, 2015	4.762447	0.130447	4.799647	-	0.013933	0.022172	0.036089	0.010114

Units	SO2	RH	Radiation	Temp.	Wind Dir	Wind Spd	MC
	ppm	%	w/m2	degC	Degrees	m/s	Mg/m3
* NAAQs				5 mg/m3 8 hrs	120 Ug/m3 24 hrs	180 Ug/m3 1 hrs	40 Ug/m3 24 hrs
July, 2014	0.004488	69.84083	458.6908	33.16833	104.1146	1.977917	
Aug, 2014	0.004925	-	-	-	-	-	-
Sep, 2014	0.0086	89.71833	2.777167	26.86417	76.95792	0.916458	
Oct, 2014	0.004588	-	-	-	-	-	
Nov, 2014	0.005704	-	-	-	-	-	
Dec, 2014	0.007138	-	-	-	-	-	
Jan, 2015	-	43.256	674.76	27.528	185.55	1.1555	
Feb, 2015	-	-	-	-	-	-	
Mar, 2015	-	0.10055	1.86925	-19.8988	-	-	
Apri, 2015	-	-	-	-	-	-	
May, 2015	-	-	-	-	-	-	

Source: Environmental Protection Agency (EPA), Lahore.

Table A-82: Month wise Analysis of Air Quality at Townhall (F1), Lahore

Units	CH4 ppm	NMHC ppm	THC ppm	CO mg/m³	NO ug/m³	NO2 ug/m³	NOx ug/m³	O3 ug/m³
* NAAQs	-	-	-	5 mg/m³	40 ug/m³	40 ug/m³	80 ug/m³	130 ug/m³
July, 2014	2.076583	0.681467	2.75925	1.3099	9.339286	14.77339	24.11268	11.78571
Aug, 2014	3.4692	0.561163	4.030125	S.N.O	11.45759	32.49366	43.95125	24.96429
Sep, 2014	3.382	0.019	1.819	S.N.O	-	-	-	24.22286
Oct, 2014	6.288875	1.500492	7.789375	S.N.O	26.67813	17.09598	43.77411	26.57143
Nov, 2014	3.853487	0.94506	4.79838	S.N.O	21.59152	30.66643	52.25795	12.07714
Dec, 2014	-	-	-	S.N.O	15.83125	29.50071	45.33196	56.50071
Jan, 2015	2.985696	0.022035	3.007652	S.N.O	10.94286	42.38464	53.3275	S.N.O
Feb, 2015	8.426553	0.00171	8.301793	S.N.O	14.15625	43.10357	57.25982	S.N.O
Mar, 2015	3.017083	0.08588	2.931208	S.N.O	10.47946	42.14652	52.62598	S.N.O
Apri, 2015	9.124938	0.961988	10.07306	S.N.O	15.23884	31.34482	46.58366	12.38786
May, 2015	4.762447	0.130447	4.799647	S.N.O	16.66027	30.53179	47.19206	21.67286
Averages	4.738686	0.473406	5.030949		15.23755	31.40415	42.40154	23.77

Units	SO2 Ug/m³	PM2.5 Ug/m³	RH %	Radiation w/m2	Temp. degC	Wind Dir Degrees	Wind Spd m/s
* NAAQs	80 ug/m³	15 ug/m³		5 mg/m³ 8 hrs	120 Ug/m³ 24 hrs	180 Ug/m³ 1 hrs	40 Ug/m³ 24 hrs
July, 2014	12.82286	93.62	69.84083	458.6908	33.16833	104.1146	1.977917
Aug, 2014	14.07143	57.70	-	-	-	-	-
Sep, 2014	24.57143	49.54	89.71833	2.777167	26.86417	76.95792	0.916458
Oct, 2014	13.10857	S.N.O	-	-	-	-	-
Nov, 2014	16.29714	S.N.O	-	-	-	-	-
Dec, 2014	20.39429	S.N.O	-	-	-	-	-
Jan, 2015	S.N.O	S.N.O	43.256	674.76	27.528	185.55	1.1555
Feb, 2015	S.N.O	S.N.O	-	-	-	-	-
Mar, 2015	S.N.O	S.N.O	0.10055	1.86925	-19.8988	-	-
Apri, 2015	S.N.O	S.N.O	-	-	-	-	-
May, 2015	-		-	-	-	-	-
Averages	16.87762						

Source: Environmental Protection Agency (EPA), Lahore.
S.N.O. means Sensor not operational
* NAAQS: National Ambient Air Quality Standard

Table A-82: Month wise Analysis of Air Quality at Townhall (F2), Lahore

Units	Wind Spd	Wind Dir	Temp.	RH	Radiation	NO	NO2	NOx
	m/s	Degrees	degC	%	w/m2	ug/m^3	ug/m^3	ug/m^3
* NAAQs						40 ug/m^3	40 ug/m^3	80 ug/m^3
July, 2014	0.15	70.81	40.86	20.5	655.1	10.34	26.7363	37.0763
Aug, 2014	S.N.O	S.N.O	32.2	67.7	210.3	10.0	25.6	35.6
Sep, 2014	0.1281	71.89	29.64	41.93991	3.456	10.44	28.25	38.69
Oct, 2014	0.1283	73.36	29.64	41.93755	3.449122	11.67	33.08	44.75
Nov, 2014	0.1278	74.9384	29.64	41.93	3.45087	10.567	36.6562	47.2232
Dec, 2014	0.126617	76.52	29.62	41.95313	3.4273	10.5094	36.7404	47.2498
Jan, 2015	S.N.O	S.N.O	14.65	96.02	3.9273	9.150	34.1694	43.3194
Feb, 2015	S.N.O	-	21.1	69.8	8.7	8.5	27.33	35.83
Mar, 2015	S.N.O	-	15.4	84.4	49.6	8.7	25.45	34.15
Apri, 2015	S.N.O	-	36.3	32.6	511.1	9.4	26.7	36.1
May, 2015			41.7	14.4	415.2	9.9	24.07	33.97
Averages						9.925127	29.52566	39.45079

Units	CH4	NMHC	THC	CO	SO2	O3	PM2.5
	ppm	ppm	ppm	mg/m^3	Ug/m^3	ug/m^3	Ug/m^3
* NAAQs	-	-	-	5 mg/m^3 8hrs	120 ug/m^3 24hrs	130 ug/m^3 1hrs	35 ug/m^3 24hrs
July, 2014	2.255	2.0215	4.283	1.02775	36.47	3.21	94.335
Aug, 2014	*	*	*	0.718	21.2	446.9	-
Sep, 2014	3.2805	0.919	4.199	4.21	36.05	5.82	151.0
Oct, 2014	A.N.O*	A.N.O*	A.N.O*	4.217	36.07	5.80	-
Nov, 2014	A.N.O*	A.N.O*	A.N.O*	4.217	36.05	5.80	-
Dec, 2014	A.N.O*	A.N.O*	A.N.O*	4.217	36.04	6.0	-
Jan, 2015	A.N.O*	A.N.O*	A.N.O*	0.798	35.15	6.3429	-
Feb, 2015	A.N.O*	A.N.O*	A.N.O*	1.574	32.0	17.8	-
Mar, 2015	A.N.O*	A.N.O*	A.N.O*	0.958	32.5	1.4	87.1
Apri, 2015	A.N.O*	A.N.O*	A.N.O*	1.119	32.3	5.9	88.6
May, 2015	-	-	-	3.023	32.7	A.N.O**	149.7
Averages				2.3709	33.3209	39.52	113.75

A.N.O * : analyzer is not operational due Pump Alarm in HC analyzer * NAAQS: National Ambient Air Quality Standard
* Missing values are due to rapid load shedding and AVR tripping.
A.N.O**: Analyzer not operational due to Lamp alarm
Source: Environmental Protection Agency (EPA), Lahore.

Table A-83: Tide Data off Seashore Karachi

(Metres)

Month	2009			2010			2011		
	Av. high water	Av. low Water	Mean sea level	Av. high water	Av. low water	Mean sea level	Av. high water	Av. low water	Mean sea level
January	2.58	0.80	1.69	2.62	0.75	1.69	2.58	0.78	1.68
February	2.60	0.79	1.70	2.60	0.79	1.70	2.62	0.76	1.69
March	2.62	0.81	1.71	2.65	0.76	1.71	2.60	0.80	1.70
April	2.61	0.87	1.74	2.61	0.85	1.73	2.61	0.85	1.73
May	2.62	0.88	1.75	2.62	0.89	1.76	2.63	0.88	1.76
June	2.66	0.85	1.76	2.65	0.86	1.76	2.66	0.86	1.76
July	2.66	0.81	1.74	2.67	0.79	1.73	2.69	0.77	1.73
August	2.62	0.76	1.69	2.63	0.73	1.68	2.68	0.68	1.68
September	2.56	0.73	1.65	5.58	0.72	1.56	2.61	0.67	1.64
October	2.50	0.76	1.63	2.50	0.76	1.63	2.55	0.70	1.63
November	2.49	0.79	1.64	2.51	0.76	1.64	2.51	0.75	1.63
December	2.54	0.79	1.66	2.54	0.76	1.65	2.53	0.79	1.66
Month	2012			2013			2014		
	Av. high water	Av. low water	Mean sea level	Av. high water	Av. low water	Mean sea level	Av. high water	Av. low water	Mean sea Level
January	2.57	0.79	1.68	2.60	0.76	1.56	2.63	0.72	1.68
February	2.61	0.77	1.69	2.61	0.77	1.69	2.61	0.77	1.69
March	2.59	0.83	1.71	2.64	0.77	1.71	2.66	0.75	1.70
April	2.61	0.84	1.73	2.64	0.82	1.73	2.64	0.81	1.73
May	2.65	0.86	1.76	2.67	0.83	1.75	2.66	0.77	1.70
June	2.69	0.82	1.76	2.70	0.81	1.75	2.68	0.83	1.75
July	2.70	0.78	1.74	2.68	0.78	1.73	2.69	0.76	1.72
August	2.70	0.69	1.70	2.62	0.74	1.68	2.66	0.70	1.68
September	2.50	0.67	1.59	2.57	0.87	1.64	2.6	0.68	1.64
October	2.53	0.73	1.63	2.52	0.72	1.61	-	-	-
November	2.51	0.81	1.66	2.52	0.74	1.63	-	-	-
December	2.54	0.82	1.68	2.57	0.74	1.66	-	-	-

Source:- National Institute of Oceanography Karachi

Table A-84: Films Released by Language

(Number)

Year	Number of films released						
	Total	Urdu	Sindhi	Punjabi	Pushto	Sariaiki	Gujrati
1991	93	38(a)	-	26	29	-	-
1992	91	26(a)	4	39	22	-	-
1993	88	48(a)	3	14	23	-	-
1994	77	38(a)	1	15	23	1	-
1995	64	27(a)	-	14	23	-	-
1996	70	30(a)	2	12	26	-	-
1997	68	38(a)	1	9	20	-	-
1998	51	29 (a)	-	5	17	-	-
1999	51	28	-	6	17	-	-
2000	61	31	-	15	15	-	-
2001	49	27	-	19	3	-	-
2002	53	18	-	28	7	-	-
2003	43	15	-	17	11	-	-
2004	43	7	-	16	20	-	-
2005	42	11	-	11	20	-	-
2006	42	8	-	12	22	-	-
2007	39	10	-	15	14	-	-
2008	35	7	-	12	16	-	-
2009	23	5	-	9	9	-	-
2010	18	3	-	7	8	-	-
2011	24	6	-	4	12	2	-
2012	22	-	-	6	16	-	-
2013	31	8	-	5	18	-	-
2014	42	15	3	8	14	2	-

Source:- Pakistan Film Producer's Association

(a) It also includes the films produced in urdu & punjabi double version.

Table A-85: Documentary Films Produced/Released

(Number)

Year	Federal		Punjab		Sindh	
	No. of Films Produced	No .of Films Released	No. of Films Produced	No. of Films Released	No. of Films Produced	No. of Films Released
2000-01	10	7	6	5	-	-
2001-02	6	6	4	4	-	-
2002-03	2	2	7	6	-	-
2003-04	1	1	6	6	-	-
2004-05	1	1	9	8	-	-
2005-06	1	1	9	8	-	-
2006-07	-	-	7	5	4	4
2007-08	5	-	4	4	-	-
2008-09	1	1	1	-	-	-
2009-10	-	-	-	-	-	-
2010-11	7	6	-	-	-	-
2011-12	7	7	-	-	-	-
2012-13	-	-	-	-	-	-
2013-14	1	1	-	-	-	-

Year	Khyber Pakhtunkhwa		Balochistan	
	No .of Films Produced	No .of Films Released	No .of Films Produced	No. of Films Released
2000-01	-	-	-	-
2001-02	-	-	-	-
2002-03	-	-	-	-
2003-04	-	-	-	-
2004-05	-	-	-	-
2005-06	-	-	-	-
2006-07	-	-	-	-
2007-08	-	-	-	-
2008-09	-	-	-	-
2009-10	-	-	-	-
2010-11	-	-	-	-
2011-12	-	--	-	-
2012-13	-	-	-	-
2013-14	-	-	-	-

Source: i. Ministry of Information & Broadcasting (Central) Karachi
ii. Provincial Public Relation Departments

Table A-86: Dramas and Plays Produced/Released

(Number)

Year	On Television		On Radio	
	Produced	Telecasted	Produced	Broadcasted
1995	730	715	285	818
1996	759	736	289	1234
1997	839	833	298	671
1998	708	695	127	554
1999	614	565	173	456
2000	636	587	260	605
2001	688	486	137	363
2002	759	552	206	561
2003	561	521	666	826
2004	550	510	140	362
2005	535	471	195	515
2006	433	345	214	1148
2007	629	595	704	2438
2008	324	324	98	280
2009	219	219	105	290
2010	644	479	95	280
2011	508	383	81	270
2012	420	389	75	263
2013	357	357	*	*
2014	261	263	*	*

Source:- i) Pakistan Television Corporation Limited
ii) Pakistan Broadcasting Corporation Limited

* Broadcasting data from Radio has not been receiving due to non-available in source agency.

Table A-87: Cinemas and Seating Capacity therein by Province

(Number)

Years	PAKISTAN	BALOCHISTAN	Khyber Pakhtunkhwa	PUNJAB	SINDH
Cinemas					
2000-01	433	15	35	281	102
2001-02	413	14	35	273	91
2002-03	406	14	35	268	89
2003-04	375	13	33	247	82
2004-05	334	10	30	238	56
2005-06	286	8	28	199	51
2006-07	287	8	35	184	60
2007-08	245	9	30	143	63
2008-09	203	4	22	123	54
2009-10	133	8	17	87	21
2010-11	107	11	11	70	15
2011-12	80	1	10	54	15
2012-13	115	1	11	71	32
2013-14	109	1	10	61	37
Seating Capacity of Cinemas					
2000-01	257,834	8,701	17,988	164,219	66,926
2001-02	251,477	5,991	16,602	167,063	61,821
2002-03	240,800	5,993	16,557	159,091	59,159
2003-04	224.454	5,993	15,868	149,175	53,418
2004-05	200,909	3,762	14,448	143,615	39,084
2005-06	159,789	3,722	12,521	106,670	36,876
2006-07	162,864	3,722	20,200	101,134	37,808
2007-08	159,157	5,120	21,812	96,274	35,951
2008-09	124,980	2,400	15,650	77,200	29,730
2009-10	37,650	3,600	10,000	15,400	8,650
2010-11	60,200	4,100	7,500	39,700	9,150
2011-12	43,300	500	4,800	29,400	8,600
2012-13	47,850	800	8,150	30,400	9,000
2013-14	47,850	550	6,500	28,600	12,200

Source:- 1) Divisional Directorates of Excise & Taxation, Punjab, Sindh, KP & Balochistan
2) Cantonment Boards of the Punjab, Sindh, KP & Balochistan.

Note:- Federal Capital Area Islamabad is included in Punjab

Table A-88: Visitors, Type of Attraction, Total Expenditure and Income by Zoo

Year	No of visitors		Type of attractions		Total expenditure (per annum) Rs.	Total income (per annum) Rs.
	Adult	Minor	Animals	Birds		
Karachi Zoo						
2000-01	1,300,000	925,000	413	468	9,095,941	16,869,243
2001-02	1,491,900	596,910	420	464	4,651,018	16,600,847
2002-03	1,071,000	900,000	389	468	5,427,761	15,955,988
2003-04	1,125,000	1,000,000	389	487	5,916,000	17,426,701
2004-05	1,449,322	1,027,642	419	369	4,636,135	20,062,108
2005-06	1,500,000	840,000	414	311	3,577,091	21,220,552
2006-07	1,447,623	600,000	432	404	5,991,799	19,313,884
2007-08	1,207,640	1,320,600	388	434	5,567,895	21,048,742
2008-09	1,800,000	70,000	512	501	27,100,000	24,303,194
2009-10	1,562,960	1,128,400	387	473	9,182,875	26,460,096
2010-11	1,272,393	118,651	371	450	16,025,702	23,200,281
2011-12	970,000	2,898,277	357	496	17,500,000	28,270,385
2012-13	1,103,334	2,206,667	356	442	39,700,000	40,000,000
2013-14	550,000	1,200,000	417	502	49,664,805	34,727,153
Hyderabad Zoo						
1999-00	51,000	58,000	103	189	2,400,000	749,000
2000-01	49,000	59,500	91	309	2,400,000	749,000
2001-02	200,000	100,000	151	269	2,800,000	1,000,000
2002-03	30,000	90,000	26	260	2,000,000	905,000
2003-04	75,000	50,000	53	175	1,500,000	810,000
2004-05	75,000	50,000	48	160	1,400,000	810,000
2005-06	50,000	65,000	33	100	1,500,000	625,000
2006-07	-	-	-	-	-	-
2007-08	***	***	***	***	***	***
2008-09	***	***	***	****	***	***
2009-10	***	***	***	***	***	***
2010-11	***	***	***	****	***	***
2011-12	***	***	***	***	***	***
2012-13	***	***	***	****	***	***
2013-14	***	***	***	****	****	****

Contd…

Table A-89: Visitors, Type of Attraction, Total Expenditure and Income by Zoo

Year	No of visitors		Type of attractions		Total expenditure (per annum) Rs.	Total income (per annum) Rs.
	Adult	Minor	Animals	Birds		
Bahawalpur Zoo						
2000-01	436,021	102,179	188	406	4,816,020	4,806,350
2001-02	419,779	100,211	211	457	4,232,820	4,140,220
2002-03	416,420	97,699	208	497	3,805,170	4,503,720
2003-04	470,120	90,021	204	705	3,633,000	4,389,000
2004-05	411,901	82,378	204	659	4,107,000	4,210,000
2005-06	**	**	194	682	4,347,000	5,338,235
2006-07	**	**	194	563	4,599,836	4,055,000
2007-08	601,069	131,568	175	616	4,700,000	5,870,686
2008-09	642,488	142,514	179	614	16,509,000	7,479,000
2009-10	655,948	133,526	177	702	7,043,000	7,922,000
2010-11	659,075	133,753	156	688	7,221,000	8,045,000
2011-12	849,000	389,000	180	814	7,200,000	11,000,000
2012-13	982,000	356,500	123	581	7,800,000	9,912,000
2013-14	719,200	140,000	142	456	8,790,000	10,808,000
Lahore Zoo						
2000-01	1,918,555	708,512	448	683	14,214,915	30,027,147
2001-02	*	*	447	716	6,412,531	33,151,297
2002-03	*	*	394	951	6,008,053	32,117,376
2003-04	2,034,611	834,552	329	1,277	6,892,308	40,535,656
2004-05	1,949,588	700,034	313	747	6,588,798	34,458,772
2005-06	2,036,748	837,500	322	780	--	44,204,063
2006-07	2,874,248	2,665,510	325	616	17,609,703	47,633,708
2007-08	1,998,007	658,236	286	751	8,660,012	49,590,700
2008-09	1,936,036	733,724	43	71	41,040,012	50,105,989
2009-10	1,873,100	684,700	277	705	48,192,172	63,345,191
2010-11	2,300,141	843,722	314	688	17,575,893	69,315,735
2011-12	2,517,915	900,266	300	638	23,428,712	74,458,636
2012-13	2,799,293	974,261	324	734	23,501,215	82,142,052
2013-14	2,995,835	989,398	289	619	24,480,042	1,10,531,470

Source**:-** Zoological Garden, Karachi, Hyderabad, Bahawalpur and Lahore

* Contract of gate entry ticket was leased out therefore number of visitors is not available on the record

** Sale of tickets leased out to private contractor.

*** Zoological Garden Hyderabad has been shifted to Karachi.

SECTION - B

Environmental Impacts of Socio-Economic Activities and Natural Events

Rapid population growth impacts directly all facets of environment, whether natural or man made. Some major problems include food shortages, sub-division of landholding to the level of uneconomical size, deforestation, reduction in agricultural land due to expansion of cities, pressure on housing units unaffordable increase in energy consumption, shortages of natural resources for the development of industrial sector and degradation of environment.

The predecessor publication contained some paragraphs on human settlement and other allied/consequential factors, based on National Conservation Strategy (NCS) 1994. These could not be updated as no follow-up or new version of NCS has so far been prepared and as such, the last Compendium can be referred to for this purpose. This section briefly dwells on certain aspects of economic activities, which bear nexus with population growth and, by the same token, environment.

Thus, this section includes tabulations on area under, as well as production of, agricultural crops, import/export of, agricultural commodities, milk and milk products, fertilizers, wood and wood products, petroleum product and coal. In order to allude towards deforestation, revenue earned by forest department is also tabulated. Further, as an explicit consequences of population pressure, some tables on waste generation, chemical analysis of river waters, water logging and salinity and different types of pollutants on coast of Pakistan are included. Similarly, a record of nature's unsavoury expressions i.e. natural disasters, which bear uncanny relationship with human actions, is given at the end.

Table B-01: Area under Agricultural Crops and Fruits Indices (2001-02=100)

Year	Rice	Wheat	Bajra	Jowar	Maize	Barley	Gram	Masoor
2001-02	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	105.25	99.71	83.74	94.55	99.35	97.38	103.12	109.38
2003-04	116.38	101.97	129.30	109.76	100.58	91.86	105.18	115.18
2004-05	119.18	103.73	82.31	85.99	104.27	84.36	117.13	96.88
2005-06	123.99	104.85	105.66	71.14	110.66	81.28	110.17	75.67
2006-07	122.09	106.46	120.86	81.54	108.00	84.99	112.68	87.05
2007-08	118.98	106.11	127.21	78.69	111.69	82.37	118.51	67.86
2008-09	140.11	112.27	112.61	73.46	111.74	77.76	115.71	68.97
2009-10	136.37	113.33	114.05	69.46	99.31	76.04	114.24	53.57
2010-11	111.88	110.46	131.48	63.98	103.46	69.71	112.84	58.26
2011-12	121.62	107.35	109.88	59.70	115.47	65.28	107.88	50.89
2012-13	109.20	107.48	110.55	55.51	112.52	66.09	106.22	43.08
2013-14	131.92	114.17	113.78	34.37	124.10	64.10	101.68	40.63

Year	Mash	Mung	Other Pulses (a)	Rapeseed & mustard	Sesa-Mum	Linseed	Ground-nut	Cotton
2001-02	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	101.28	107.73	77.45	104.35	64.82	95.16	86.92	89.66
2003-04	89.03	107.02	103.92	104.05	44.03	100.00	103.22	95.94
2004-05	68.56	94.23	78.43	95.65	49.04	87.10	106.44	102.46
2005-06	63.25	87.17	81.37	84.53	60.47	93.55	94.27	99.59
2006-07	60.69	91.05	91.18	98.85	52.65	83.87	94.06	98.68
2007-08	59.41	102.80	113.73	87.24	56.34	74.19	95.37	98.03
2008-09	50.46	91.85	89.22	91.07	66.89	87.10	93.36	90.51
2009-10	44.06	76.63	138.24	70.77	58.85	67.74	87.93	99.67
2010-11	44.79	57.44	118.63	80.51	57.23	64.52	83.40	86.31
2011-12	44.79	58.86	65.69	74.64	55.83	61.29	96.18	90.97
2012-13	42.41	56.81	45.10	83.41	52.29	59.68	82.09	92.39
2013-14	38.21	54.72	40.20	71.62	60.25	53.23	93.76	90.05

Note:- (a) Includes " Moth and Arhar etc" Pulses.

Contd…

Table B-01: Area under Agricultural Crops and Fruits Indices (2001-02=100)

Year	Jute	Sunhemp	Sugar cane	Tobacco	Potato	Vegetables (b)	Garlic	Chilies
2001.02	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002.03	0.00	75.00	109.99	94.33	110.08	100.18	100.00	115.81
2003-04	0.00	71.88	107.48	92.31	104.28	105.53	98.57	114.58
2004-05	0.00	53.13	96.67	102.23	106.46	106.47	94.29	100.00
2005-06	0.00	59.38	90.76	114.17	111.60	109.86	100.00	132.65
2006-07	0.00	46.88	102.91	103.04	126.81	109.50	111.43	97.13
2007-08	0.00	43.75	124.17	104.05	146.67	113.20	115.71	131.83
2008-09	0.00	37.50	102.97	100.61	137.83	112.80	120.00	151.54
2009-10	0.00	31.25	92.51	112.96	131.65	111.37	120.00	153.39
2010-11	0.00	25.00	98.79	103.85	151.52	112.40	120.00	130.60
2011-12	0.00	21.88	105.78	92.71	175.76	112.04	95.71	56.26
2012-13	0.00	15.63	112.91	100.81	164.26	114.14	100.00	131.21
2013-14	0.00	06.25	117.29	99.39	150.47	102.90	107.14	128.75

Year	Onion	Citrus Fruit	Banana	Mango	Apple	Guava	Grapes	Dates
2001-02	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	104.05	93.51	95.19	103.84	97.74	97.67	100.00	99.24
2003-04	105.01	90.89	101.28	104.14	227.98	95.80	100.79	95.29
2004-05	123.12	94.64	106.09	153.03	229.63	98.76	102.36	104.08
2005-06	143.26	99.02	104.17	158.18	230.45	96.11	102.36	104.46
2006-07	126.59	99.49	111.86	166.16	231.69	97.20	108.66	108.03
2007-08	147.50	102.68	113.78	167.88	232.51	98.44	120.47	114.78
2008-09	124.86	102.94	115.38	171.82	232.51	96.73	120.47	115.54
2009-10	120.13	102.16	111.54	175.45	229.63	96.58	120.47	115.41
2010-11	142.20	100.15	94.87	173.64	227.57	99.53	120.47	114.78
2011-12	124.95	99.90	72.12	174.14	227.16	103.73	121.26	118.60
2012-13	121.39	99.90	87.18	172.12	212.76	104.51	120.47	114.14
2013-14	138.63	99.74	89.74	173.03	216.46	66.41	120.47	114.01

Source:- Agricultural Statistics of Pakistan, 2013-14
Note: (b) Excluding patato & Sugarbeet.

Table B-02: Production of Agricultural Crops and Fruits Indices (2001-02=100)

Year	Rice	Wheat	Bajra	Jowar	Maize	Barley	Gram	Masoor
2001-02	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	115.37	105.25	87.43	91.43	104.37	99.80	186.47	111.45
2003-04	124.87	106.99	126.48	107.45	114.00	97.80	168.77	118.70
2004-05	129.44	118.58	89.33	84.12	168.05	91.88	239.77	98.85
2005-06	142.90	116.74	102.03	68.86	186.83	87.68	132.42	68.32
2006-07	140.09	127.81	109.98	81.00	185.56	92.89	231.37	80.53
2007-08	143.31	114.99	140.94	76.76	216.58	87.58	131.07	55.73
2008-09	179.08	131.86	136.97	74.23	215.87	81.66	204.50	54.96
2009-10	177.30	127.90	135.40	69.54	195.96	71.54	155.07	41.60
2010-11	124.25	138.34	159.89	63.72	222.72	71.34	136.98	50.76
2011-12	158.69	128.79	140.53	61.87	260.65	65.83	78.54	42.37
2012-13	143.63	132.84	143.53	55.28	253.55	67.33	207.40	41.22
2013-14	175.12	142.54	139.09	55.46	303.06	66.63	110.19	30.92

Year	Mash	Mung	Other Pulses(a)	Rapeseed & mustard	Sesamum	Linseed	Groun-Dnut	Cotton (000 bales)
2001-02	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	105.07	119.93	78.57	106.19	27.59	100.00	89.21	96.21
2003-04	89.13	122.01	101.79	107.64	35.49	103.33	113.56	94.68
2004-05	66.67	112.65	82.14	97.51	42.82	86.67	75.64	134.42
2005-06	59.78	98.70	82.14	81.70	50.43	93.33	68.42	122.67
2006-07	57.61	120.02	85.71	99.86	43.68	120.00	73.17	121.14
2007-08	62.68	153.99	128.57	83.64	47.13	103.33	82.57	109.82
2008-09	49.28	136.40	108.93	89.88	58.91	120.00	84.65	111.37
2009-10	38.77	102.86	251.79	73.29	47.99	90.00	52.67	121.68
2010-11	40.94	66.03	216.07	86.71	44.68	90.00	67.13	107.99
2011-12	39.49	80.68	132.14	73.16	43.53	86.67	87.03	127.95
2012-13	39.49	77.99	62.50	92.59	41.81	90.00	80.50	122.79
2013-14	37.68	80.50	67.86	96.34	46.84	76.67	99.80	120.32

Contd…

Note:- (a) Includes " Moth and Arhar etc" Pulses
1 bale = 375 Lbs

Table B-02: Production of Agricultural Crops and Fruits Indices (2001-02=100)

Year	Jute	Sunhemp	Sugar cane	Tobacco	Potato	Vegetables (b)	Garlic	Chilies
2001-02	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	0.00	77.27	108.36	93.33	113.05	100.23	102.12	106.00
2003-04	0.00	72.73	111.19	91.22	112.57	105.38	100.00	103.32
2004-05	0.00	50.00	98.34	106.35	117.61	106.08	98.94	97.00
2005-06	0.00	54.55	92.97	119.15	91.07	108.74	101.42	131.73
2006-07	0.00	45.45	113.95	109.31	149.94	109.20	110.27	74.49
2007-08	0.00	45.45	133.05	114.07	147.47	109.16	112.92	124.44
2008-09	0.00	45.45	104.17	111.01	170.84	111.84	118.94	201.18
2009-10	0.00	45.45	102.77	126.24	182.46	105.95	101.42	202.36
2010-11	0.00	36.36	115.13	108.78	202.81	109.02	97.88	184.14
2011-12	0.00	22.73	121.55	103.60	197.04	108.16	100.00	57.98
2012-13	0.00	18.18	132.70	114.60	219.89	101.68	107.26	157.77
2013-14	0.00	04.55	140.42	137.46	167.50	94.54	114.34	157.02

Year	Onion	Citrus fruits	Banana	Mango	Apple	Guava	Grapes	Dates
2001-02	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2002-03	103.07	93.01	95.46	99.76	85.92	98.72	98.48	99.16
2003-04	104.62	96.18	102.87	101.81	90.93	102.06	96.58	67.71
2004-05	127.43	106.20	105.54	161.14	95.86	106.18	93.35	98.75
2005-06	148.43	134.32	109.22	169.12	95.70	102.54	92.78	78.74
2006-07	131.16	80.45	100.53	165.77	94.88	103.12	88.40	67.63
2007-08	145.50	125.36	105.54	169.10	120.29	100.07	143.16	88.45
2008-09	123.04	116.49	105.08	166.61	120.13	95.13	144.68	89.88
2009-10	122.82	117.47	103.41	177.95	99.81	94.56	123.00	84.28
2010-11	122.15	108.30	94.32	182.09	143.26	101.50	122.43	82.85
2011-12	122.19	117.32	65.60	163.93	163.09	91.96	122.43	88.42
2012-13	119.91	109.37	94.39	162.03	151.57	92.48	122.43	83.23
2013-14	125.65	118.43	80.43	159.93	165.10	92.91	125.86	83.58

Source:- Agricultural Statistics of Pakistan, 2013-14
Note: (b) Excluding patato & Sugarbeet.

Table B-03: Quantity and Value of Export of Major Agricultural Commodities

(Quantity in '000' tones)
(Value in million Rs.)

Year	2010-11		2011-12		2012-13		2013-14 *	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
A. Primary Commodities								
Rice (all)	3670.0	184674.6	3629.9	184405.0	3407.6	186623.1	3717.2	222906.7
Rice Basmati	1170.6	82314.3	953.3	73711.4	674.0	64592.8	667.5	78844.3
Rice other varieties	2499.4	102360.3	2676.6	110693.6	2733.6	122030.3	3049.7	144062.4
Fish & Fish Preparation	133.9	25313.9	131.7	28597.6	138.7	30759.1	150.5	37917.6
Fruit & Veg. Incl. Juice	1562.8	50699.6	1311.4	51971.3	1518.3	66016.0	1394.5	70814.6
Fruits	668.7	25046.7	737	32067.7	718.5	38084.9	784.4	45196
Vegetables	856.9	22878.9	523.9	16254.1	754.9	24041.9	568.1	21507.9
Fruits & Veg. Juice	37.2	2774	50.5	3649.5	44.9	3889.2	42.0	4110.7
Wheat	1781.1	50065.5	413.7	11177.8	169.4	2125.8	20.0	731.9
Wheat Flour	908.1	22833.7	885.2	20746.2	893.2	22994.3	425.0	18020.1
Spices (Incl.Chillies)	15.7	4307.4	13.9	4662.8	19.6	6634.4	17.5	5824.3
Oil seed, Nuts, Kernals	17.4	1660.2	30.5	2690.0	28.0	3479.8	60.1	8558.9
Leguminous Vegetables	0.1	149.6	9.8	850.2	502	441.7	3.2	291.7
Raw hides and skins	0.1	141.3	-	37.2		15.3	0.2	77.2
Raw Wool & Animal Hair	8.5	1186.1	6.5	-836.7	11.2	1400.5	12.3	1626.8
Raw wool	3.1	501.2	1.8	298.2	5.7	796.2	5.8	809.2
Animal hair	5.4	684.9	4.7	538.5	5.5	604.3	6.5	817.6
Crude Animals material	8.1	3608.5	9.1	5664.3	11.0	4258.2	14.5	5414
Crude fertilizer	0.4	5.4	2.2	32.3	16.3	193.3	13.3	147.3
Molasses	86.4	892.1	55.6	578.0	225.2	2747.3	197.3	2510.4
Raw cotton	144.3	31168.4	256.5	41392.6	92.5	14888.1	114.7	21352.5
Cotton waste	76.7	4531.1	56.7	6448.0	66.6	7827.2	69.2	8124.1
Tobacco		2334.4		2742.9		2527.3		2447
UN-manufactured	7.8	2078.4	8.7	2591.5	7.8	2387.2	6.4	2190
Manufactured Excl. cigarette	0.7	216.1	0.1	28.2	0.2	78.3	0.3	91
Cigarettes (Million Nos.)	23.5	39.9	62.4	123.2	31.5	61.8		166
Sub-Total (A):		**383541.8**		**362833.0**		**355931.4**		**406765.3**

Table B-03: Quantity and Value of Export of Major Agricultural Commodities

(Quantity in '000' tones)
(Value in million Rs.)

Year	2010-11		2011-12		2012-13		2013-14 *	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
B. Textile Manufactures								
Cotton yarn	536.1	188200.1	575.8	162003.7	737.6	218044.9	663.9	205659.8
Cotton Cloth (Million sqm)	2337.8	224257.1	2066.6	218159.8	2160.8	260237.5	2520.5	285130.2
Cotton thread	0.1	71.4	3.9	1399.8	2.6	972.1	3.5	1540.1
Tents & other canvas goods	15.3	4008.9	28.7	8242.9	33.0	11388.9	28.5	8008.1
Bedwear	307.7	178596.0	248.8	155108.3	263.6	172724.2	316.7	219961.7
Towels	173.8	65167.0	145.9	61326.2	170.1	74447.6	166.6	78889.2
Textile madeups (excl. towels)		53424.5		52849.9		57943.7		67784.8
Sub-Total (B):		**713725.0**		**659090.6**		**795758.9**		**866973.9**
C. Other Manufactures								
Leather (Million sqm)	28.7	39744.3	25.0	39841.2	27.3	48455.7	29.3	56496.4
Leather manufacctures (excl.footwear)		46237.4		46536.0		54268.3		64367.5
Carpets (Million sq.M)	2.7	11322	3.3	10756.9	3.1	11839.5	3.2	12934.7
Feeding stuff for animals	280.5	3950.2	312.3	5035.5	325.9	6425.1	493.9	13747.7
Fertilizers manufactures	0.3	8.7	0.1	3.7	0.2	7.0		
Rubber Manufactures		660.7	0.1	710.0		904.8		1034.9
Guar & Guar Products	28.0	3993.7		14333.9	1.2	23270.9	24.4	7007.6
Foot wears (Million pairs)	12.5	9343.4	35.6	8860.8	13.0	10109.3	16.1	12208.3
Sports Goods		28208.4	12.4	30241.0		32375.2		37259.6
Furniture		568.3		575.8		671.4		754.4
Sub-Total (C):		**144037.1**	**388.8**	**156894.8**		**188327.2**		**205811.1**
Total (A+B+C)		**1241303.9**	**388.8**	**1178818.4**		**1340017.5**		**1479550.3**
Total Exports		**2120846.7**		**2110605.5**		**2366477.8**		**2583463.2**

* Provissional ** Negligible

Source:- Agricultural Statistics of Pakistan, 2013-14

Table B-04: Import of other Agricultural Commodities

(Quantity 000 Tonnes)
(Value in Million Rs)

Item	2011-12		2012-13		2013-14 *	
	Quantity	Value	Quantity	Value	Quantity	Value
Milk and cream	55.0	10072.6	43.9	8511.0	94.0	1112.4
Pulses	672.5	38810.9	472.6	31500.6	499.3	31526.2
Potato Seed	2.2	431.1	3.8	233.2	7.7	586.8
Maize Seed	14.3	3697.3	18.1	4288.6	21.0	6210.7
Cotton	--	44066.2		85666.2	--	521913.0
Dry Fruits	110.9	8123.4	106.3	7955.1	130.3	10515.1
Sugar Refined	17.2	1166.8	7.3	500.6	9.8	635.4
Tea	120.4	31291.6	123.4	35631.5	133.1	30827.2
Spices	121.5	8992.5	98.3	6495.3	111.6	9469.9
Milk food for babies inft. Invld	6.7	4342.5	6.6	4734.9	7.3	5634.8
Palm oil	2108.7	211826.2	2163.8	189618.0	2264.7	195230.2
Soyabean oil	39.5	4560.5	60.3	7157.9	118.1	11724.9
Agriculture machinery & Implements	-	11174.8		9644.1	-	7367.8
Jute	90.0	4622.1	89.2	4445.0	78.1	4247.0
Fertilizer manufactured	2588.0	110625.9	1270.8	63276.7	1833.2	73057.6
Insecticides	32.2	12255.0	17.9	8507.1	23.5	12571.8
Feeding stuff for animals	609.9	22749.6	630.4	37801.2	749.2	43198.8
Hides & skins & fur skins raw	18.2	4116.5	18.4	5758.3	19.8	7022.0
Oil seeds & oleagionous Fruits	1023.5	58569.3	665.2	43875.1	588.2	39269.9
Rubber crude incl. Synth/reclaimed	83.5	16891.9	91.7	15024.7	119.0	17371.2
Wood and cork	-	5747.3		6176.0	-	7762.3
Pulp & waste paper	198.2	7271.8	277.5	9038.9	272.5	12450.1
Fertilizer crude	210.1	4910.5	185.1	4675.0	149.6	3174.7
Crude animal & vegetable materials	77.2	8943.7	73.8	10244.0	81.3	11821.4
Animal oils and fats	41.6	3725.4	33.3	3134.9	24.2	2064.3
Animal/veg/fat oil wax etc nes	94.0	5583.9	64.5	3105.5	21.5	1822.3
Cork/wood mfg. (excl. furniture)	90.2	5330.9	81.6	4617.4	99.4	5324.5
Paper & paper board & manf. thereof	430.9	35697.1	427.1	36508.9	435.0	41503.8
Foot wear (pair)	23.0	6921.5	22.9	7576.1	16.7	7309.8
Total		**692518.8**		**655701.8**		**1122725.9**
Total Imports		**4009093.0**		**4349879.5**		**4630520.8**

Source:- Agricultural Statistics of Pakistan, 2013-14
* Provissional

Table B-05: Import of Edible Oil

(Quantity in Tonnes)

(Value in Million Rs.)

Year	Quantity				Value			
	Soyabean	Palm oil	Other	Total	Soyabean	Palm oil	Other	Total
1997-98	144.5	1034.1	-	1178.6	4281.7	29022.7	-	33304.4
1998-99	363.7	961.2	-	1324.9	11232.2	29303.5	-	40535.7
1999-00	202.4	848.5	-	1050.9	4573.3	16828.6	-	21401.9
2000-01	128.4	1015.1	-	1143.5	2555.4	16489.4	-	19044.8
2001-02	34.3	1162.5	-	1196.8	787.0	23247.3	-	24034.3
2002-03	82.7	1210.9	-	1293.6	2755.9	31532.6	-	34288.5
2003-04	80.8	1280.0	-	1360.8	2622.8	35294.4	-	37917.2
2004-05	73.3	1531.2	-	1604.5	3244.3	41730.7	-	44975.0
2005-06	32.6	1663.2	-	1695.8	1285.6	42926.5	-	44212.1
2006-07	48.5	1720.7	17.9	1787.1	2467.6	55919.7	1119.6	59506.9
2007-08	108.3	1772.8	819.7	2700.8	6456.2	102568.5	27778.7	136803.4
2008-09	91.8	1783.0	472.2	2347.0	6989.5	109929.3	21490.2	138409.0
2009-10	26.9	1702.2	148.6	1877.7	2339.4	109948.7	42397.1	154685.2
2010-11	66.4	1951.1	158.5	2176.0	5722.2	172702.0	8730.6	187154.8
2011-12	39.5	2108.0	135.6	2283.8	4560.5	211826.2	9309.3	225696.1
2012-13	60.3	2163.8	97.8	2321.9	7157.9	189618.0	6240.4	203016.3
2013-14 (P)	118.1	2264.7	45.7	2428.5	11724.9	195230.2	3886.7	210841.8

Source:- Agricultural Statistics of Pakistan, 2013-14

(P) Provisional

Table B-06: Import of Milk and Milk Products

(Quantity in Kilogram)
(Value in 000 Rs.)

Items	2010-11		2011-12		2012-13		2013-14	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Milk and Cream of a Fat upto 1%	36,119	4,269	78,755	9,719	15,583	3,169	16,366	3,215
Milk and Cream of a Fat 1% to 6%	21,598	2,448	3,600	509	49,936	8,463	22,626	4,577
Milk and Cream of a Fat >6%	73,745	11,826	20,918	5,705	363	114	1,246	348
Milk in powder Fat 1.5 %	28,550,611	7,556,738	26,222,979	7,467,111	22,290,780	5,886,946	23,251,956	8,460,169
Milk in powder >1.5% Fat	4,680,293	1,207,746	2,501,199	780,087	3,257,703	1,029,365	1,320,377	322,576
Other Milk in powder >1.5% Fat	293,320	80,803	41,543	12,375	87,941	27,891	108,805	24,205
Other Milk/cream not solid/sweet	288,369	42,453	250,806	41,139	48,654	6,692	18,917	38,912
Other Milk/Cream solid,Sweetend	448,372	68,515	690,321	106,549	1,356,330	195,080	1,178,396	218,252
Yogurt	50,116	4,758	123,635	12,379	105,328	12,492	860,380	222,423
Butter Milk,Curdled Milk/Cream	35,914	9,106	16,415	4,908	15,559	6,854	3,474	2,218
Whey powder	29,832,967	1,447,311	24,149,142	1,472,108	16,257,896	1,232,176	20,874,578	1,736,446
Other whey preserve concent/Sweet	299,488	30,125	96,368	5,642	12,000	2,256	875,500	73,473
Other product consist Nature Milk	683,246	129,662	16,626	784,247	314,150	78,248	168,700	48,199
Butter	56,015	14,183	78,246	15,656	194,155	29,699	104,291	22,357
Dairy spreads	11,779	2,825	212	50	97	15	76	10
Other fats & oil Derived from Milk	10,894	3,411	16,701	5,367	453,695	103,298	271,408	97,335
Fresh cheese	641,026	178,111	671,545	193,821	609,932	163,440	692,443	163,499
Other cheese & Curd Fresh	47,408	9,664	14,600	5,302	24,830	12,091	2,571	1,465
Grated or Powder cheese	4,110	1,237	111	39	3,211	971	6,187	3,187
Processed Cheese not grated	426,832	118,594	602,211	181,975	742,411	230,582	1,570,295	333,579
Other Cheese	15,730	4,378	17,936	5,238	1,269	417	19,940	5,152
TOTAL		**10,928,163**		**11,109,926**		**9,030,259**		**11,781,597**

Source:- Agricultural Statistics of Pakistan, 2013-14

Table B-07: Import of Fertilizers

Year	Quantity (000 Nutrient Tones)			
	N	P	K	Total
1997-98	286.9	415.7	11.1	713.7
1998-99	421.8	425.0	37.2	884.8
1999-00	233.0	416.0	13.8	662.8
2000-01	194.0	369.1	16.5	579.6
2001-02	178.5	429.5	17.7	625.7
2002-03	215.7	542.4	7.9	766.0
2003-04	204.2	553.5	6.4	764.1
2004-05	309.7	458.2	16.9	784.8
2005-06	603.4	639.8	25.1	1268.3
2006-07	307.6	476.2	12.1	795.9
2007-08	286.7	565.7	23.9	876.3
2008-09	456.6	111.5	0.04	568.1
2009-10	900.8	522.4	20.9	1444.1
2010-11	383.2	243.5	18.0	644.7
2011-12	871.0	291.0	15.0	1177.0
2012-13	457.5	272.3	6.8	736.6
2013-14	702.6	431.7	14.1	1148.4

Source:- Agricultural Statistics of Pakistan, 2013-14

Table B-08: Import of Wood and Wood Products

(Rupees in Thousands)

Items	Unit	2011-12		2012-13		2013-14 *	
		Quantity	Value	Quantity	Value	Quantity	Value
Wood Tret With Paint,Stain etc	CUMB	4,350	131,918	4,270	185,650	6,607	9,042
Oth Wood Oak Logs Non-confifer	CUMB	141	2,393	23	669	312	2,084
Wood of Other Non-Conf Species	CUMB	38,440	563,310	37,253	661,838	30,658	578,906
Oth Railway Sleepers of Wood	CUMB	392	6,458	-	-	2	932
Coniferous Wood Speci Saw/Chip	CUMB	719	11,716	288	4,837	229	3,598
Tropical Wood White Lauan Ecc	CUMB	7,801	205,428	7,601	219,370	7,831	246,749
Oth Tropical Wood Non-Conf Saw	CUMB	179,262	2,772,526	178,081	2,979,386	207,582	3,857,647
Oak Wood, Swan/Chipped Len Wise	CUMB	602	16,017	819	25,845	568	19,148
Beech Wood Swan/Chipped L/Wise	CUMB	1,255	36,215	2,470	74,515	4,455	146,363
Oth Wood Non-Conf.Species	CUMB	81,156	1,288,793	63,902	1,079,848	79,897	1,477,730
Pol Cream/Prep,Wood Furniture	Kg	24,410	20,115	110,219	109,746	30,400	21,133
Residual Lye From Wood Pulp Ns	Kg	386,514	114,509	386,027	152,537	302,955	146,543
Gum,Wood,Sulphat Turpentine Oil	Kg	10,233	2,585	19,132	2,539	11,133	6,175
Oth Terpenic Oil Conifer Wood	Kg	162,712	65,025	154,433	51,355	204,206	85,038
Wood In Chips or Particles Con	Kg	-	-	-	-	-	
Saw Dust & Wood Waste & Scrap	Kg	313,116	10,960	150,783	7,531	44,925	6,395
Wood Charcoal of Bamboo not Agglome	Kg	41,292	774	34,518	903	16,103	582
Coniferous Sheet for Veneering	Kg	226,071	15,130	346,642	26,633	965,443	85,422
Oth Veneer Sheet/Tropical Wood	Kg	292,466	72,247	294,399	70,616	348,631	48,592
Wood State	Kg	1,207,634	335,755	493,440	148,985	733,601	172,298

Contd...

Table B-08: Import of Wood and Wood Products

(Value in Million Rs.)

Items	Unit	2011-12		2012-13		2013-14 *	
		Quantity	Value	Quantity	Value	Quantity	Value
Other Laminated Wood	Kg	35,616	8,248	4647	1996	21,796	2,385
Unworked Oriented Stand Board	Kg	1,367,255	320,076	1,000,420	241,175	440,835	117,836
Oth Board & Wafer Board Of Wood	Kg	4,712	1,173	2,497	772	4,682	1,864
Oth Board Ligneous Material	Kg	36,164	6,199	11,265	2,605	25,997	7,389
Oth(Mdf)Density Exc 0.8g/Cm3	Kg	67,027	3,353	129,609	7,113	4,690	168
Fibre Board Density>0.5-G-0.8G	Kg	21,772,030	987,369	18,068,307	927,496	24,779,259	1,339,435
Oth, Fibre Board Density0.8GCm3	Kg	453,866	16,594	722,451	28,070	42,250	1,726
Oth, (Mdf) Density Not>0.5g/Cm3	Kg	97,916	7,188	76,649	8,389	90,888	10,026
Densified Wood Block,Plate.Etc	Kg	700,907	54,423	456,524	42,661	252,295	22,459
Wooden Frames For Paintings	Kg	173,473	12,999	229,434	18,044	176,517	13,085
Oth Builders Joinery/Carp Wood	Kg	189,318	49,645	126,968	29,558	97,649	25,363
Tableware & Kitchenware Of Wood	Kg	1,053,603	202,939	144,258	24,489	111,412	32,072
Statuettes/Oth Ornament Wood	Kg	29,327	2,388	20,527	3,066	8,417	1,477
Oth Wood Marquetry & Inland Wood	Kg	355,624	63,466	262,916	50,366	241,382	44,123
Clothes Hangers Of Wood	Kg	37,126	5,567	46,128	10,284	38,714	14,108
Other,Articles Of Wood	Kg	729,003	147,338	542,210	107,859	462,864	98,969
Total			**7,560,839**		**7,306,746**		**8,646,862**

Source:- Agricultural Statistics of Pakistan, 2013-14

* Provissional

Table B-09: Export of Crude Oil and Petroleum Products

Unit: Qty. in Tonnes
Qty. in TOE
(Value in Million US $)

Products	Year						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	ACGR
Crude Oil	-	-	-	-	-	25,181	
	-	-	-	-	-	26,032	
	-	-	-	-	-	(20.83)	
Energy	726,504	675,251	791,198	726,075	705,939	856,400	
Products	776,197	721,438	845,316	775,739	754,225	914,978	3.3%
Naphtha	(412.87)	(464.16)	(652.51)	(675.87)	(637.57)	(787.78)	
Motor Spirit	3,034	4,128	15,688	808	-	-	
	3,242	4,410	16,761	863	-	-	
	(2.82)	(2.43)	(19.65)	(0.93)	-	-	
HSD	62,014	126,433	120,238	26,381	134	1,721	
	65,195	122,919	126,406	27,734	141	1,809	-51.2%
	(53.80)	(102.72)	(135.82)	(31.06)	(0.14)	(2.27)	
JP-1	419,493	631,275	641,940	118,415	1,766	61,082	
	432,749	651,223	662,225	122,157	1,822	63,012	- 32.0%
	(352.77)	(531.99)	(719.79)	(157.61)	(2.16)	(75.19)	
100 LL	-	-	-	-	-	70	
	-	-	-	-	-	73	
	-	-	-	-	-	(0.20)	
Furnace oil	686	12,885	4,191	611	-	-	
	668	12,546	4,081	595	-	-	
	(0.28)	(5.73)	(2.28)	(0.57)	-	-	
Total Energy Products:	**1,211,731**	**1,449,972**	**1,573,255**	**872,290**	**707,839**	**919,273**	
	1,278,051	**1,522,537**	**1,654,789**	**927,088**	**756,188**	**979,869**	**-5.4%**
	(822.54)	**(1,107.03)**	**(1,530.05)**	**(866.04)**	**(639.87)**	**(865.44)**	
Lubes						**41038**	
						(40.00)	

Source:- Pakistan Energy Year Book-2014, Published by Hydrocarbon Development Institute of Pakistan.

Table B-10: Import of Petroleum Products

(Unit:Qty. in Tones)

(Qty. in TOE)

(Value in Million US $)

Products	Year						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	ACGR
100/LL	253,024	606,163	802,971	271,216	131,978	130,000	-12.5
	263,676	631,682	836,776	282,634	137,534	135,473	
	(162.00)	418.93	(723.31)	(290.00)	(286.33)	(131.06)	
HSD	4,395,427	4,394,888	3,777,500	3,263,000	2,957,000	2,568,000	- 10.2%
	4,620,912	4,620,346	3,971,286	3,430,392	3,108,694	2,699,738	
	(2,862.00)	(2,724.66)	(3,063.36)	(3,060.00)	(2,714,.00)	(2,343.00)	
High Sulphur Furnace Oil	5,077,096	5,600,120	5,597,137	6,419,000	5,582,000	6,529,000	5.2%
	4,943,568	5,452,837	5,449,932	6,250,180	5,435,193	6,357,287	
	(2,022.00)	(2,579.00)	(3,121.19)	(4,550.00)	(3,673.00)	(4,135.00)	
Low Sulphur Furnace Oil*	-	-	1,063,590	-	-	-	
	-	-	1,035,618	-	-	-	
			(628.26)				
Motor Spirit	248,637	576,929	1,129,689	1,554,000	1,818,000	2,296,000	56.0%
	265,644	616,391	1,206,960	1,660,294	1,942,351	2,453,046	
	(151.00)	(422.00)	(970.99)	(1,530.00)	(1,767.00)	(2,292.00)	
Total:	**9,974,184**	**11,178,100**	**12,370,887**	**11,507,216**	**10,488,978**	**11,523,000**	2.9%
	10,093,801	**11,321,256**	**12,500,572**	**11,623,500**	**10,623,773**	**11,645,545**	
	(5,197.00)	**(6,144.59)**	**(8,507.11)**	**(9,430.00)**	**(8,440.33)**	**(8,901.06)**	
Annual Growth Rate of Qty.	**10.52%**	**12.07%**	**10.67%**	**- 6.98%**	**-8.85%**	**9.86**	

Source**:-** Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan.

* For convenience of calculations, the conversion factors for HSFO & LSFO have been assumed as same.

Table B-11: Import of Crude Oil

(Unit: Qty. in Tones)
(Qty. in TOE)
(Value in Million US $)

Refinery	Year						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	ACGR
Byco Refinery Pakistan	875,233	632,732	491,922	120,162	783,403	760,873	-2.8%
	904,816	654,118	508,549	124,223	809,882	786,591	
	(495.82)	(350.66)	(329.42)	(109.98)	(640.59)	(631.15)	
Pakistan Refinery	1,304,743	979,604	929,885	941,307	1,026,096	1,205,208	-1.6%
	1,348,843	1,012,715	961,315	973,123	1,060,778	1,245,944	
	(595.56)	(551.95)	(637.80)	(815.30)	(838.59)	(1003.57)	
National Refinery	2,317,995	1,711,581	1,927,662	1,834,848	1,672,341	1,848,073	-4.4%
	2,396,343	1,769,432	1,992,817	1,896,866	1,728,866	1,910,538	
	(1,172.31)	(955.95)	(1,305.76)	(1,514.70)	1,341.24)	(1,491.32)	
PARCO	3,562,684	3,564,378	3,308,563	3,216,415	3,919,899	4,222,859	3.5%
	3,683,103	3,684,854	3,420,392	3,325,130	4,052,392	4,365,592	
	(1,980.02)	(1,991.95)	(2,412.61)	(2,679.80)	(3,185.69)	(3,446.65)	
Total:	**8,060,655**	**6,888,295**	**6,658,032**	**6,112,732**	**7,401,739**	**8,037,013**	-0.1%
	8,333,105	**7,121,119**	**6,883,073**	**6,319,342**	**7,651,918**	**8,308,664**	
	(4,243.71)	**(3,850.51)**	**(4,685.59)**	**(5,119.78)**	**(6,006.10)**	**(6,572.68)**	
Annual Growth Rate of Quantity	-4.31%	-14.54%	-3.34%	-8.19%	21.09%	8.58%	

Source:- Pakistan Energy Year Book, 2014 Published by Hydrocarbon Development Institute of Pakistan

Table B-12: Import of Coal *

Unit → Year ↓	Tones	TOE	Annual Growth Rate
1996-97	840,000	552,636	-22.22%
1997-98	960,000	631,584	14.29%
1998-99	909,649	598,458	-5.24%
1999-00	956,669	629,393	5.17%
2000-01	950,000	625,005	-0.70%
2001-02	1,080,584	710,916	13.75%
2002-03	1,578,169	1,038,277	46.05%
2003-04	2,789,238	1,835,040	76.74%
2004-05	3307168	2175786	18.57%
2005-06	2842829 **	1870297	-14.04%
2006-07	4,251,195	2,796,861	49.54%
2007-08	5,986,940	3,938,808	40.83%
2008-09	4,651,751	3,060,387	-22.30%
2009-10	4,657,829	3,064,386	0.13%
2010-11	4,267,058	2,807,297	-8.39%
2011-12	4,056,897	2,669,033	-4.93%
2012-13	3,709,940	2,440,770	-8.55%
2013-14	3,119,155	2,052,092	-15.92%
ACGR	-7.7%	-	-

Source:- Pakistan Energy Year Book,2014 Published by Hydrocarbon Development Institute of Pakistan

* Includes coal imported by Pakistan Steel for use as coke.

** Includes 458356 tonnes of metallurgical cock imported by Pakistant Steel.

Table B-13: Revenue Earned by Forest Department

(Million Rs.)

Year	Total	Balochistan	KP	Punjab	Sindh	Gilgit-Baltistan	Azad Kashmir
1996-97	1111.003	6.286	355.285	297.157	34.143	37.967	380.165
1997-98	984.940	7.000	261.330	304.280	37.450	4.830	370.050
1998-99	1000.434	7.000	285.009	402.760	43.384	16.179	246.102
1999-00	947.899	31.224	258.214	344.507	52.722	18.525	242.707
2000-01	1258.430	2.020	613.660	405.360	53.520	N.A	183.870
2001-02	1292.630	8.280	638.240	427.350	48.970	N.A	169.790
2002-03	1578.384	5.570	727.150	483.300	59.694	N.A	302.670
2003-04	1879.300	11.180	710.490	691.440	61.670	N.A	404.520
2004-05	2011.984	6.084	879.170	708.850	72.810	N.A	345.070
2005-06	1309.330	1.120	343.010	665.950	48.070	N.A	251.180
2006-07	1356.805	N.A	559.640	513.240	48.761	N.A	235.164
2007-08	1828.906	N.A	539.258	977.480	60.550	N.A	251.618
2008-09	1833.042	2.060	585.120	891.560	75.190	N.A	279.112
2009-10	1029.349	N.A	640.742	N.A	73.922	N.A	314.685
2010-11	1797.958	40.233	749.820	N.A	703.565	5.046	299.294
2011-12	2423.421	40.250	874.730	1085.500	101.52	3.272	318.617
2012-13	2922.181	N.A	675.848	1782.900	129.959	14.863	318.611

Source**:-** Agricultural Statistics of Pakistan-2013-14
N.A=Not available

Table B-14: Solid Waste Generation Estimates

City	Generation Rate		Waste Generated	
	Kg/capita/day	Kg/h/day	Tons/day	Tons/year
2014 Year				
Karachi	0.49	-	12000	1,44,000
Hyderabad	0.212	1.284	300	109.500
Peshawar	0.629	29521.31	781	282082.4
Bannu	0.68	68000	68	24480
Quetta	0.56	-	1250	456,250
Sibi	1.276	2.8	46	16,790
Faisalabad	0.50	3.52	1759	642035
Lahore	0.56	4.032	5000	1825000
Bahawalpur	0.50	-	398	145132

Source:- Tehsil Municipal Administration of each district

Table B-15: Physical Composition of Waste

Cites/ → Waste ↓	2014 Year				
	Karachi	Hyderabad	Peshawar	Bannu	Sibi
Plastic & Rubber	6.40%	15.00	16.6	10	9.00
Metals	0.75	00.90	1	3	1.1
Paper	4.10	7.50	6.2	7	1.4
Cardboard	-	5.40	1.8	4	1.80
Rags	8.40	9.60	2.1	4	7.80
Glass	1.50	4.50	1.8	3	1.70
Bones	3.00	-	-	-	-
Board Papers	-	9.60	1.6	1	1.48
Food Waste	21.00	44.10	26.7	8	11.90
Animal Waste	3.40	3.00	3.3	4	5.32
Leaves Grass etc.	14.00	38.40	10.6	14	18.21
Wood	2.25	3.40	1.3	1	1.02
Fines	29.70	141.50	17	5	28.06
Debris	3.50	-	-	-	-
Stones	-	17.10	10	4	9.1
Others	2.00	-	-	-	-

2014 Year			
Type of waste	Bahawalpur	Type of waste	Lahore
Plastic & Rubber	8.20	**Combustibles**	3.842
Metals	0.30	Diaper	4.632
Paper	2.10	Elec. –Electro.	0.078
Cardboard	2.00	Glass	0.696
Rags	3.00	Hazardous	1.216
Glass	3.50	Biodegradable	64.776
Board Papers	0.60	Metals	0.07
Food Waste	0.90	Non-Combust	3.858
Animal Waste	16.50	Paper-Card	2.492
Leaves Grass etc.	16.50	Pet	0.134
Wood	02.50	Nylon	9.53
Fines	3.00	Plastics	0.61
Stones	40.90	Tetrapak	0.97
		Textile	7.096
		Total	100.00

Source:- Lahore Waste Management Company
Tehsil Municipal Administration of each districts

Table B-16: Waste Generation Rate and Amount

City	Generation rate (Kg/Capita/Day)	Waste Generation (Tons/Day)
	2014	
Karachi	0.49	12,000
Peshawar	0.629	781
Bannu	0.439	38
Quetta	0.56	1250
Sibbi	1.276	46.00
Faisalabad	0.48	1759
Lahore	0.56	5000
Bahawalpur	0.50	398
Hyderabad	0.212	300.0

Source:- Tehsil Municipal Administration of each district

Table- B-17: Results of Chemical Analysis of Water Samples from River Ravi

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
At Ravi siphon Lahore	Feb-11	8.23	0.27	0.2	-	0.19	0.14	0.03	0.03
	Apr-11	8.17	0.21	0.4	0.1	0.13	0.07	0.02	0.02
	Jun-11	7.4	0.2	0.2		0.19	0.11	0.03	0.01
	Aug-11	7.55	0.23	0.21		0.12	0.13	0.01	0.02
	Oct-11	8.02	0.3	0.4		0.13	0.21	0.02	0.01
	Dec-11	7.5	0.36	0.25		0.13	0.19	0.01	0.02
	Feb-12	7.2	0.32	0.41		0.11	0.15	0.01	0.02
	Apr-12	7.4	0.27	0.27		0.13	0.12	0.02	0
	Jun-12	7.5	0.16	0.17		0.1	0.1	0.01	0
	Aug-12	7.7	0.24	0.18		0.07	0.16	0.01	0.02
	Oct-12	8.21	0.36	0.15		0.1	0.18	0	0.01
	Dec-12	7.8	0.24	0.16		0.06	0.13	0	0.02
	Feb-13	7.2	0.3	0.09		0.13	0.06	0.07	0.03
	Apr-13	7.7	0.22	0.2		0.14	0.11	0.07	0.04
	Jun-13	8.1	0.17	0.18		0.06	0.02	0.05	0.02
	Aug-13	8.3	0.24	0.18		0.04	0.08	0.03	0.02
	Oct-13	7.9	0.35	0.07		0.05	0.07	0.05	0.03
	Dec-13	8.05	0.32	0.1		0.04	0.01	0.03	0.04
Balloki Head works	Feb-11	8.14	0.31	0.2		0.09	0.09	0.02	0.02
	Apr-11	8.4	0.3	0.7	0.1	0.09	0.12	0.02	0.01
	Jun-11	8.2	0.22	0.3	0.1	0.16	0.06	0.02	0.02
	Aug-11	7.7	0.3	0.23		0.04	0.12	0	0.01
	Oct-11	7.71	0.33	1.2		0.12	0.09	0.04	0.02
	Dec-11	7.3	0.34	0.8		0.07	0.12	0.02	0.01
	Feb-12	7.8	0.38	0.79		0.19	0.12	0.02	0.01
	Apr-12	7.2	0.33	0.73		0.12	0.1	0.01	0.01
	Jun-12	7.6	0.23	0.42	0.2	0.11	0.08	0	0.02
	Aug-12	8	0.27	0.5	0.1	0.09	0.17	0	0
	Oct-12	7.56	0.32	0.18		0.13	0.13	0	0.01
	Dec-12	7.1	0.56	1.55		0.16	0.14	0.01	0.02
	Feb-13	7.2	0.36	0.41		0.13	0.08	0.03	0.02
	Apr-13	7.5	0.28	0.4		0.18	0.12	0.05	0.03
	Jun-13	8.2	0.23	0.2		0.19	0.06	0.04	0.02
	Aug-13	8.3	0.27	0.3	0.1	0.26	0.12	0.11	0.03
	Oct-13	7.4	0.33	0.33		0.18	0.08	0.06	0.04
	Dec-13	7.39	0.41	0.8		0.09	0	0.02	0.03

Contd..

Table- B-17: Results of Chemical Analysis of Water Samples from River Ravi

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Sidhnai Head works	Feb-11	8.1	0.62	2.41		0.13	0.19	0.02	0.02
	Apr-11	8.38	0.45	2.1	0.5	0.16	0.05	0.01	0.09
	Jun-11	8.08	0.28	1	0.1	0.18	0.11	0.02	0.03
	Aug-11	8.01	0.51	3	0.2	0.16	0.9	0.01	0.01
	Oct-11	8.1	0.5	2.3		0.07	0.13	0.03	0.03
	Dec-11	8.4	0.7	3.1		0.17	0.16	0.05	0.03
	Feb-12	8.06	0.51	1.4		0.12	0.11	0.04	0.01
	Apr-12	7.5	0.38	1.3		0.14	0.11	0.05	0.01
	Jun-12	7.59	0.26	0.1		0.15	0.12	0.07	0.02
	Aug-12	7.9	0.34	0.9		0.13	0.09	0.04	0.03
	Oct-12	8.23	0.82	3.4		0.16	0.15	0.03	0
	Dec-12	7.52	0.52	1.4		0.04	0.06	0.04	0.03
	Feb-13	7.9	0.35	0.6		0.15	0.11	0.05	0.04
	Apr-13	7.92	0.29	0.6	0.3	0.13	0.07	0.09	0.03
	Jun-13	7.7	0.4	1.3	0.2	0.13	0.12	0.04	0.03
	Aug-13	7.9	0.6	2.4		0.13	0.06	0	0.01
	Oct-13	7.67	0.83	3.2		0.15	0.02	0.03	0.02
	Dec-13	7.8	0.94	3.88		0.17	0.13	0.02	0.01

Contd..

Table B-17: Results of Chemical Analysis of Water Samples from River Sutlej

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Head Islam	Feb-11	8.48	0.8	3		0.13	0.13	0.04	0.02
	Apr-11	8.2	0.33	0.91		0.13	0.1	0.03	0.01
	Jun-11	8.25	0.33	1.3	0.4	0.13	0.13	0.01	0.01
	Aug-11	8.1	0.32	0.85		0.13	0.1	0.07	0.04
	Oct-11	NA							
	Dec-11	7.7	0.52	2.62		0.09	0.12	0.07	0.03
	Feb-12	7.5	0.42	2.1		0.12	0.12	0.05	0.02
	Apr-12	7.5	0.44	1.7		0.1	0.15	0.03	0.01
	Jun-12	7.5	0.6	1.45		0.14	0.14	0.05	0.02
	Aug-12	7.98	0.33	0.42		0.16	0.13	0.07	0.02
	Oct-12	8.11	0.48	1.2		0.1	0.12	0.05	0.01
	Dec-12	7.9	0.5	1.45		0.12	0.15	0.02	0
	Feb-13	8	0.51	1.4		0.1	0.08	0.03	0.04
	Apr-13	NA							
	Jun-13	NA							
	Aug-13	NA							
	Oct-13	7.8	0.49	1.8		0.06	0.06	0.02	0.03
	Dec-13	NA							
Head Punjnad	Feb-11	8.04	0.31	0.5		0.17	0.12	0.02	0.01
	Apr-11	NA							
	Jun-11	NA							
	Aug-11	8.1	0.24	0.57		0.07	0.12	0.05	0.02
	Oct-11	NA							
	Dec-11	NA							
	Feb-12	7.8	0.71	2.8		0.1	0.15	0.09	0
	Apr-12	7.4	0.38	0.96		0.11	0.13	0.03	0.02
	Jun-12	8.1	0.23	0.41		0.13	0.17	0.04	0.01
	Aug-12	7.99	0.26	0.1		0.12	0.15	0.02	0.02
	Oct-12								
	Dec-12	7.8	0.4	1.5		0.15	0.13	0.03	0.01
	Feb-13	7.8	0.8	3.2		0.02	0.02	0.03	0.05
	Apr-13	NA							
	Jun-13	NA							
	Aug-13	NA							
	Oct-13	7.8	0.5	2.1		0.11	0.24	0.02	0.03
	Dec-13	NA							

Contd..

Table B-17: Results of Chemical Analysis of Water Samples from River Sutlej

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Head Fordwah canal head Sulemanki	Feb-11	NA							
	Apr-11	7.6	0.34	0.63	0.1	0.13	0.12	0.04	0.04
	Jun-11	8	0.25	0.58	0.2	0.11	0.12	0.04	0.01
	Aug-11	8	0.28	0.65	0.2	0.13	0.11	0.04	0.04
	Oct-11	NA							
	Dec-11	NA							
	Feb-12	7.8	0.44	2.1		0.15	0.13	0.05	0.03
	Apr-12	NA							
	Jun-12	8.2	0.26	0.5		0.12	0.14	0.03	0.02
	Aug-12	7.8	0.29	0.6		0.15	0.17	0.04	0.02
	Oct-12	7.8	0.39	1		0.1	0.13	0.05	0.01
	Dec-12	NA							
	Feb-13	NA							
	Apr-13	NA							
	Jun-13	7.77	0.34	0.2		0.08	0.08	0	0.02
	Aug-13	NA							
	Oct-13	NA							
	Dec-13	NA							

Contd..

Table B-17: Results of Chemical Analysis of Water Samples from River Chenab

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Head Khanki Mainline	Feb-11	7.8	0.3	0.25	-	0.05	0.13	0.01	0.02
	Apr-11	6.97	0.21	0.44	-	0.12	0.09	0.02	0.02
	Jun-11	7.5	0.21	0.44	-	0.08	0.11	0	0.04
	Aug-11	7.47	0.33	1.2	0.8	0.02	0.16	0.02	0.02
	Oct-11	7.5	0.23	0.3	-	0.12	0.11	0.03	0.01
	Dec-11		NA						
	Feb-12	8	0.26	0.2	-	0.12	0.14	0.02	0.01
	Apr-12	6.9	0.23	0.21	-	0.1	0.15	0.02	0.02
	Jun-12	7.5	0.2	0.2	-	0.07	0.09	0.03	0.01
	Aug-12	7	0.25	0.5	0.2	0.13	0.17	0.02	0.02
	Oct-12	7.5	0.26	0.14		0.09	0.14	0.02	0
	Dec-12	7	0.25	0.3		0.07	0.13	0.03	0
	Feb-13	7.6	0.31	0.08		0.17	0.05	0	0.03
	Apr-13	6.6	0.26	0.11	0.1	0.09	0.13	0.05	0.03
	Jun-13	6.8	0.3	0.8		0.06	0.15	0.02	0.02
	Aug-13	7	0.25	0.19		0.15	0.04	0.04	0.02
	Oct-13	7.5	0.3	0.45		0.1	0.15	0.02	0.03
	Dec-13	8	0.28	0.19		0.11	0.11	0.08	0.03
Chenab At Marala Head works	Feb-11	8	0.24	0.4	0.2	0.09	0.17	0.04	0.06
	Apr-11	8.32	0.3	0.3		0.13	0.13	0.04	0.01
	Jun-11	7.92	0.19	0.2		0.09	0.09	0.05	0.03
	Aug-11	7.65	0.2	0.23	0.2	0.18	0.09	0.09	0.03
	Oct-11	7.8	0.23	0.21		0.13	0.17	0.01	0.04
	Dec-11	7.6	0.22	0.15		0.17	0.23	0.04	0
	Feb-12	8	0.24	0.27		0.06	0.15	0.01	0.02
	Apr-12	7.2	0.2	0.2		0.14	0.19	0	0.01
	Jun-12	7.8	1.2	2.6		0.09	0.2	0	0.02
	Aug-12	8.06	0.24	0.3		0.1	0.19	0.01	0.01
	Oct-12	7.4	0.24	0.14		0.07	0.14	0.01	0
	Dec-12	8.2	0.24	0.25		0.15	0.16	0.01	0.01
	Feb-13	6.5	0.3	0.09		0.11	0.1	0.02	0.03
	Apr-13	7.1	0.2	0.3		0.02	0.02	0.01	0.05
	Jun-13	8	0.16	0.2		0.02	0.08	0.08	0.02
	Aug-13	8.1	0.26	0.17		0.08	0.08	0.02	0.02
	Oct-13	7.8	0.29	0.15		0.04	0.02	0.02	0.03
	Dec-13	7.73	0.29	0.1		0.05	0.06	0.03	0.02

Contd..

Table B-17: Results of Chemical Analysis of Water Samples from River Chenab

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Tail of R-Q link canal Qaderabad barrage	Feb-11	8.3	0.61	2.34		0.13	0.06	0.01	0.04
	Apr-11	8.36	0.36	1.4	0.5	0.04	0.12	0.01	0.01
	Jun-11	8.15	0.26	0.63		0.19	0.13	0.03	0.01
	Aug-11	8	0.52	3.1	0.9	0.09	0.1	0.03	0.02
	Oct-11	7.2	0.5	2.7		0.09	0.05	0.05	0.01
	Dec-11	7.8	0.7	2.9		0.07	0.08	0.01	0.01
	Feb-12	7.6	0.46	1.8		0.11	0.09	0.02	0.02
	Apr-12	7.1	0.36	1.1		0.09	0.13	0.03	0.02
	Jun-12	7.68	0.26	0.67		0.13	0.15	0.02	0.01
	Aug-12	7.7	0.39	1.7		0.08	0.11	0.01	0.02
	Oct-12	8.23	0.8	2.8		0.12	0.09	0.02	0
	Dec-12	7.9	0.93	3.7		0.15	0.1	0.04	0
	Feb-13	7.8	0.29	0.2		0.08	0.07	0.07	0.03
	Apr-13	8	0.25	0.05		0.11	0.1	0.04	0.08
	Jun-13	8.1	0.3	0.5		0.18	0.18	0.1	0.05
	Aug-13	7.54	0.21	0.1		0.02	0.15	0.02	0.01
	Oct-13	7.8	0.23	0.2		0.06	0.07	0.08	0.04
	Dec-13	8.1	0.23	0.16		0.17	0.16	0.02	0.03
Trimmu Head works	Feb-11	8.3	0.61	2.34		0.13	0.06	0.01	0.04
	Apr-11	8.36	0.36	1.4	0.5	0.04	0.12	0.01	0.01
	Jun-11	8.15	0.26	0.63		0.19	0.13	0.03	0.01
	Aug-11	8	0.52	3.1	0.9	0.09	0.1	0.03	0.02
	Oct-11	7.2	0.5	2.7		0.09	0.05	0.05	0.01
	Dec-11	7.8	0.7	2.9		0.07	0.08	0.01	0.01
	Feb-12	7.6	0.46	1.8		0.11	0.09	0.02	0.02
	Apr-12	7.1	0.36	1.1		0.09	0.13	0.03	0.02
	Jun-12	7.68	0.26	0.67		0.13	0.15	0.02	0.01
	Aug-12	7.7	0.39	1.7		0.08	0.11	0.01	0.02
	Oct-12	8.23	0.8	2.8		0.12	0.09	0.02	0
	Dec-12	7.9	0.93	3.7		0.15	0.1	0.04	0
	Feb-13	7.47	0.52	1.6	0.5	0.08	0.11	0.06	0.03
	Apr-13	7.7	0.4	2.38	1.1	0.05	0.1	0.02	0.03
	Jun-13	7.99	0.31	1.1	0.2	0.08	0.11	0.02	0.02
	Aug-13	6.9	0.4	0.7		0.1	0.06	0	0.04
	Oct-13	7.9	0.6	2.4		0.05	0.07	0.07	0.03
	Dec-13	8.11	0.65	2.7	0.2	0.02	0.08	0.02	0.02

Contd..

Table B-17: Results of Chemical Analysis of Water Samples from River Jhelum

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Head from Mangla Dam	Feb-11	8.3	0.25	0.3	-	0.09	0.11	0.02	0.03
	Apr-11	8.48	0.8	3.1	-	0.03	0.15	0.01	0.03
	Jun-11	8.09	0.18	0.2	-	0.07	0.13	0.01	0.01
	Aug-11	8.25	0.18	0.7	0.5	0.04	0.14	0.02	0.01
	Oct-11	7.9	0.23	0.26	-	0.1	0.1	0.02	0.01
	Dec-11	7.2	0.23	0.25	-	0.06	0.08	0.03	0.02
	Feb-12	8.2	0.23	0.28	-	0.1	0.13	0.01	0.01
	Apr-12	7.9	0.19	0.21	-	0.09	0.14	0	0.02
	Jun-12	8	0.24	0.25	-	0.05	0.15	0.01	0.01
	Aug-12	7.47	0.24	0.1	-	0.02	0.15	0	0.01
	Oct-12	7.4	0.24	0.14	-	0.11	0.09	0.01	0.02
	Dec-12	8.2	0.23	0.2	-	0.09	0.1	0.01	0.02
	Feb-13	8	0.29	0.2	-	0.13	0.13	0.05	0.03
	Apr-13	7.9	0.24	0.08	-	0.04	0.02	0.02	0.03
	Jun-13	7.4	0.2	0.3	-	0.09	0.06	0.08	0.04
	Aug-13	7.89	0.19	0.19	-	0.11	0.08	0.05	0.02
	Oct-13	7.6	0.17	0.17	-	0.1	0.11	0.07	0.03
	Dec-13	7.9	0.23	0.08	-	0.09	0.06	0	0.04
Rasool Barrage	Feb-11	8.5	0.24	0.41	-	0.11	0.09	0.03	0.02
	Apr-11	8.04	0.31	0.5	-	0.06	0.13	0.02	0.02
	Jun-11	8.22	0.18	0.2	0.1	0.09	0.17	0.03	0.01
	Aug-11	7.69	0.2	0.1	-	0.13	0.1	0.03	0.01
	Oct-11	7.8	0.23	0.21	-	0.12	0.07	0.01	0.03
	Dec-11	7.2	0.23	0.25	-	0.03	0.13	0.05	0.01
	Feb-12	8	0.22	0.21	-	0.09	0.11	0.02	0.02
	Apr-12	7.9	0.2	0.2	-	0.05	0.15	0.01	0.01
	Jun-12	8	0.24	0.15	-	0.04	0.17	0.02	0
	Aug-12	7.65	0.25	0.1	-	0.09	0.12	0.01	0
	Oct-12	7.6	0.24	0.14	-	0.1	0.1	0.01	0.01
	Dec-12	8.2	0.23	0.15	-	0.09	0.09	0	0
	Feb-13	8	0.29	0.2	-	0.15	0.08	0.03	0.04
	Apr-13	8	0.24	0.06	-	0.09	0.06	0	0.03
	Jun-13	7.9	0.23	0.6	-	0.1	0.13	0.04	0.03
	Aug-13	7.85	0.19	0.1	-	0.11	0.13	0.03	0.02
	Oct-13	7.8	0.23	0.17	-	0.06	0.12	0.02	0.05
	Dec-13	8	0.23	0.06	-	0.01	0.08	0.05	0.05

Contd..

Table B-17: Results of Chemical Analysis of Water Samples from River Indus

Sampling site	Reference Values	6-9	1.5	10	2.5	0.2	0.2	5.0	0.02
		Chemical parameters				Trace metals			
	Sampling Season	pH	EC dS/m	SAR	RSC me/l	Cu mg/l	Zn mg/l	Pb mg/l	Ni mg/l
Head Taunsa Barrage	Feb-11	8.2	0.38	0.73		0.03	0.1	0.04	0.04
	Apr-11	8.4	0.35	0.9		0.08	0.11	0.02	0.04
	Jun-11	8.3	0.2	0.3	0.2	0.07	0.08	0.02	0.02
	Aug-11	8.5	0.3	1.1	0.1	0.07	0.08	0.04	0.01
	Oct-11	8.1	0.2	0.4		0.08	0.13	0.03	0.04
	Dec-11	7.6	0.29	0.79		0.08	0.1	0.05	0.01
	Feb-12	8.3	0.32	0.32		0.04	0.09	0.01	0.01
	Apr-12	7.3	0.34	0.5		0.07	0.07	0.04	0
	Jun-12	8	0.2	0.27		0.1	0.12	0.05	0.02
	Aug-12	8.1	0.24	0.41		0.09	0.1	0.01	0.01
	Oct-12	7.7	0.26	0.29		0.03	0.13	0	0
	Dec-12	8.1	0.28	0.51		0.08	0.09	0	0.01
	Feb-13	NA							
	Apr-13	NA							
	Jun-13	7.7	0.24	0.34		0.09	0.08	0.08	0.03
	Aug-13	7.6	0.24	0.08		0.06	0.11	0	0.02
	Oct-13	NA							
	Dec-13	7.6	0.29	0.79		0.06	0.07	0.02	0.03
Indus Basin	Feb-11	NA							
	Apr-11	8.1	0.3	1.06	0.3	0.05	0.11	0.02	0.01
	Jun-11	8.2	0.14	0.078		0.1	0.13	0.02	0.02
	Aug-11	NA							
	Oct-11	7.98	0.45	2.3		0.14	0.12	0.04	0.01
	Dec-11	NA							
	Feb-12	NA							
	Apr-12	NA							
	Jun-12	8.1	0.23	0.54		0.12	0.16	0.03	0.01
	Aug-12	NA							
	Oct-12	NA							
	Dec-12	7.8	0.4	1.4		0.15	0.14	0.14	0.01
	Feb-13	7.7	0.57	1.8		0.1	0.08	0.03	0.04
	Apr-13	NA							
	Jun-13	NA							
	Aug-13	NA							
	Oct-13	8	0.35	1.8		0.06	0.06	0.02	0.03
	Dec-13	NA							

Source: Directorate of Land Reclamation Punjab
NA = Not Available.

Table B-18: Who Installed the Water Delivery System by Province

PROVINCE	WATER DELIVERY SYSTEM 2013-14 PSLM					
	Piped Water	Hand Pump	Motor Pump	Open well	Closed Well	TOTAL
Punjab						
Local Government	91	1	2	2	0	17
Non-Government	6	10	4	34	23	7
Household it self	2	88	94	63	77	76
Don't know	0	1	0	1	0	0
Total	**100**	**100**	**100**	**100**	**100**	**100**
Sindh						
Local Government	98	1	4	2	83	47
Non-Government	1	27	17	96	0	16
Household it self	1	72	79	2	17	37
Don't know	0	0	0	1	0	0
Total	**100**	**100**	**100**	**100**	**100**	**100**
Khyber Pakhtunkhwa						
Local Government	75	2	6	0	0	32
Non-Government	19	9	10	10	7	14
Household it self	6	88	84	88	91	54
Don't know	0	1	0	1	1	0
Total	**100**	**100**	**100**	**100**	**100**	**100**
Balochistan						
Local Government	84	16	12	2	0	47
Non-Government	15	42	59	70	34	35
Household it self	1	40	27	28	66	17
Don't know	0	3	2	0	0	1
Total	**100**	**100**	**100**	**100**	**100**	**100**
Pakistan						
Local Government	91	1	3	2	1	28
Non-Government	7	16	7	51	14	11
Household it self	2	82	91	47	84	61
Don't know	0	1	0	1	1	0
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Pakistan Social and Living Standareds Measurement Survey, PBS.

Notes:-

1. Households having the type of water delivery system indicated, expressed as a percentage of the total number of households.
2. Local Government includes Public Health Engineering Department, LG&RDD Municipality/District/Union Councils etc; "Non Govt" includes community NGO, private etc.
3. Categories: "Tap water" Hand pump/M, pump" includes hand pumps, motor pump and tube will outside the house; "Dug well" includes well open and well closed both inside and outside the house; "River/Canal/Stream" includes canal, river, spring, stream, pond and " Other" includes public standpipe (supplied by tanker), water seller, mineral water, filtration plant and other.
4. Totals for columns may not add up to 100 because of rounding
5. In PSLM Survey 2011-12, 57 areas and 2013-14 61 areas of Balochistan province could not be covered due to security reasons, so the results of Balochistan province may be read with caution.

Table B-19: Extent of Water logging and Salinity

(000 Hectare)

Year / Month	Province				
	Total	Balochistan	Khyber Pakhtunkhwa	Punjab	Sindh
0 to 5 Feet or 150 Cm Water Table Depth					
2008 June	853	5	16	313	519
October	*	*	*	*	*
2009 June	1,108	5	16	388	698
October	3,915	148	14	476	3,277
2010 June	559	10	25	201	323
October	3,811	44	25	670	3,071
2011 June	2,952	140	20	633	2,158
October	5,511	168	24	832	4,487
2012 June	1,846	96	26	242	1,482
October	4,938	181	25	751	3,981
2013 June	1,548	28	18	433	1,069
October	4,567	131	20	823	3,594
2014 June	1,548	11	19	322	920
October	-	-	-	-	-
0 to 10 Feet or 300 Cm Water Table Depth					
2008 June	6,209	118	156	1728	4,206
October	*	*	*	*	*
2009 June	6,649	118	156	1980	4,395
October	7,249	253	150	1930	4,916
2010 June	5,729	165	150	1309	4,105
October	6,707	123	145	2152	4,287
2011 June	7,063	266	107	1974	4,716
October	8,524	286	151	2716	5,371
2012 June	6,963	264	128	1708	4,863
October	8,039	270	150	2434	5,185
2013 June	7,145	248	157	1816	4,925
October	7,441	133	158	2279	4,871
2014 June	7,145	128	147	1963	4,687
October	-	-	-	-	-

Source:- Scraps Monitoring, WAPDA, Lahore

* Not Observed

Table B-20: Summary of Different Types of Pollutants on the Coast of Pakistan, 2010 to 2014

Area	Oil Sliks	Tar on Beaches	Tar Balls	Industrial Waste	Domestic Wastes	Heavy Metal Sediment	Thermal Pollution
Jiwani	+	+	+	-	+	-	-
Gwadar	++	+	++	-	+	-	-
East Bay	+	+	++	-	+	-	-
West Bay	-	-	+	-	+	-	-
Pasni	+	-	+	-	+	-	-
Ormara	-	-	+	-	-	-	-
Sonmiani Bay	-	-	+	+	+	++	-
Gadani	+	-	+	++	+	++	-
Cape Monze	+	+	+	-	-	+	-
Paradise Point	+	-	+	-	+	+	+
Buleji	-	-	+	-	+	-	-
Hawksbay	+	-	+	-	+	+	-
Sandspit	+	-	+	-	+	+	-
Manora Channel (Open Seaside)	+	+	++	-	+	+	-
Clifton	+	+	++	+	+	+	-
Korangi Creek	-	-	+	++	++	++	+
Port Qasim	-	-	+	+	+	+	+
Indus Delta	-	-	-	-	+	+	-

Source:- National Institute of Oceanography, Karachi.

Note: -
+ = Low
++ = Medium
+++ = High
++++ = Highest

Table B-21: Major Natural Disasters in Pakistan

Year	Type of Disaster	Persons Died	Population Affected	Houses Destroyed/ Damaged	Cattle Head Lost
	1	2	3	4	5
2007	Cyclone Yemyen / Flood	443	2.5 M	71,486	-
2008	Earthquake Baluchistan	164	-	9,761	-
2008	Flood	80	255,685	17,172	15,549
2010	Attabad Landslide	20	12,954	457	-
2010	Flood	1,985	20 M	1,602,765	-
2011	Flood	520	9.3 M	1,604,406	116,529
2012	Flood	571	4.8 M	636,438	12,121
2013	Flood	333	1,489,063	79,943	13,504
2013	Earthquake Mashkhel	14	-	2250	-
2013	Earthquake Awaran	386	-	46,756	-
2014	Drought Tharparkar	*497 (Children)	-	-	-
2014	Flood	367	2.5 M	129,880	1,925

Source:- Cabinet Division
* Report from 01-12-2013 to 14-04-2015

Table B-22: Summary of Damages Causes by Awaran Earthquake 2013

Death	376
Injured	824
Families affected	37,000
Population affected	125,949
Area affected	400sq km
Villages affected	260
Educational institutions destroyed	172
Health units destroyed	16
Houses destroyed	18,694
Road damaged	69 km
Services such as Telecommunication, Power, Water and Sanitation	30-40%

Source: Earthquake Reconstruction and Rehabilitation Authority (ERRA)

Table B-23: Total Destroyed and Damaged Housing Units Due to Awaran Earthquake, 2013

Category	Nos	Completely Destroyed	Partially Damaged
Pakka	338	171	85
Kacha	18,356	2301	3915
Total	**18,694**	**2,472**	**4,000**

Source: Earthquake Reconstruction and Rehabilitation Authority (ERRA)

Table B-24: Total Destroyed and Damaged Health facilities due to Awaran Earthquake, 2013

Category	Nos	Completely Destroyed	Partially Damaged
DHQ	1	-	-
RHC	2	1	-
BHU	7	3	2
Civil Dispensary	15	5	3
Mother child Health	1	-	-
TB clinic	1	-	-
Mobile Dispensary	1	-	-
Leprosy Center	1	-	-
Sub Health Centre	2	2	-
Total	**31**	**11**	**5**

Source: Earthquake Reconstruction and Rehabilitation Authority (ERRA)

Table B-25: Total Destroyed and Damaged Education Facilities due to Awaran Earthquake, 2013

Category	Nos	Completely Destroyed	Partially Damaged	Boys	Girls
Primary	207	29	105	105	29
Middle	24	-	15	10	5
High	22	2	19	16	3
Colleges	2	-	2	-	-
Total	**255**	**31**	**141**	**131**	**37**

Source: Earthquake Reconstruction and Rehabilitation Authority (ERRA)

Table B-26: Summary of Roads/Bridges Damaged due to Awaran Earthquake, 2013

Category	Nos	Completely Destroyed	Partially Damaged
Metal	392 km	69 km	-
Shingle	1281 km	-	-
Bridge	**-**	167 rft	**-**

Source: Earthquake Reconstruction and Rehabilitation Authority (ERRA)

Table B-27: Preliminary Consolidated State of National Losses/Damages (As on 16 September 2015)

Provinces	Deaths				Injured		
	Male	Female	Children	Total	Male	Female	Total
Balochistan	12	4	-	16	29	5	34
Khyber Pakhtunkhwa	52	30	27	109	61	87	148
Punjab	12	8	38	58	-	-	11
Sindh	-	-					
AJ&K	17	9	-	26	2	3	5
Gilgit Baltistan	7	3	-	10	19	2	21
FATA	15	4	-	19	13	0	13
TOTAL	**238**	**232**					

Provinces	Houses Damaged	Villages Affected	Population Affected			
			Male	Female	Children	Total
Balochistan	1,176	Being Assessed	37920	32,056	-	69,976
Khyber Pakhtunkhwa	4,799	Being Assessed				
Punjab	3,770*	588	136,295	128,233	199,374	460,303
Sindh	Being Assessed	3,203	-	-	-	995,030
AJ&K	408	17	-	-	-	-
Gilgit Baltistan	812	286	18,571	17,146	-	35,717
FATA	425	19	-	-	-	900
TOTAL	**11,390**	**4,113**	**1,561,926**			

Source: 1. Provincial Disaster Management Authorities
2. National Disaster Management Authorities

*Figures Rationalized After Assessment by PDMA

Table B-28: Preliminary Consolidated State of National Releif Efforts (As on 16 September 2015)

Items	Punjab			Khyber Pakhtunkhwa			Balochistan		
	NDMA	Armed Forces	PDMA	NDMA	Armed Forces	PDMA	NDMA	Armed Forces	PDMA
Tents	10,000	-	48,600	-	715	3,965	-	-	647
Ration	-	-	4,194 tons	16.5 tons	220.1 tons	231.4 tons	-	-	20.8 tons
Tarpaulins	-	-	-	-	-	-	-	-	-
Blankets	-	-	-	-	491	3,660	-	-	711
Plastic Mats	5,000	-	24,800	-	-	-	-	-	107
Aqua Tabs	-	-		700,000	-	-	-	-	-
Mineral Water	-	-	123 tons	1 ton	-	-	-	-	-
Generators	-	-	-	11	-	-	-	-	-
Water Pur Plants	10	-	-	2	-	-	-	-	-

Items	Sindh			Azad Jammu & Kashmir			Gilgit Baltistan				
	NDMA	Armed Forces	PDMA	NDMA	Armed Forces	PDMA	NDMA	Armed Forces	PDMA	FDMA	Total
Tents	10,000	1,739	51,755	2,000	-	1,000	2,800	-	760*	200	133,421**
Ration	-	24.2 tons	1,084.5 tons	-	-	-	9 tons	-	30.7 tons	-	5,854.92 tons
Tarpaulins	5,000	-	-	1,500	-	-	-	-	-	-	6,500
Blankets	-	-	-	2,000	-	2,000	-	-	1,335	-	10,197
Plastic Mats	-	-	-	-	-	-	-	-	-	-	29,907
Aqua Tabs	-	-	2,660,000	-	-	-	-	-	-	-	3,360,000
Mineral Water	-	-	-	-	-	-	-	-	-	-	124 Tons
Generators	-	-	-	-	-	-	-	-	-	-	11
Water Pur Plants	-	-	-	-	-	-	-	-	-	-	12

Source: 1. Provincial Disaster Management Authorities
2. National Disaster Management Authorities

*Ex NDMA Stock ** In Relief Camps

Table B-29: Preliminary Consolidated State of National Rescue Efforts (As on 16 September 2015)

	NDMA	Armed Forces	Balochistan	Khyber Pakhtunkhwa	Punjab	Sindh	AJ&K	Gilgit Baltistan	TOTAL
Evacuees	-	90,814	-	-	197,441	995,030	-	1,736	**1,285,021**
Relief Camps Established	-	-	-	8	309	512	-	6	**835**
Relief Camps Operational	-	-	-	-	0	159	-	-	**159**
Population in Camps	-	-	-	-	0	193,230	-	-	**193,230**
Medical Camps	-	-	-	-	150	-	-	-	**150**
Rescue Boats	38	-	-	-	289	48	-	-	**375**

Source: 1. Provincial Disaster Management Authorities
2. National Disaster Management Authorities

SECTION - C

Responses to Environmental Impacts

This Section presents a sort of empirical information regarding climate in Pakistan i.e. temperature, rainfall, clouds, wind pressure and related phenomena. It may be kept in view that secular climatic changes unfurl in long intervals of time. So the studies to size up the normal's of say, temperature, pressure, rainfall and other formative climatic variables are repeated after long period of time. Thus, the pertinent tables included in the last compendium (C-06 to C-12) come for updating in a cycle of thirty (30) years. The, interested user is advised to refer to previous publication(s). However, certain tables on the quality of groundwater in some selected centres in the four provinces of Pakistan and Gilgit Baltastan (GB) are included.

The following paragraphs provide a generalized scenario regarding climate, temperature, rainfall and air pressure.

C-I Climate

The following factors characterize the climate of Pakistan:-

1. The major area of the country is dominated by dry climate while small areas in south experience tropical climate.

2. The subtropical location of Pakistan extends approximately from 23 1/2^0 N to 37^0 N latitudes. This tends to keep the temperature high, particularly in summer.

3. The oceanic influence of the Arabian Sea keeps down the temperature contrast between summer and winter at the coasts.

4. The continental effect emphasis the differences in temperature between summer and winter in the interior of the country.

5. The higher altitudes in the west and north keep down the temperature throughout the year. In the extreme north because of great heights, the mountain tops record freezing temperature all the year round. The hills and mountains also attract more rain than the plains do.

6. The monsoon winds which come in July and continue to blow upto September bring rainfall. Pakistan receives only the tail-end of the monsoons, therefore the monsoon season is neither as prolonged nor as wet as that in India generally.

7. The Western Depressions originating from the Mediterranean region and entering Pakistan from the west bring rainfall alongwith cyclones in winter. These cyclones make a long land journey before coming to Pakistan and are thus robbed of most of their moisture by the time they reach Pakistan.

8. Thunderstorms cause some amount of rainfall particularly in the north.

9. A temperature inversion layer at a low elevation of approximately 1,500 meters (5,000 feet) in the southern part of Pakistan during the summer season does not allow the moisture-laden air to rise and condensation to take place. (Khan, 1991).

C-II Temperature

Pakistan has all the four seasons and the temperature varies from one season to another as well as from region to region. The temperature variation can be arranged in the following categories:

Hot:	32^0 C or more	(90^0 F or more)
Warm:	21^0 C to 32^0 C	(70^0 F to 89^0 F)
Mild:	10^0 C to 21^0 C	(50^0 F to 69^0 F)
Cold:	0^0 C to 10^0 C	(32^0 F to 49^0 F)
Cold below:	0^0 C	(32^0 F)

The country can be divided into the following temperature zones:-

1. **Hot summer and mild winter**: The temperature varies between 32^0 C to 44^0 or more in summer while 10^0 C to 21^0 C in winter.

2. **Warmer summer and mild winter:** Summer temperature lies between 21^0 C and 32^0 C, and winter's between 10^0 C and 21^0 C.

3. **Warm summer and cool winter:** Summer between 21^0 C and 32^0 C and coolest month temperature between 0^0 C and 10^0 C.

4. **Mild summer and cool/cold winter:** Summer temperature between 10^0 C and 21^0 C and the coolest month (January) temperature less than 0^0 C in some areas and between 0^0 C and 10^0 C in other areas.

The data on temperature at selected centres for various cities do not seem to be indicating some long-term trend the last 18 years in the country. However, marginal variations of temperature are observed in the country from one year to another as depicted by Table C-02.

C-III Rain Fall

The major part of Pakistan experiences dry climate. Humid conditions prevail in a small area in the north. The whole of Sindh, most part of Balochistan and major part of Punjab, south of Sahiwal and the central part of northern areas receive less than 250 mm/10 inches of rainfall in a year. Three large areas i.e. i) Northern Sindh and Southern Punjab ii) North Western Balochistan and iii) the central part of the Northern areas have to content with an annual rainfall of less than 125 mm. To the North of Sahiwal rain fall steadily increases and aridity starts to diminish. However, the true humid condition appear after rain fall increase to 750 mm/30 inches on the plains and 625 mm/25 inches on the highlands.

There are two sources of rainfall in Pakistan, the Monsoons and the Western Depressions. The monsoons rainfall takes place from July to September. The Western Depressions bring rainfall primarily from December to March. In the intervening periods October-November and April-June a small quantity of rainfall comes form thunderstorms (Kureshi, 1991).

C-IV Pressure and Winds

In summer, the land becomes heated and a low-pressure area is created in southwestern Pakistan. In the month of July, atmospheric pressure is lowest in the vicinity of Multan and rises north-ward and southward. This low-pressure area attracts winds from the Indian Ocean. Some colonic storms migrate to this low area all the way across northern Indian Ocean from the Bay of Bengal, although their moisture content decreases as they move westward, it is these storms, which bring most of Pakistan's rainfall. Winds sucked in from the Arabian Sea bring less moisture because these air streams have originated over Arabia, and have lower moisture content. Nevertheless, they do produce some rain in the western mountains.

In winter, the temperatures over the land are relatively low and high pressures areas are established particularly in the month of December and January. The pressure generally decreases from north to south. Thus, while the prevailing direction of the winter monsoons over the sub-continent as a whole is north-east to south-west, over Pakistan it is almost from north to south. Since these winds blow from the land towards the sea, they are generally dry. (Kureshi, 1991). Certain observations are summarised below:-

- A lowest air pressure (825.6 mbs) at mean station level was recorded in 2008 at Parachinar, which is the lowest air pressure among 15 selected centres (Table C-04).

- A highest air pressure (1007.8 mbs) at mean station level was recorded in 1997 at Chhor, which is the highest air pressure among 15 selected centres (Table C-04).

- A lowest vapour pressure (6.2 mbs) was recorded in 2004 at Dalbadin, which is the lowest vapour pressure among 15 selected centres (Table C-05).

- A highest vapour pressure (25.0 mbs) was recorded in 2001 at Chhor, which is the highest vapour pressure among 15 selected centres (Table C-05).

Table C-01: Sunshine Hours at Selected Centres (Percentage of long term average)

Year	Karachi (Airport) (21)	Lahore (213)	Peshawar (359)	Quetta (1600)	Jacobabad (55)
1997	58.0	65.5	. . .	. . .	. . .
1998	66.1	67.6	66.9	. . .	. . .
1999	64.8	65.6	63	74.6	76.8
2000	64.2	67.1	61.2	77.2	76.1
2001	66.1	66.8	65.4	75.2	67.5
2002	. . .	64.6	61.1	72.8	61.8
2003	. . .	66.3	62.5	. . .	66.7
2004	. . .	65.3	62.8	. . .	64.4
2005	. . .	64.1	59.8	. . .	70.3
2006	. . .	. . .	. . .	. . .	63.1
2007	64.2	. . .	. . .	. . .	70.7
2008	58.2	. . .	. . .	78.2	65.7
2009	61.2	. . .	. . .	79.6	69.8
2010	. . .	. . .	. . .	. . .	. . .
2011	56.8	. . .	. . .	76.1	. . .
2012	52.6	. . .	. . .	. . .	. . .
2013	54.8	. . .	. . .	. . .	. . .

Source**:-** Pakistan Meteorological Department.
Note:- Figures in parenthesis indicate the heights above sea level in meters.

Table C-02: Temperature at Selected Centres (Mean of Maximum)

(Centigrade)

Year/ Station	Karachi (Airport) (21)	Nawab-Shah (37)	Hyde-rabad (40)	Jacob-abad (55)	Lahore (213)	Multan (122)	Islama-bad (507)	Jhelum (232)	Sarg-odha (187)
1996	32.0	35.6	33.8	34.1	30.4	32.6	28.8	30.1	31.0
1997	31.3	34.4	32.8	32.6	28.6	30.9	27.1	28.8	29.5
1998	32.7	36.0	34.2	34.5	30.6	32.7	28.9	30.6	31.6
1999	32.3	36.0	33.3	34.6	31.2	33.2	29.8	31.4	32.8
2000	32.3	36.7	34.4	35.2	30.9	33.3	29.8	31.2	32.2
2001	32.6	36.8	34.6	35.1	30.7	32.8	30.2	31.6	31.8
2002	32.2	37.4	35.0	35.2	31.1	33.5	30.1	31.8	32.3
2003	32.8	36.0	34.0	34.3	29.9	32.7	28.8	30.2	31.1
2004	32.8	37.1	35.0	35.0	30.8	33.1	29.5	31.4	32.3
2005	32.1	35.7	33.9	33.5	29.9	31.7	28.3	30.3	30.7
2006	32.3	36.4	34.1	34.5	30.6	32.9	29.3	30.9	31.7
2007	32.9	36.0	34.3	34.2	30.5	32.5	29.1	30.5	31.5
2008	32.0	35.8	33.7	34.0	30.2	32.0	28.7	30.2	31.3
2009	32.9	35.7	34.3	34.3	31.1	32.8	29.5	31.4	32.2
2010	33.0	36.6	34.7	. . .	30.8	32.9	29.9	31.5	31.7
2011	32.4	. . .	33.6	33.6	29.9	32.2	29.8	30.8	31.2
2012	32.0	35.3	33.9	33.5	30.3	32.1	28.9	31.2	. . .
2013	32.4	34.8	33.9	33.7	30.0	32.0	29.2	30.7	30.8
2014	32.7	35.8	34.5	34.0	29.8	31.4	28.8	30.0	. . .

Contd…

Table C-02 Temperature at Selected Centres (Mean of Maximum)

(Centigrade)

Year/ Station	Faisal-Abad (183)	Baha-walpur (116)	Pesha-war (359)	D.I. Khan (173)	Quettta (1600)	Zhob (Fort Sandeman) (1405)	Dalban-Din (848)	Khuzdar (1231)	Panjgur (980)
1996	30.9	32.8	30.4	31.9	24.8	28.3	31.1	29.1	29.7
1997	29.3	31.6	28.8	30.3	24.1	26.7	31.0	27.8	29.0
1998	31.1	33.1	30.1	32.0	26.0	----	32.7	29.8	30.6
1999	31.9	33.7	31.2	32.3	25.8	----	32.3	30.1	30.8
2000	31.9	33.7	30.0	32.5	26.2	27.9	32.9	----	31.3
2001	31.3	33.7	30.2	32.2	26.4	28.0	33.8	----	31.4
2002	32.0	34.5	29.6	32.7	25.9	27.6	33.4	30.1	31.3
2003	31.0	33.5	29.1	31.6	25.2	26.8	32.8	29.1	30.3
2004	31.8	34.2	30.2	32.4	26.3	28.5	33.7	30.1	31.4
2005	30.6	32.7	28.7	30.7	23.9	26.1	----	----	29.8
2006	31.5	33.5	29.7	31.8	26.3	27.3	33.8	29.1	31.3
2007	31.5	33.0	29.6	31.4	25.1	26.9	32.8	28.4	29.9
2008	30.9	32.4	29.2	31.4	25.8	27.0	33.1	28.9	30.6
2009	31.7	33.1	29.8	31.9	25.4	26.9	33.0	28.9	31.0
2010	31.6	33.4	30.0	31.6	26.0	27.6	33.7	29.6	31.4
2011	30.7	32.7	29.5	31.2	26.7	27.0	33.0	28.8	31.4
2012	30.9	32.3	28.9	31.0	24.1	25.8	32.5	. . .	30.6
2013	31.1	32.8	28.9	31.5	25.0	26.9	33.3	29.3	31.0
2014	30.4	32.1	. . .	31.2	. . .	. . .	31.7	. . .	29.7

Contd…

Table C-02: Temperature at Selected Centres (Mean of Minimum)

(Centigrade)

Year/ Station	Karachi (Airport) (21)	Nawab-Shah (37)	Hyde-rabad (40)	Jacob-Abad (55)	Lahore (213)	Multan (122)	Islama-bad (507)	Jhelum (232)	Sarg-Odha (187)
1996	20.6	17.4	21.3	19.5	18.5	17.8	14.0	16.7	17.4
1997	21.1	----	20.9	19.9	18.6	17.8	14.3	16.7	17.3
1998	21.9	18.4	21.7	20.5	19.3	18.6	14.8	17.1	17.7
1999	21.9	18.0	21.6	20.5	19.7	18.9	15.5	17.8	18.4
2000	21.9	17.9	21.1	19.9	19.4	18.6	15.5	17.4	18.1
2001	22.2	18.6	20.8	20.2	19.5	18.8	15.4	16.9	18.0
2002	21.4	18.7	21.1	20.6	20.1	19.0	15.5	17.8	18.1
2003	21.2	18.0	20.9	20.6	19.5	18.5	14.9	17.5	18.0
2004	21.9	18.7	21.3	21.0	20.3	19.1	15.4	17.8	18.6
2005	21.8	17.9	20.7	20.5	19.4	18.1	14.6	17.1	17.5
2006	22.5	18.9	21.0	21.6	20.3	19.6	16.0	18.4	18.8
2007	22.2	17.4	21.4	21.3	19.8	19.0	15.1	17.1	18.0
2008	21.6	16.1	21.2	20.9	19.8	18.8	15.6	17.2	17.8
2009	22.3	19.0	21.7	21.0	20.0	18.9	15.6	17.3	17.9
2010	21.9	18.3	21.4	----	20.1	19.4	16.2	17.3	18.5
2011	21.7	----	20.7	20.8	19.5	19.3	15.9	17.0	18.2
2012	21.5	18.8	20.0	20.2	18.4	18.7	15.7	16.5	----
2013	21.9	19.5	20.7	20.8	17.9	19.7	16.2	17.0	18.3
2014	21.7	19.0	20.6	19.1	17.9	19.0	----	16.4	----

Contd…

Table C-02: Temperature at Selected Centres (Mean of Minimum)

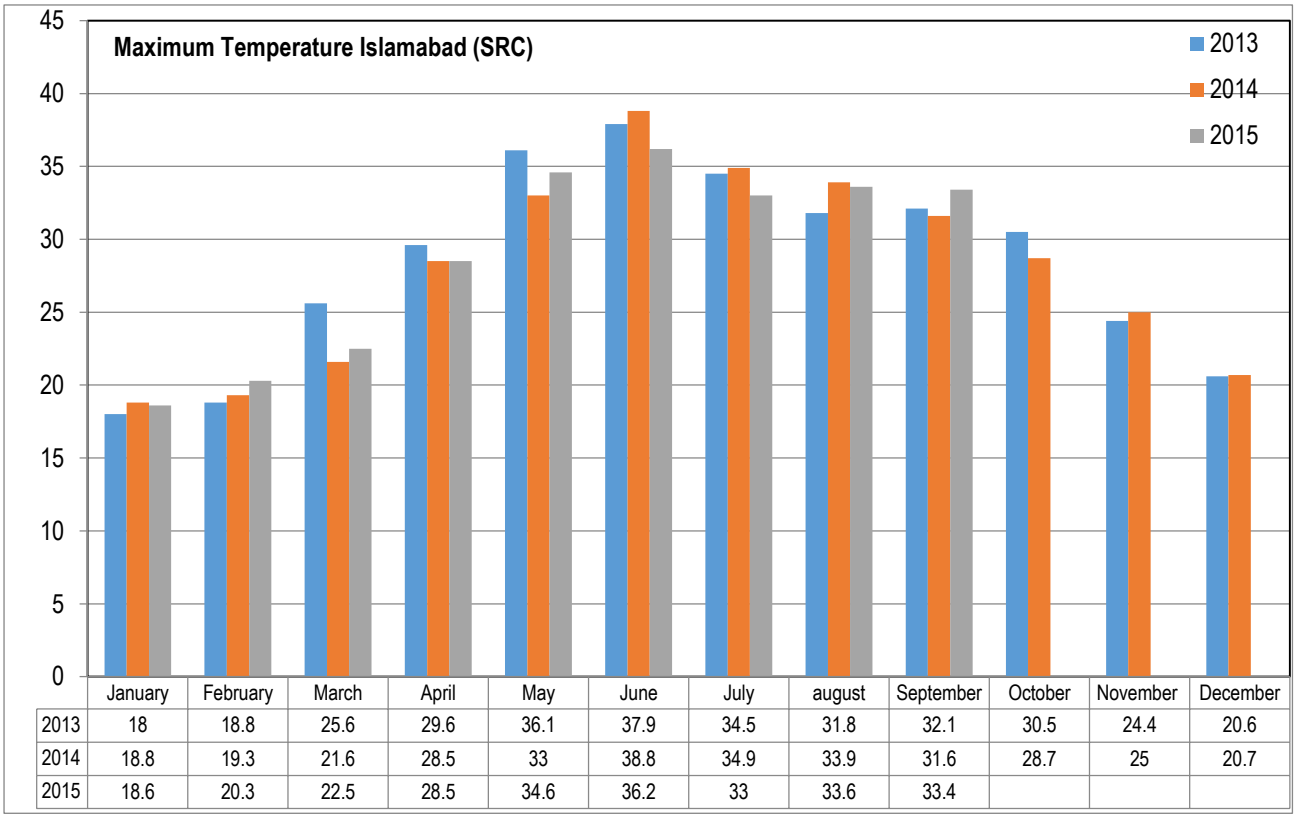
(Centigrade)

Year/ Station	Faisal-Abad (183)	Baha-Walpur (116)	Peshawar (359)	D.I. Khan (173)	Quettta (1600)	Zhob (Fort Sandeman) (1405)	Dalban-Din (848)	Khuz-dar (1231)	Panj-gur (980)
1996	16.6	16.8	15.7	16.6	7.4	10.7	----	13.8	14.7
1997	16.6	17.7	15.5	15.6	8.7	11.0	14.3	10.9	14.4
1998	17.3	18.2	15.9	16.0	8.4	13.2	15.6	----	15.4
1999	18.0	18.0	16.8	18.0	9.4	13.7	15.4	----	15.6
2000	17.6	18.7	17.1	18.1	8.3	13.4	12.4	16.0	15.7
2001	17.7	18.0	17.3	18.3	8.9	12.7	----	16.0	15.9
2002	18.0	19.0	17.5	17.2	9.1	----	----	16.1	15.8
2003	17.7	18.3	16.7	15.9	8.9	----	----	----	15.9
2004	18.1	19.9	17.3	17.2	9.3	12.0	----	16.5	16.1
2005	17.0	18.4	16.3	16.5	8.8	10.9	----	15.4	14.6
2006	18.5	19.7	17.7	16.8	10.9	10.5	----	15.5	15.6
2007	17.3	19.4	16.9	16.8	8.6	9.8	14.2	15.4	15.3
2008	17.1	18.7	16.6	17.4	8.5	8.7	----	15.8	15.1
2009	17.0	18.6	16.9	16.4	9.4	12.6	15.3	14.8	16.0
2010	17.5	17.8	17.1	17.6	9.5	12.9	14.1	15.6	15.6
2011	17.6	19.1	17.1	17.5	9.7	13.0	14.8	15.5	16.1
2012	17.3	18.4	16.5	16.4	8.4	12.0	13.0	----	14.1
2013	18.2	19.3	17.2	16.9	9.7	13.7	14.2	14.7	15.7
2014	17.5	18.8	----	15.8	----	----	12.9	----	15.5

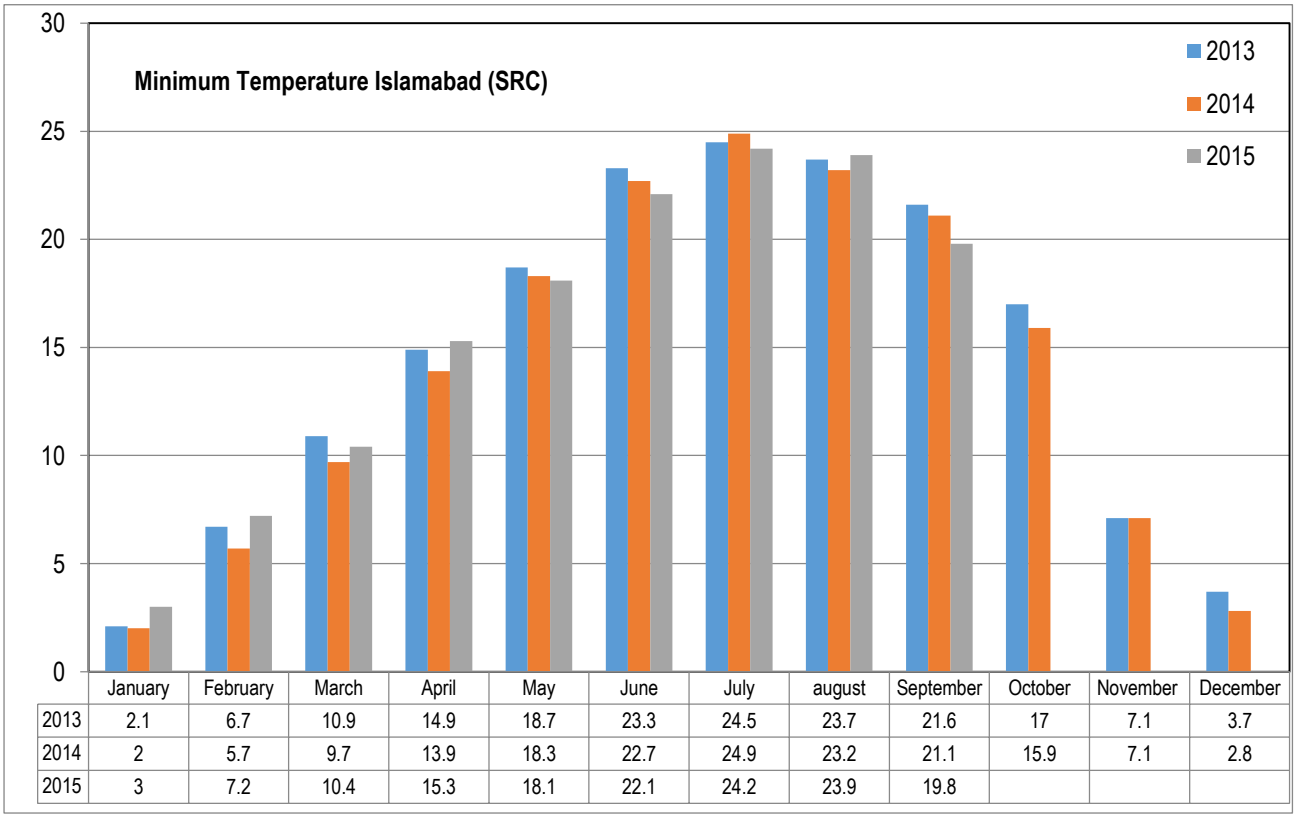
Source:- Pakistan Meteorological Department

Note:- Figures in parenthesis indicate the heights above sea level in meters.

Figure: 1 Mean Monthly Maximum/Minimum Temperature (°C)

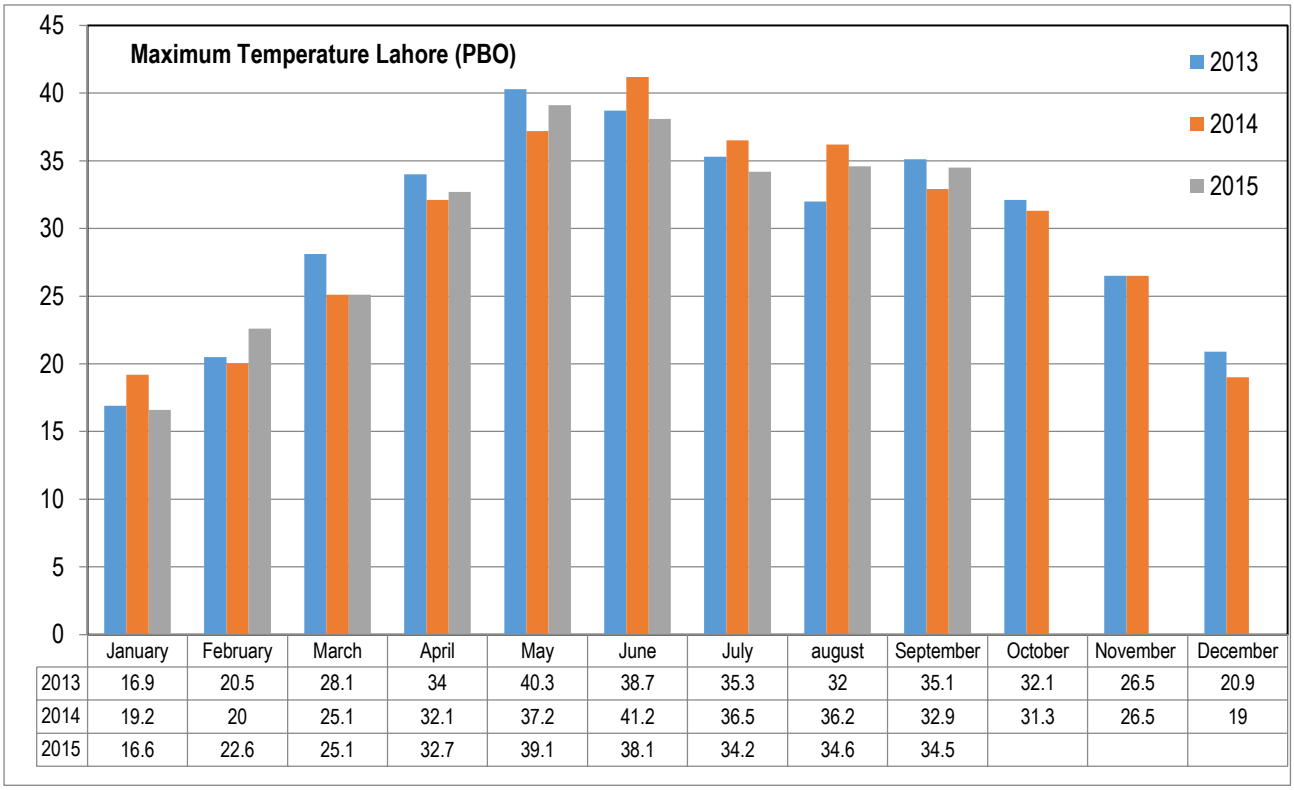


	January	February	March	April	May	June	July	august	September	October	November	December
2013	18	18.8	25.6	29.6	36.1	37.9	34.5	31.8	32.1	30.5	24.4	20.6
2014	18.8	19.3	21.6	28.5	33	38.8	34.9	33.9	31.6	28.7	25	20.7
2015	18.6	20.3	22.5	28.5	34.6	36.2	33	33.6	33.4			

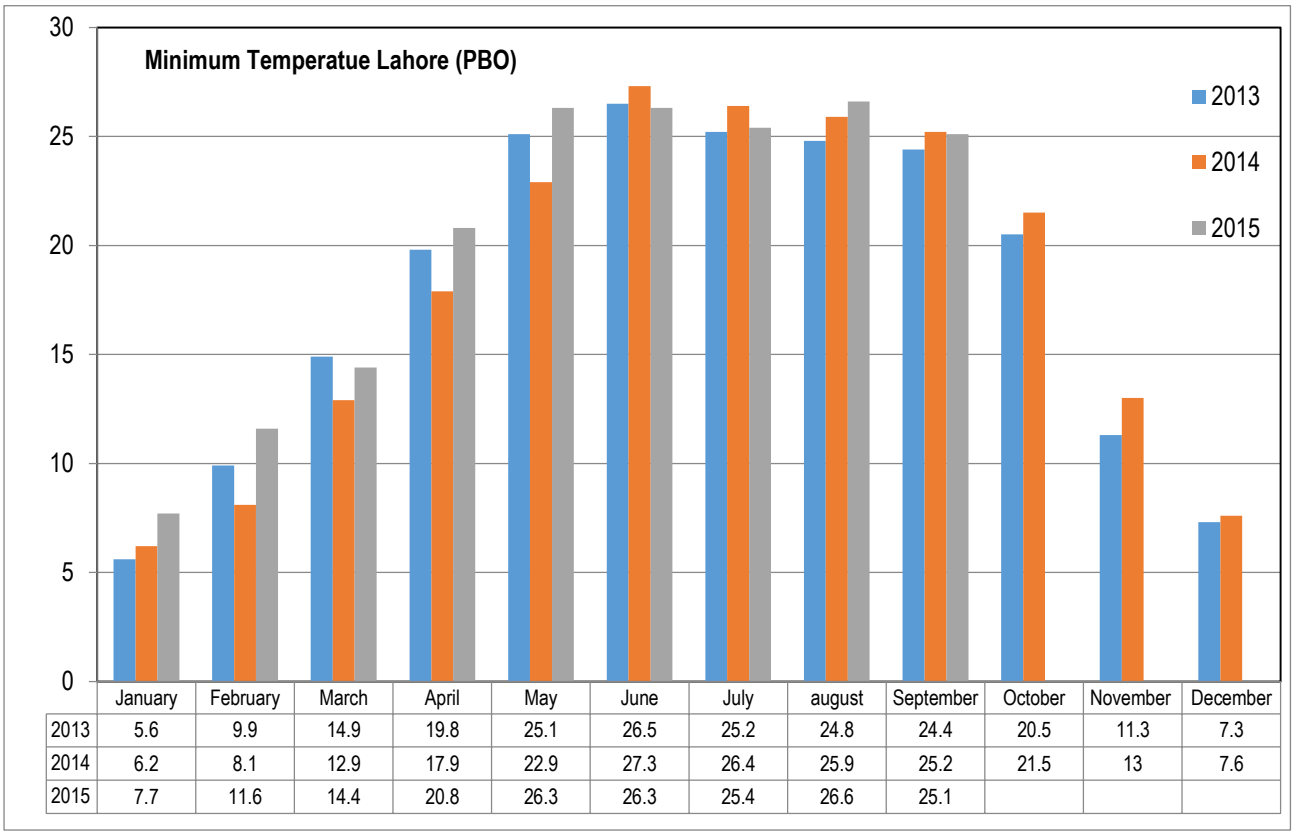


	January	February	March	April	May	June	July	august	September	October	November	December
2013	2.1	6.7	10.9	14.9	18.7	23.3	24.5	23.7	21.6	17	7.1	3.7
2014	2	5.7	9.7	13.9	18.3	22.7	24.9	23.2	21.1	15.9	7.1	2.8
2015	3	7.2	10.4	15.3	18.1	22.1	24.2	23.9	19.8			

Figure: 2 Mean Monthly Maximum/Minimum Temperature (°C)

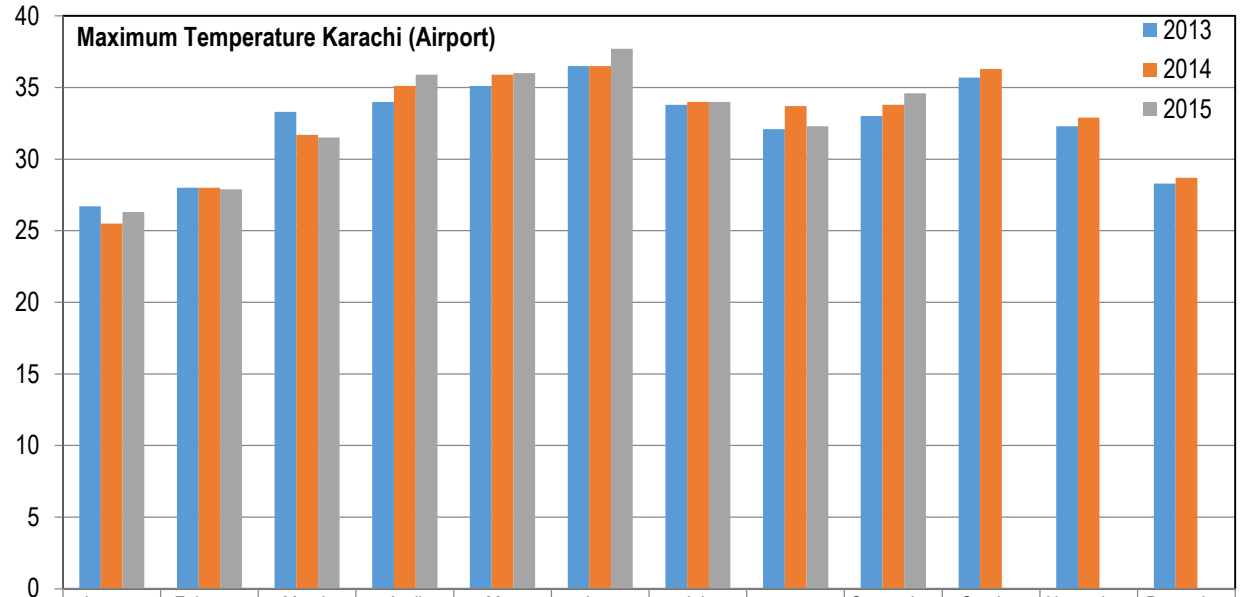


	January	February	March	April	May	June	July	august	September	October	November	December
2013	16.9	20.5	28.1	34	40.3	38.7	35.3	32	35.1	32.1	26.5	20.9
2014	19.2	20	25.1	32.1	37.2	41.2	36.5	36.2	32.9	31.3	26.5	19
2015	16.6	22.6	25.1	32.7	39.1	38.1	34.2	34.6	34.5			

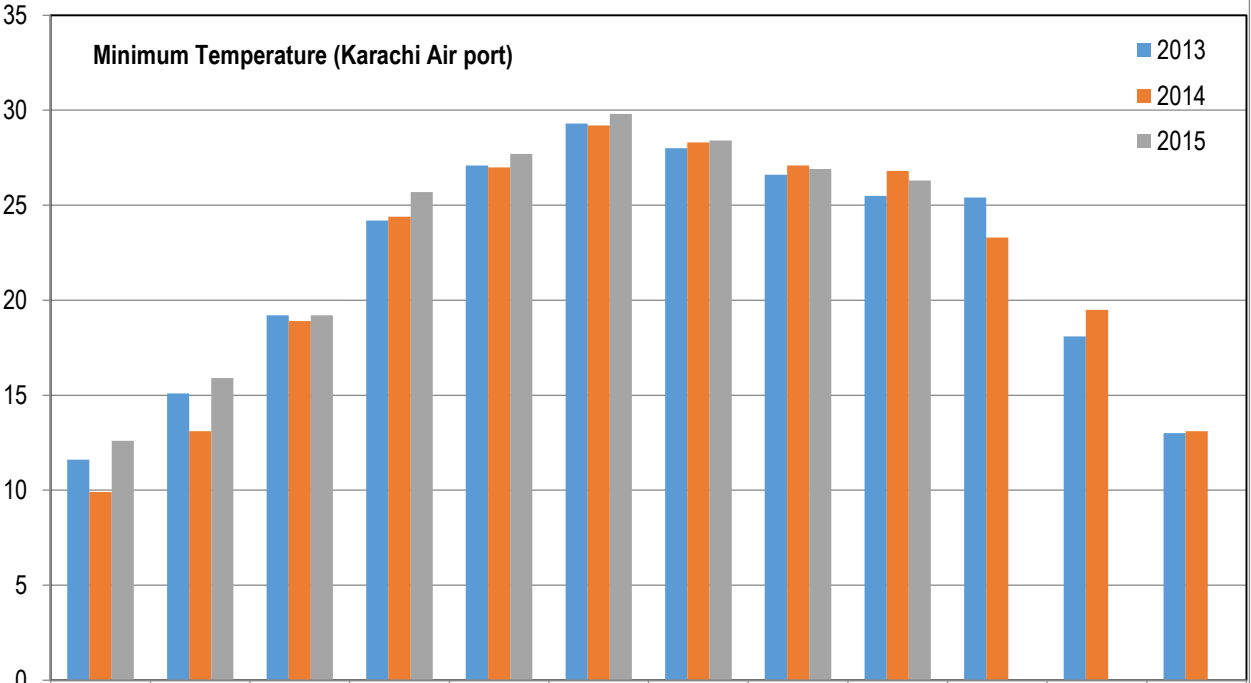


	January	February	March	April	May	June	July	august	September	October	November	December
2013	5.6	9.9	14.9	19.8	25.1	26.5	25.2	24.8	24.4	20.5	11.3	7.3
2014	6.2	8.1	12.9	17.9	22.9	27.3	26.4	25.9	25.2	21.5	13	7.6
2015	7.7	11.6	14.4	20.8	26.3	26.3	25.4	26.6	25.1			

Figure: 3 Mean Monthly Maximum/Minimum Temperature (°C)

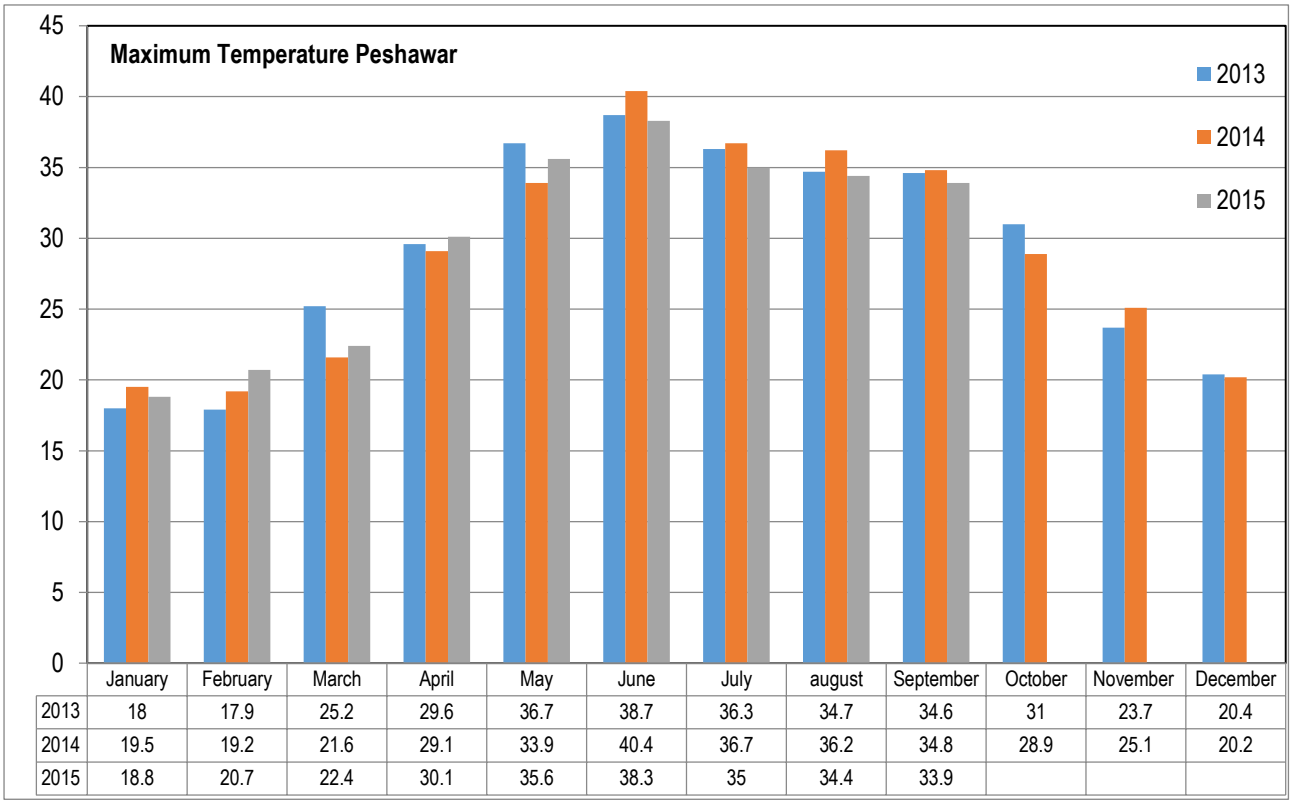


	January	February	March	April	May	June	July	august	September	October	November	December
2013	26.7	28	33.3	34	35.1	36.5	33.8	32.1	33	35.7	32.3	28.3
2014	25.5	28	31.7	35.1	35.9	36.5	34	33.7	33.8	36.3	32.9	28.7
2015	26.3	27.9	31.5	35.9	36	37.7	34	32.3	34.6			

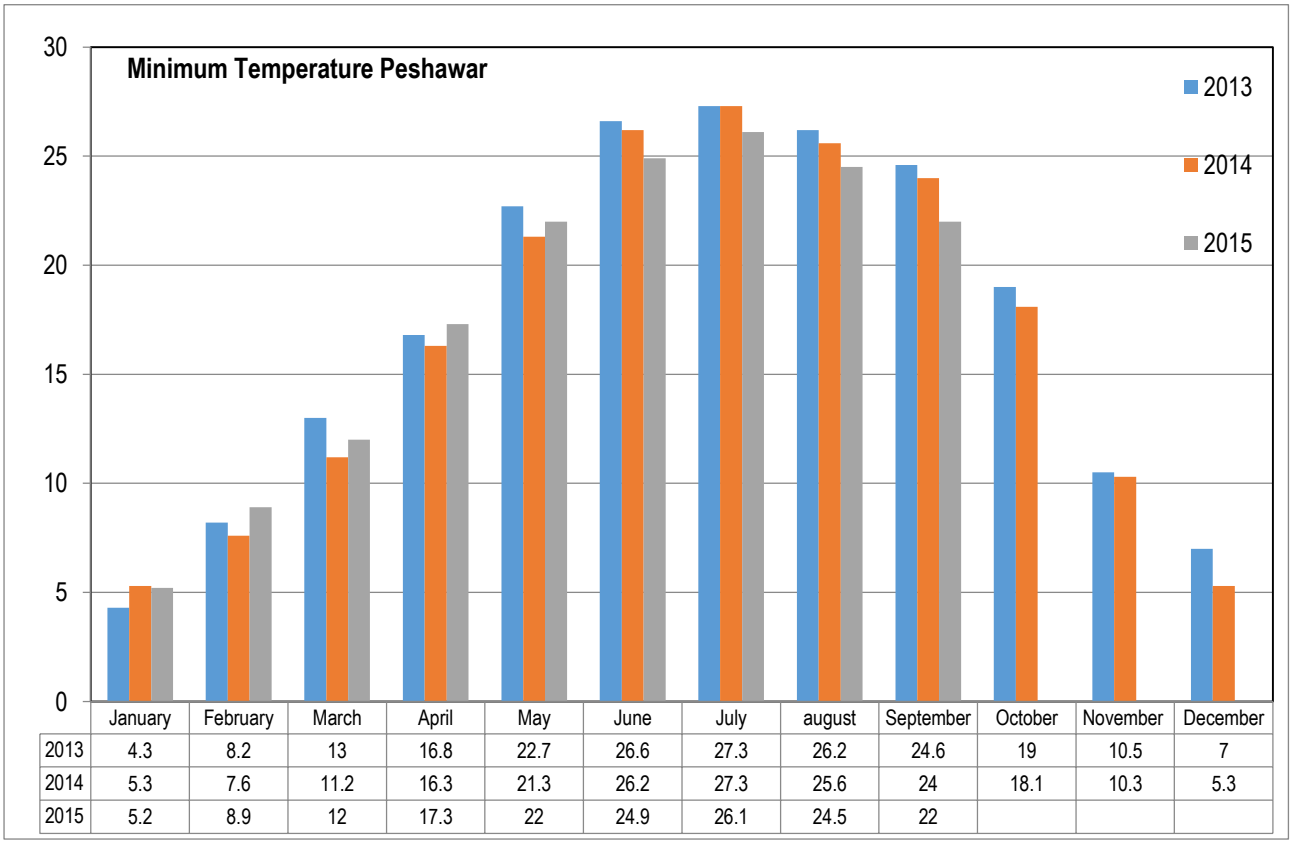


	January	February	March	April	May	June	July	august	September	October	November	December
2013	11.6	15.1	19.2	24.2	27.1	29.3	28	26.6	25.5	25.4	18.1	13
2014	9.9	13.1	18.9	24.4	27	29.2	28.3	27.1	26.8	23.3	19.5	13.1
2015	12.6	15.9	19.2	25.7	27.7	29.8	28.4	26.9	26.3			

Figure: 4 Mean Monthly Maximum/Minimum Temperature (°C)

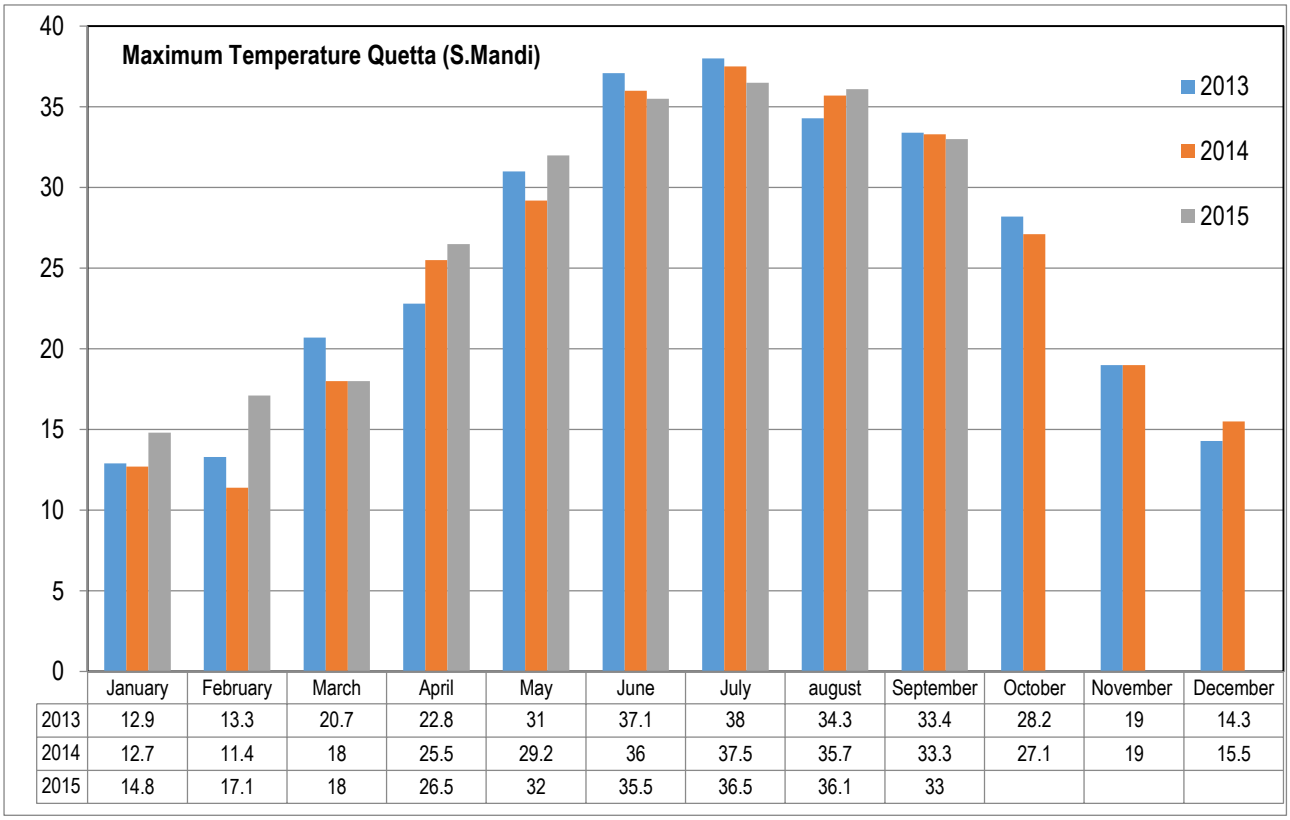


	January	February	March	April	May	June	July	august	September	October	November	December
2013	18	17.9	25.2	29.6	36.7	38.7	36.3	34.7	34.6	31	23.7	20.4
2014	19.5	19.2	21.6	29.1	33.9	40.4	36.7	36.2	34.8	28.9	25.1	20.2
2015	18.8	20.7	22.4	30.1	35.6	38.3	35	34.4	33.9			

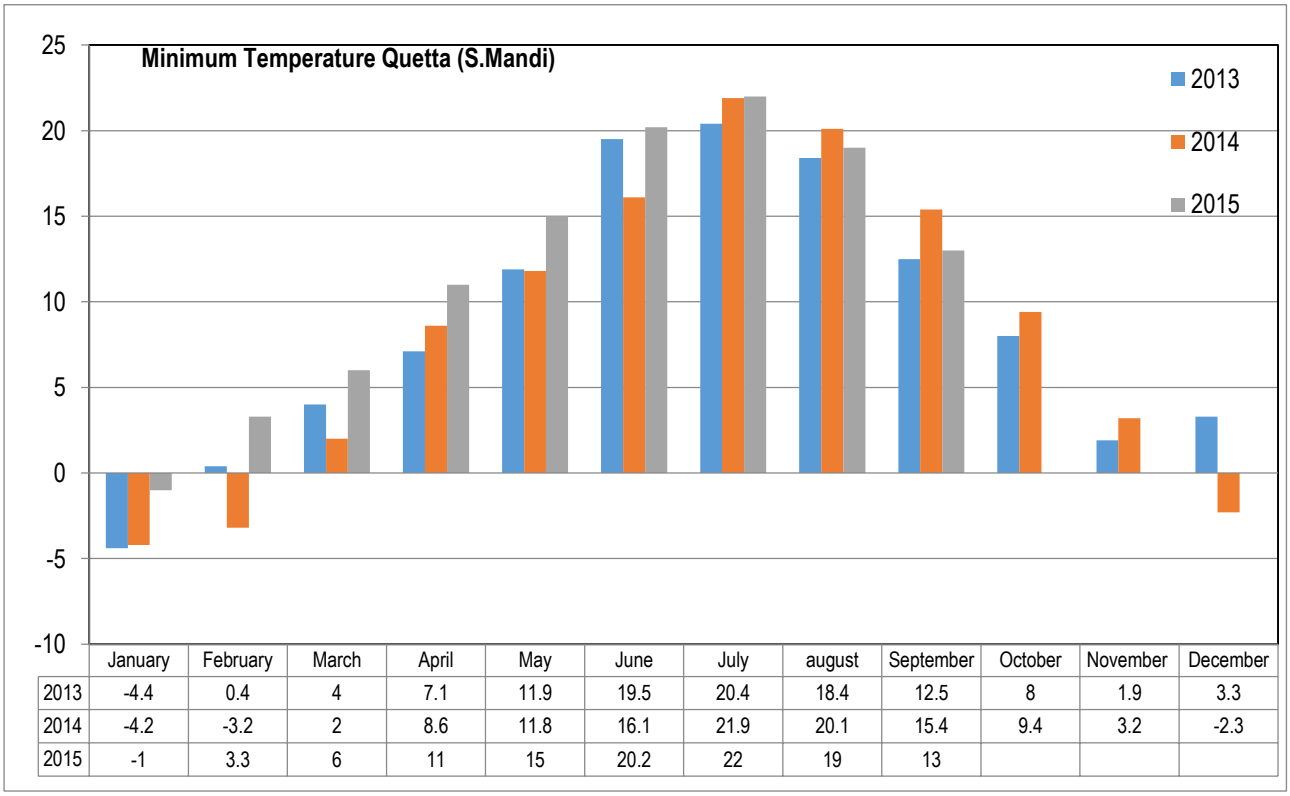


	January	February	March	April	May	June	July	august	September	October	November	December
2013	4.3	8.2	13	16.8	22.7	26.6	27.3	26.2	24.6	19	10.5	7
2014	5.3	7.6	11.2	16.3	21.3	26.2	27.3	25.6	24	18.1	10.3	5.3
2015	5.2	8.9	12	17.3	22	24.9	26.1	24.5	22			

Figure: 5 Mean Monthly Maximum/Minimum Temperature (°C)



	January	February	March	April	May	June	July	august	September	October	November	December
2013	12.9	13.3	20.7	22.8	31	37.1	38	34.3	33.4	28.2	19	14.3
2014	12.7	11.4	18	25.5	29.2	36	37.5	35.7	33.3	27.1	19	15.5
2015	14.8	17.1	18	26.5	32	35.5	36.5	36.1	33			



	January	February	March	April	May	June	July	august	September	October	November	December
2013	-4.4	0.4	4	7.1	11.9	19.5	20.4	18.4	12.5	8	1.9	3.3
2014	-4.2	-3.2	2	8.6	11.8	16.1	21.9	20.1	15.4	9.4	3.2	-2.3
2015	-1	3.3	6	11	15	20.2	22	19	13			

Table C-03: Rainfall at Selected Centres

(Millimeter)

Year/ Station	Karachi (Airport) (21)	Nawab-Shah (37)	Hyde-rabad (40)	Jacob-Abad (55)	Lahore (213)	Multan (122)	Islama-bad (507)	Jhelum (232)	Sargodha (187)
1996	99.0	5.2	16.4	95.5	1188.5	211.5	1318.4	989.1	446.9
1997	150.1	107.3	57.0	272.1	1232.5	264.2	1413.8	1335.7	628.9
1998	82.4	60.9	49.3	39.3	492.6	135.6	1297.6	961.4	411.3
1999	14.5	20.5	79.4	89.3	473.7	177.2	1006.3	628.3	373.4
2000	46.9	46.0	55.0	19.0	557.3	83.0	999.1	840.4	452.1
2001	100.4	56.5	171.3	17.8	535.7	297.9	1177.7	746.7	611.5
2002	55.8	4.0	9.0	17.1	333.7	101.4	930.5	532.6	529.8
2003	324.9	339.9	405.6	210.0	627.5	159.8	1247.0	961.5	423.9
2004	65.9	30.0	129.5	49.6	495.2	189.8	1026.3	858.9	362.0
2005	97.2	57.9	52.4	61.8	652.2	300.5	979.0	662.2	645.0
2006	301.1	293.6	524.9	94.2	750.8	144.7	1598.0	1232.9	481.0
2007	465.6	243.4	241.9	183.0	660.3	262.0	1796.0	832.7	718.0
2008	121.6	109.1	156.6	187.7	614.0	247.5	1388.0	826.2	591.0
2009	279.9	106.8	202.2	42.8	372.2	119.2	607.0	542.2	266.0
2010	372.9	342.6	214.1	----	540.7	287.0	1088.0	791.3	523.0
2011	290.2	----	71.4	293.3	856.9	186.0	1254.0	748.3	733.0
2012	152.1	182.2	121.0	583.8	582.9	239.0	1029.5	717.4	----
2013	168.9	105.5	108.9	345.3	902.8	225.7	1900.0	924.4	424.0
2014	30.7	66.7	24.2	21.3	785.9	257.5	----	939.3	----

Contd…

Table C-03: Rainfall at Selected Centres

(Millimeter)

Year / Station	Faisal-Abad (1 83)	Baha-walpur (116)	Pesha-war (359)	D.I. Khan (173)	Quettta (1600)	Zhob(Fort Sandeman) (1405)	Dalban-Din (848)	Khuzdar (1231)	Panjgur (980)
1996	346.1	97.4	667.1	230.4	134.0	330.1	123.1	262.3	83.3
1997	806.7	304.2	443.6	277.8	309.0	495.0	121.3	357.0	304.3
1998	332.1	159.4	572.6	253.0	187.0	252.5	74.8	220.5	81.5
1999	187.9	120.6	417.8	182.0	106.0	199.8	74.9	170.0	63.5
2000	212.1	79.3	258.8	256.3	164.5	163.4	3.5	133.2	21.5
2001	371.9	182.4	263.1	327.0	93.5	117.7	32.3	165.3	33.8
2002	274.1	41.9	388.0	148.3	179.3	276.6	7.0	52.3	43.1
2003	379.2	184.6	904.5	249.2	249.5	243.3	173.9	198.9	38.0
2004	376.6	146.8	454.0	304.6	121.8	184.9	86.2	92.3	74.0
2005	518.2	197.3	625.0	497.0	310.5	359.8	----	383.1	165.9
2006	444.4	167.7	497.5	213.2	206.5	303.6	67.1	268.6	123.0
2007	351.7	227.6	685.0	416.4	297.0	357.4	153.8	274.3	162.9
2008	656.8	220.5	779.0	486.1	134.5	304.7	82.7	302.2	75.5
2009	376.9	146.8	623.0	282.1	289.0	269.5	62.4	217.1	59.5
2010	544.7	175.5	839.0	756.3	133.0	301.8	20.0	159.2	53.5
2011	544.9	164.2	568.0	283.3	459.0	109.6	69.3	370.0	139.0
2012	361.3	184.9	461.5	450.1	313.0	262.6	24.1	----	64.0
2013	378.1	148.6	596.0	327.4	286.5	220.9	83.4	481.2	124.6
2014	480.7	67.9	----	276.9	----	----	27.0	----	74.0

Source**:-** Pakistan Meteorological Department

Note:- Figures in parenthesis indicate the heights above sea level in meters.

Table C-04: Air Pressure at Selected Centres

Year / Station / Units	Karachi (Airport)		Hyderabad		Jacobabad	
	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure
	mbs	hpa/gpm	Mbs	hpa/gpm	mbs	hpa/gpm
1996	1005.7	1008.6	1002.1	1007.0	1000.4	1006.7
1997	1006.7	1009.4	1003.1	1008.0	1001.6	1008.0
1998	1006.0	1008.6	1002.1	1007.0	1000.9	1007.3
1999	1005.6	1008.0	1001.5	1006.3	999.9	1006.2
2000	1005.0	1007.7	1001.3	1006.2	999.4	1005.7
2001	1005.4	1007.7	1001.8	1006.7	999.7	1006.4
2002	1006.0	1008.7	1002.2	1007.1	1000.4	1006.7
2003	1006.0	1008.7	1002.3	1007.2	1000.9	1007.2
2004	1005.8	1008.5	1002.4	1007.0	1000.4	1006.7
2005	1006.0	1008.7	1002.5	1007.4	1001.0	1007.3
2006	1005.7	1008.4	1002.0	1006.8	1000.5	1006.7
2007	1005.3	1008.0	1002.0	1006.9	1000.7	1006.7
2008	1005.4	1008.1	1002.0	1006.9	1000.1	1006.4
2009	1005.6	1008.4	1002.2	1005.8	1000.6	1006.9
2010	1005.1	1007.7	1001.7	1006.6	----	----
2011	1004.9	1007.6	1001.3	1006.2	----	----
2012	1005.3	1008.0	1001.5	1006.4	1000.4	1006.6
2013	1005.4	1008.1	1001.8	1006.8	1000.8	1006.8
2014	1006.5	1008.9	1002.8	1007.7	1001.2	1007.5

Contd…

Table C-04: Air Pressure at Selected Centres

Year / Station / Units	Dalbadin		Jiwani		Panjgur	
	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure
	mbs	hpa/gpm	mbs	hpa/gpm	mbs	hpa/gpm
1996	915.4	1485.7	1001.9	1008.4	902.9	1499.7
1997	915.0	1482.3	1002.6	1008.9	902.7	1496.9
1998	915.4	1492.7	1002.0	1008.3	903.0	1501.9
1999	914.6	1486.3	1001.4	1007.8	900.3	1477.9
2000	914.2	1477.7	1000.9	1007.3	899.9	1472.8
2001	914.6	1484.0	1001.3	1007.8	898.4	1477.7
2002	915.1	1486.9	1002.0	1008.4	900.7	1479.7
2003	915.4	1485.5	1002.1	1008.5	900.9	1481.4
2004	915.0	1488.1	1001.7	1008.1	901.1	1485.4
2005	----	----	1001.8	1008.2	900.4	1480.0
2006	914.5	1483.2	1001.5	1007.9	900.2	1476.1
2007	914.7	1483.9	1001.3	1007.7	900.6	1477.0
2008	914.3	1477.9	1001.3	1007.7	900.2	1474.3
2009	914.4	1473.5	1001.2	1007.8	900.6	1480.4
2010	914.4	1480.6	1001.3	1007.6	900.6	1481.3
2011	914.1	1470.5	1000.8	1007.1	900.1	1474.6
2012	914.5	1477.1	1001.2	1007.5	900.4	1478.0
2013	914.5	1484.0	1001.5	1007.9	900.6	1478.4
2014	916.0	1485.7	----	----	900.6	1473.6

Contd…

Table C-04: Air Pressure at Selected Centres

Year / Station / Units	Peshawar		Parachinar		Jhelum	
	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure
	mbs	hpa/gpm	mbs	hpa/gpm	mbs	hpa/gpm
1996	966.9	1007.4	826.2	1482.6	980.6	1007.2
1997	967.9	1008.5	826.7	1488.9	981.9	1008.5
1998	967.9	1008.0	827.1	1491.2	981.2	1007.3
1999	966.4	1006.6	826.0	1481.6	979.8	1006.2
2000	965.9	1006.2	825.8	1477.4	979.6	1006.0
2001	966.4	1006.7	826.5	1483.9	980.4	1006.9
2002	966.9	1007.3	826.9	1488.5	980.6	1007.1
2003	967.4	1007.8	826.8	1485.0	981.1	1007.6
2004	967.7	1008.1	826.6	1486.3	980.7	1007.2
2005	968.2	1008.7	826.4	1485.3	981.2	1007.8
2006	968.0	1008.3	826.8	1488.8	980.0	1007.5
2007	967.6	1008.0	826.6	1489.7	980.8	1007.3
2008	967.2	1006.4	825.6	1476.8	980.7	1007.3
2009	967.9	1008.2	825.9	1481.2	981.0	1007.4
2010	967.4	1006.5	826.1	1486.3	980.7	1007.1
2011	966.9	1007.3	824.7	1468.4	980.4	1006.9
2012	967.2	1007.6	825.4	1477.7	980.4	1006.9
2013	967.2	1005.6	826.4	1489.4	980.9	1007.4
2014	----		----	----	981.6	1008.3

Contd…

Table C-04: Air Pressure at Selected Centres

Year / Station	D.I.Khan		Lahore		Quetta	
	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure
Units	mbs	hpa/gpm	mbs	hpa/gpm	mbs	hpa/gpm
1996	987.4	1006.9	982.9	1007.1	838.6	1474.5
1997	988.7	1008.3	984.1	1008.5	838.5	1472.3
1998	987.8	1007.4	983.2	1007.6	839.0	1477.0
1999	986.6	1006.1	982.1	1006.4	838.4	1469.6
2000	986.4	1005.8	981.8	1006.0	838.0	1465.5
2001	987.1	1006.6	982.6	1006.8	838.5	1470.6
2002	987.4	1006.9	982.8	1007.0	838.7	1473.6
2003	987.7	1007.3	983.2	1007.5	838.8	1474.5
2004	987.4	1006.9	982.9	1007.1	840.8	1492.7
2005	988.0	1007.6	983.3	1007.6	840.6	1492.9
2006	987.7	1007.2	983.2	1007.5	841.4	1491.7
2007	987.4	1006.9	982.9	1007.2	840.5	1491.9
2008	987.2	1006.8	982.8	1007.1	840.3	1489.1
2009	987.7	1007.3	983.2	1007.4	840.7	1492.1
2010	987.4	1006.9	983.0	1007.2	840.7	1488.8
2011	987.1	1006.7	982.6	1006.9	840.1	1492.1
2012	987.5	1006.7	982.7	1007.0	840.2	1484.9
2013	987.4	1007.2	983.2	1007.6	840.6	1491.4
2014	986.9	1007.7	984.0	1008.4	----	----

Contd…

Table C-04: Air Pressure at Selected Centres

Year / Station / Units	Chhor		Zhob		Multan	
	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure	Mean Station Level Pressure	Mean Sea Level Pressure
	mbs	hpa/gpm	mbs	hpa/gpm	mbs	hpa/gpm
1996	1006.7	1007.4	855.8	1460.8	993.3	1007.4
1997	1007.8	1008.5	856.3	1467.3	994.6	1008.7
1998	1006.7	1007.3	856.5	1468.8	993.8	1007.8
1999	1005.8	1006.4	855.6	1459.2	992.5	1006.5
2000	1005.6	1006.3	854.6	1454.6	992.1	1006.0
2001	1006.2	1006.8	855.6	1460.8	992.9	1006.9
2002	1006.7	1007.3	856.0	1461.0	993.2	1007.2
2003	1007.0	1007.7	856.1	1464.8	993.7	1007.7
2004	1006.7	1007.4	855.8	1463.3	993.5	1007.8
2005	1007.0	1007.6	856.0	1463.9	994.1	1008.2
2006	1006.5	1007.1	856.0	1464.5	993.8	1008.1
2007	1006.3	1006.9	855.9	1459.5	993.5	1007.7
2008	1006.3	1006.9	855.6	1460.4	993.4	1007.6
2009	1006.4	1007.0	855.0	1469.1	993.7	1007.9
2010	1005.8	1006.4	856.1	1466.1	993.2	1007.4
2011	1006.0	1006.6	855.3	1457.9	992.8	1007.1
2012	1006.3	1006.9	----	----	992.9	1007.2
2013	1006.5	1007.2	----	----	993.2	1007.4
2014	1007.3	1007.6	----	----	994.2	1008.5

Source:- Pakistan Meteorological Department.

Table C-05: Vapour Pressure at Selected Centers

(mbs)

Year/ Station	Peshawar (359)	Parachinar (1725)	Jhelum ((234)	Zhob (1407)	D.I.Khan (174)	Lahore (214)	Quetta ((1589)	Multan (123)
1996	16.8	9.5	18.1	9.9	18.3	18.2	8.8	18.3
1997	17.7	10.2	18	11.2	18.7	18.5	9.9	18.7
1998	18.4	9.5	19.4	----	18.9	18.8	8.1	18.9
1999	17.6	9.7	18.1	8.8	18.5	18.3	7.4	18.5
2000	16.7	9.7	18.3	7.8	19	18.1	5.6	17.8
2001	16.8	9.8	18.1	8.2	20	19.2	6.4	19.5
2002	16.4	9.2	17.1	7.4	19	18.3	7.1	17.9
2003	18.0	9.2	17.9	7.9	19.5	18.3	8.1	17.7
2004	17.2	9.5	18.1	7.9	19.3	18.7	8.4	18.0
2005	17.3	9.5	17.7	8.4	18.7	18.4	10.5	17.9
2006	17.8	11.0	18.8	9.1	20.6	19.4	11.1	18.4
2007	17.3	10.5	18.9	9.1	20.3	19.1	9.7	18.8
2008	17.3	10.0	18.9	9.2	20	19.9	9.0	18.6
2009	16.2	9.8	16.5	9.0	18.7	17.9	9.5	18.7
2010	17.9	10.7	18	8.6	19.7	18.9	8.8	19.2
2011	17.5	10.7	19.5	10.1	19.7	19.7	10.8	19.8
2012	15.9	10.2	17.9	8.2	18.3	18.2	11.2	18.1
2013	----	8.2	19.6	10.0	19.9	20.4	9.3	19.5
2014	----	----	19.4	----	19.7	19.2	----	18.8

Contd…

Table C-05: Vapour Pressure at Selected Centers

(mbs)

Year/Station	Dalbadin (850)	Jacobabad (56)	Panjgur (981)	Jiwani (56)	Hyderabad (30)	Chhor (6)	Karachi (22)
1996	6.5	18.5	12.2	21.7	20.5	19.6	20.2
1997	7.6	18.7	14.1	22.7	19.8	19.9	21.1
1998	9.1	19.8	12.8	23.3	19.6	21.1	21.4
1999	7.7	19.4	12.2	22.7	18.1	21.4	20.9
2000	8.7	19.2	12.5	23.3	18.5	20.6	21.4
2001	7.1	20.8	11.7	23.0	18.5	25.0	21.3
2002	7.3	19.5	12.1	22.8	18.2	19.1	20.9
2003	7.3	20.8	10.9	23.7	18.6	20.1	20.6
2004	6.2	18.6	13.1	23.5	18.3	20.4	21.0
2005	----	19.4	12.6	22.4	18.4	18.9	20.6
2006	6.7	19.9	11.0	23.3	21.0	22.2	22.6
2007	9.6	19.7	8.9	22.6	20.2	22.6	22.7
2008	8.1	19.0	9.8	22.2	19.2	21.4	21.3
2009	9.5	18.6	10.0	23.5	19.6	21.9	22.7
2010	8.9	----	9.1	22.4	20.2	22.2	22.8
2011	8.7	22.0	8.9	23.9	20.2	24.4	22.3
2012	8.4	20.6	10.6	23.5	19.3	22.5	21.7
2013	10.6	22.1	13.5	23.2	20.1	22.3	21.9
2014	8.7	21.1	11.0	…..	19.5	21.4	20.7

Source**:-** Pakistan Meteorological Department

Note**:-** Figures in parenthesis indicate the heights above sea level in meters.

… Data not available

Table C-06: Area of Crops Covered by Ground Plant Protection Measures in Pakistan

Area '000 hectares

Year	Cropped area	Area sprayed		Spray hectare
		Actual	Percent	
2003-04	22,940	7,519	32.77	16,387
2004-05	22,780	7,776	34.13	23,333
2005-06	23,130	7,704	33.30	23,287
2006-07	23,560	16,476	69.90	30,273
2007-08	23,850	16,433	68.90	30,224
2008-09	23,798	18,838	79.15	36,143
2009-10	23,773	18,201	76.56	35,496
2010-11	22,720	15,248	67.05	9,268
2011-12	22,450	20,277	90.32	11,934
2012-13	22,750	20,277	89.12	11,934
2013-14	22,730	21,966	96.64	14,304

Source**:-** Agricultural Statistics of Pakistan, 2013-14

Table C-07: Area Covered by Aerial Plant Protection Operation in Pakistan

Area '000 hectares

Year	Cropped area	Area Sprayed	% Area Sprayed	Spray hectare
2003-04	22,940	11	0.048	11
2004-05	22,780	4	0.017	4
2005-06	23,130	9	0.039	9
2006-07	23,560	-	-	-
2007-08	23,850	5	0.02	5
2008-09	23,798	10	0.042	10
2009-10	23,773	-	-	N.A
2010-11	22,720	-	-	N.A
2011-12	22,450	0	-	-
2012-13	22,750	0	-	-
2013-14	22,730	0	-	-

Source:- Agricultural Statistics of Pakistan, 2013

Table C-08: Area Irrigated by Different Sources

(Million Hectares)

Year	Total	Canals		Tubewells	Wells	Canal Tubewells	Canal Wells	Tanks	Others
		Govern-ment	Private						
1994-95	17.20	7.06	0.45	2.83	0.17	6.41	0.10	(*)	0.18
1995-96	17.58	7.15	0.45	2.89	0.18	6.58	0.11	(*)	0.22
1996-97	17.83	7.35	0.46	2.90	0.18	6.61	0.11	(*)	0.22
1997-98	18.00	7.31	0.48	3.00	0.16	6.74	0.13	(*)	0.18
1998-99	17.95	7.20	0.47	2.98	0.17	6.88	0.09	(*)	0.16
1999-00	18.11	7.10	0.46	3.11	0.18	6.99	0.09	(*)	0.18
2000-01	17.82	6.55	0.43	3.19	0.16	7.22	0.10	(*)	0.17
2001-02	18.04	6.38	0.43	3.45	0.20	7.24	0.16	(*)	0.18
2002-03	18.22	6.62	0.44	3.37	0.21	7.21	0.17	(*)	0.21
2003-04	18.78	6.78	0.44	3.48	0.22	7.50	0.15	(*)	0.21
2004-05	18.84	6.56	0.44	3.46	0.25	7.70	0.19	(*)	0.24
2005-06	19.12	6.54	0.52	3.58	0.28	7.78	0.20	(*)	0.22
2006-07	19.54	6.36	0.42	3.89	0.62	7.78	0.22	(*)	0.25
2007-08	19.29	6.52	0.39	3.83	0.31	7.79	0.17	(*)	0.28
2008-09	19.39	6.42	0.38	3.83	0.31	7.94	0.20	(*)	0.24
2009-10	20.06	6.39	0.39	3.88	0.31	7.07	0.26	(*)	0.28
2010-11	19.16	6.00	0.39	3.92	0.36	7.60	0.25	(*)	0.72
2011-12	18.99	5.59	0.71	4.03	0.35	7.86	0.19	(*)	0.72
2012-13	18.68	5.22	0.43	3.81	0.31	7.86	0.19	(*)	0.19
2013-14	19.28	5.55	0.41	3.71	0.38	8.15	0.27	(*)	0.17

Source**:-** Agricultural Statistics of Pakistan, 2013-14

Note: - (*) Nominal

Table C-09: River Flow Availability (Kharif and Rabi)

(Million Acre Feet)

Year	Kharif				Rabi			
	Jehlum at Mangla	Chenab at Marala	Indus at * Kalabagh	Total	Jehlum at Mangla	Chenab at Marala	Indus at * Kalabagh	Total
1996-97	24.93	27.48	85.08	137.50	4.11	4.41	15.23	23.75
1997-98	16.96	21.74	71.45	110.15	7.06	6.55	18.48	32.10
1998-99	18.11	23.16	83.71	124.98	3.61	4.78	16.18	24.57
1999-00	11.24	18.70	77.51	107.46	3.19	4.35	14.57	22.11
2000-01	10.27	17.20	58.86	86.33	2.28	2.73	11.55	16.56
2001-02	8.23	16.00	55.65	79.88	3.66	2.90	10.72	17.28
2002-03	12.31	18.02	64.64	94.97	5.10	5.47	12.49	23.06
2003-04	17.67	21.50	76.61	115.78	5.00	4.36	12.79	22.15
2004-05	11.74	14.90	55.43	82.07	6.72	6.41	17.32	30.45
2005-06	17.71	21.12	82.37	121.20	5.46	4.02	14.45	23.93
2006-07	16.43	21.38	74.02	111.83	6.78	6.33	17.73	30.84
2007-08	13.51	16.98	75.40	105.89	4.18	3.62	12.39	20.19
2008-09	13.77	16.21	65.89	95.48	5.88	3.61	13.51	23.00
2009-10	16.48	14.46	68.18	99.12	4.57	3.39	13.22	21.18
2010-11	20.31	21.02	91.18	132.51	5.42	4.78	14.51	24.71
2011-12	15.28	18.84	65.85	99.97	4.17	3.60	10.93	18.70
2012-13	14.70	17.14	66.27	98.11	5.38	4.43	15.37	25.18
2013-14	15.22	18.70	82.38	116.30	5.07	4.45	14.88	24.40
2014-15	19.93	21.14	65.88	106.94	6.39	5.47	15.52	27.38

Year	Total (Kharif & Rabi)			
	Jehlum at Mangla	Chenab at Marala	Indus at Kalabagh	Total
1996-97	29.04	31.89	100.32	161.25
1997-98	24.02	28.29	89.93	142.25
1998-99	21.72	27.94	99.89	149.55
1999-00	14.43	23.05	92.09	129.57
2000-01	12.55	19.93	70.41	102.89
2001-02	11.89	18.90	66.37	97.16
2002-03	17.41	23.49	77.13	118.03
2003-04	22.67	25.86	89.40	137.93
2004-05	18.46	21.31	72.75	112.52
2005-06	23.17	25.14	96.82	145.13
2006-07	23.21	27.71	91.75	142.67
2007-08	17.69	20.60	87.79	126.08
2008-09	19.65	19.82	79.40	118.87
2009-10	21.05	17.85	81.40	120.30
2010-11	25.73	25.80	105.69	157.22
2011-12	19.45	22.44	76.78	118.67
2012-13	20.08	21.57	81.64	123.29
2013-14	20.29	23.15	97.26	140.70
2014-15	26.32	26.61	81.40	134.32

Source:-Pakistan Water and Power Development Authority (WAPDA). * Un-regulated

Table C-10: Summary of Protected Areas in Pakistan (based on NCCW data) 2014

(000 ha)

Region/Province	National Parks	Wildlife Sanctuaries	Game Reserves	Community Reserves	Total Protected Area	Total Area Conserved (000ha)
Azad Jammu Kashmir	7	-	12	-	19	113355
Balochistan	2	14	6	3	25	2705387
Punjab	4	38	24	-	66	3468346
Khyber Pakhtunkhwa	6	3	38	52	99	1034595
Sindh	1	33	14	-	48	1053488
Federal Territory	1	1	1	-	3	24386
Gilgit/Baltistan	5	3	9	9	26	2751944
Totals	**26**	**92**	**104**	**64**	**286**	**11151501**

Source-Climate change

Table C-11: Forest Area (2013-14)

(000 ha)

Forest Type	Punjab	KP	Sindh	Baloch--istan	Azad Kashmir	* Gilgit Batistan	Total
Coniferous Forests	58	760	-	125	408	315	1666
Irrigated Plantations	172	-	111	-	-		283
Riverain Forests	71	-	281	-	-	-	352
Scrub Forests	274	308	1	371	9	38	1001
Coastal Forests	-	-	328	2	-	-	330
Linear Plantations	14	2	-	1	-	-	17
Mazri	-	24	-	-	-	-	24
Range Land	96	74	272	371	150	461	1424
Miscellaneous	84	750	--	-	-	-	834
Grand Total	**769**	**1918**	**993**	**870**	**567**	**814**	**5931**

Source:- Agricultural Statistics of Pakistan-2013-14

Table C-12: Share of Forestry in Value Added of Agriculture Sector

(Rs. In Million)

Year	GDP-CF	Agriculture	Forestry	% Share of Forestry in Agriculture	% Share of Forestry in GDP
(BASE = 1980-81)					
1991-92	480,413	125,425	1,139	0.91	0.24
1992-93	491,325	118,795	1,132	0.95	0.23
1993-94	513,635	125,005	1,192	0.95	0.23
1994-95	540,528	133,215	1,211	0.91	0.22
1995-96	577,080	148,832	909	0.61	0.16
1996-97	588,191	149,016	1,004	0.67	0.17
1997-98	600,125	155,748	771	0.50	0.13
1998-99	625,233	158,783	771	0.49	0.12
(BASE = 1999-2000)					
2002-03	3,922,104	941,942	27,150	2.88	0.69
2003-04	4,215,608	964,853	26,293	2.73	0.62
2004-05	4,593,230	1,027,403	17,785	1.73	0.39
2005-06	4,860,476	1,092,098	17,596	1.61	0.36
2006-07	5,191,709	1,137,037	16,697	1.47	0.32
2007-08	5,383,012	1,148,851	14,534	1.27	0.27
2008-09	5,475,716	1,195,002	14,094	1.18	0.26
2009-10	5,681,531	1,201,945	14,404	1.20	0.25
2010-11	5,815,029	1,216,523	14,346	1.18	0.25
2011-12	6,028,571	1,269,491	14,482	1.14	0.24
2012-13	9,820,249	2,105,715	43,292	2.06	0.44
2013-14(R)	9,820,249	2,105,715	43,292	2.06	0.44

Source:- Agricultural Statistics of Pakistan 2013-14
(R) = Revised

Table C-13: Area of Forests by Legal Classification 2013-14

(000Hectares)

Category	Total	Balochistan	KPK	Punjab	Sindh	*Gilgit Baltistan	AJK
1	2	3	4	5	6	7	8
Total	**11032**	**1325**	**1843**	**3202**	**1045**	**3050**	**567**
State	1274	707	-	-	-	-	567
Reserved	647	-	97	323	227	-	-
Protected	4587	378	614	2726	802	67	-
Unclassed	123	-	50	62	11	-	-
Resumed Lands	40	-	26	9	5	-	-
Guzara	548	-	507	41	-	-	-
Communal	2993	-	10	-	-	2983	--
Section 38	32	-	14	18	-	-	-
Chose Act	2	1	-	1	-	-	-
Miscellaneous	786	239	525	22	-	-	-

Source:- Agricultural Statistics of Pakistan, 2013-14

* Data of Forests Gilgit Baltistan, extract from Forestry Statistics of Pakistan, 2004

Table C-14: Forest Area under the Control of Forest Departments by Types of Vegetation in 2013-14

(000 Hectares)

Category	Total	Balochistan	KP	Punjab	Sindh	*Gilgit Baltistan	AJK
1	2	3	4	5	6	7	8
Total	**5931**	**870**	**1918**	**769**	**993**	**814**	**567**
Coniferous	1666	125	760	58	-	315	408
Irrigated-plantation	283	-	-	172	111	-	-
Riverain	352	-	-	71	281	-	-
Scrub	1001	371	308	274	1	38	9
Coastal	330	2	-	-	328	-	-
Linear Plantation	17	1	2	14	-	-	-
Range Lands	1424	371	74	96	272	461	150
Mazri	24	-	24	-	-	-	-
Miscellaneous	834	-	750	84	-	-	-

Source:- Agricultural Statistics of Pakistan2013-14

* Data of Forests Gilgit Baltistan, extract from Forestry Statistics of Pakistan, 2004

Table C-15: Area Afforested

(000 Hectares)

Year	Total	Balochistan	KPK	Punjab	Sindh
1993-94	13.1	N.A	9.9	2.5	0.7
1994-95	14.7	1.8	9.8	1.5	1.6
1995-96	19.1	0.9	13.6	2.7	1.9
1996-97	19.9	N.A	15.1	1.9	2.9
1997-98	20.9	N.A	6.9	2.3	11.7
1998-99	18.9	N.A	8.2	3.9	6.8
1999-00	15.1	N.A	10.5	3.9	0.7
2000-01	22.9	4.5	7.6	3.9	6.9
2001-02	16.5	4.9	6.5	1.1	4.0
2002-03	17.5	4.4	5.7	1.4	6.0
2003-04	21.9	6.9	7.7	1.9	5.4
2004-05	19.9	2.0	11.3	3.2	3.4
2005-06	11.7	0.8	5.5	3.0	2.4
2006-07	15.1	0.8	8.1	4.2	2.0
2007-08	19.5	N.A	7.9	3.6	8.0
2008-09	17.2	1.0	9.3	4.1	2.8
2009-10	14.4	0.5	6.3	3.0	4.6
2010-11	9.1	0.4	-	3.2	5.5
2011-12	13.6	4.8	-	3.4	5.4
2012-13	26.8	3.3	8.0	3.5	12.0
2013-14	-	-	-	-	-

Source:- Agricultural Statistics of Pakistan,2013-14
P= Provisional - = Not Available

Table C-16: Area Regenerated

(000 Hectares)

Year	Total	Balochistan	KPK	Punjab	Sindh
1993-94	29.3	0.2	1.9	2.3	24.9
1994-95	31.8	N.A	2.0	4.2	25.6
1995-96	31.7	0.1	2.5	4.5	25.6
1996-97	18.1	0.1	1.9	3.6	12.5
1997-98	18.3	N.A	0.6	1.6	16.1
1998-99	19.8	N.A	0.5	1.0	18.3
1999-00	7.0	N.A	0.5	0.6	5.9
2000-01	7.1	N.A	2.6	0.4	4.1
2001-02	16.3	N.A	3.9	0.9	11.5
2002-03	5.5	N.A	2.7	0.8	2.0
2003-04	12.6	N.A	3.4	1.2	8.0
2004-05	11.4	N.A	1.0	0.9	9.5
2005-06	11.4	N.A	1.1	2.5	7.8
2006-07	12.1	N.A	1.4	1.1	9.6
2007-08	10.0	N.A	1.2	0.8	8.0
2008-09	7.6	0.5	3.1	1.0	3.0
2009-10	8.2	0.2	3.0	1.0	4.0
2010-11 (P)	16.7	0.2	3.5	N.A	13.0
2011-12	N.A	N.A	N.A	N.A	N.A
2012-13	-	-	-	-	-

Source:- Agricultural Statistics of Pakistan, 2012-13
P= Provisional - = Not Available

Table C-17: Quality of Ground Water at Various Locations of Faisalabad during 2014

Location	Physical and Biological Parameters							
	Colour	Taste	Smell	Temperature Centigrade	Oxygen Contents mg/l	Conductivity Second	Turbidity NTU	Coliform Per 100ml
1. Well-field area near River Chenab Faisalabad Sample No.1	Col	Good	Odl	26.5	-	795	0.00	0
2. Well-field area near River Chenab Faisalabad Sample No.2	Col	Good	Odl	26.5	-	829	0.00	0
3. Well-field area near River Chenab Faisalabad Sample No.3	Col	Good	Odl	26.5	-	832	0.00	0
4. Well-field area near River Chenab Faisalabad Sample No.4	Col	Good	Odl	26.5	-	805	0.00	0
5. Well-field area near River Chenab Faisalabad Sample No.5	-	-	-	26.5	-	746	0.00	0
6. Well-field area near River Chenab Faisalabad Sample No.6	Col	Good	Odl	26.5	-	655	0.00	0

Location	Chemical Parameters					
	T.D.S (mg/l)	Calcium (mg/l)	Magnesium (mg/l)	Carbonates (mg/l)	Bicarbonates (mg/l)	Chloride (mg/l)
1. Well-field area near River Chenab Faisalabad Sample No.1	472	96	28	NIL	260	78
2. Well-field area near River Chenab Faisalabad Sample No.2	494	64	33	NIL	164	78
3. Well-field area near River Chenab Faisalabad Sample No.3	473	84	33	NIL	280	82
4. Well-field area near River Chenab Faisalabad Sample No.4	473	84	21	NIL	276	84
5. Well-field area near River Chenab Faisalabad Sample No.5	433	79	21	NIL	252	58
6. Well-field area near River Chenab Faisalabad Sample No.6	379	77	23	NIL	232	50
6. Madina Town T/W 4.	1886	208	07	NIL	480	548
7. Mansoor Abad T/W 4.	1687	70	60	NIL	536	380

Contd.

Table C-17: Quality of Ground Water at Various Locations of Faisalabad during 2015

Location	Physical and Biological Parameters							
	Colour	Taste	Smell	Temperature Centigrade	Oxygen Contents mg/l	Conductivity Second	Turbidity NTU	Coliform Per 100ml
1. Well-field area near River Chenab Faisalabad Sample No.1	Col	Good	Odl	22	-	920	0.00	0
2. Well-field area near River Chenab Faisalabad Sample No.2	Col	Good	Odl	22.5	-	940	0.00	0
3. Well-field area near River Chenab Faisalabad Sample No.3	Col	Good	Odl	23	-	825	0.00	0
4. Well-field area near River Chenab Faisalabad Sample No.4	Col	Good	Odl	22	-	880	0.00	0
5. Well-field area near River Chenab Faisalabad Sample No.5	Col	Good	Odl	22	-	815	0.00	0
6. Well-field area near River Chenab Faisalabad Sample No.6	Col	Good	Odl	23	-	680	0.00	0

Location	Chemical Parameters					
	T.D.S (mg/l)	Calcium (mg/l)	Magnesium (mg/l)	Carbonates (mg/l)	Bicarbonates (mg/l)	Chloride (mg/l)
1. Well-field area near River Chenab Faisalabad Sample No.1	550	50	35	Nil	235	125
2. Well-field area near River Chenab Faisalabad Sample No.2	565	65	50	Nil	225	45
3. Well-field area near River Chenab Faisalabad Sample No.3	490	100	15	Nil	240	80
4. Well-field area near River Chenab Faisalabad Sample No.4	530	80	10	Nil	250	125
5. Well-field area near River Chenab Faisalabad Sample No.5	490	90	17	Nil	244	40
6. Well-field area near River Chenab Faisalabad Sample No.6	400	90	112	Nil	220	80
6. Madina Town T/W 4.	1623	105	85	Nil	550	1060
7. Mansoor Abad T/W 4.	1380	75	65	Nil	448	480

Source:- Faisalabad Development Authority.
The Director (P&D) water and sanitation agency
Note: Col = Colourless Odl = Odorless.

Table C-18: Water Quality Monitoring in Rural Areas of Four Districts (Phase-II) (2009-2014)Overall Water Quality Situation of Four Districts and Causes of Contamination

Sr. No.	Tehsil	Total No. of Samples	Safe Samples		Unsafe Samples		Types of Contamination
			No.	%age	No.	%age	
District Badin							
1.	**Badin**	148	27	18	121	82	Turbidity (60%), TDS (34%), Hardness (50%), Bacteriological (43%),
2.	**S. F. Rahu**	232	56	24	176	76	Turbidity (31%), TDS (47%), Hardness (46%), Bacteriological (28%),
3.	**Matli**	244	79	32	165	68	Turbidity (8%), TDS (36%), Hardness & Bacteriological (37%),
4.	**Tando Bago**	166	60	36	106	64	Turbidity (36%), TDS & Bacteriological (34%), Hardness (33%)
5.	**Talhar**	74	10	14	64	86	Turbidity (43%), TDS & Bacteriological (47%), Hardness (58%)
	Sub-Total	**864**	**232**	**27**	**632**	**73**	Turbidity (31%), TDS (39%), Hardness (43%), Bacteriological (36%),
District Nawabshah							
6.	Daulatpur	180	85	47	95	53	Turbidity (8%), TDS (45%), Hardness (42%), Bacteriological (9%),
7.	Daur	142	45	32	97	68	Turbidity (6%), TDS (54%), Hardness (46%), Bacteriological (15%),
8.	Sakrand	100	41	41	59	59	Turbidity (1%), TDS (51%), Hardness (46%)
9.	Nawabshah	78	27	35	51	65	TDS (64%), Hardness (56%)
	Sub-Total	**500**	**198**	**40**	**302**	**60**	Turbidity (5%), TDS (52%), Hardness (46%), Bacteriological (7%),
District Vehari							
10.	Vehari	235	93	40	142	60	Turbidity (21%), TDS (43%), Hardness (16%), Bacteriological (19%),
11.	Burewala	240	121	50	119	50	Turbidity (13%), TDS (33%), Hardness (11%), Bacteriological (18%),
12.	Mailsi	300	149	50	151	50	Turbidity (1%), TDS (38%), Hardness (25%), Bacteriological (12%),
	Sub-Total	**775**	**363**	**47**	**412**	**53**	Turbidity (11%), TDS (38%), Hardness (25%), Bacteriological (12%),
District Khanewal							
13.	Jahania	130	12	9	118	91	Turbidity (18%), TDS (40%), Hardness (10%), Iron (68%), Bacteriological (62%),
14.	Kabirwala	275	38	14	237	86	Turbidity (14%), TDS (6%), Hardness (3%), Iron (69%), Bacteriological (66%),
15.	Mian Channu	170	37	22	133	78	Turbidity (14%), TDS (36%), Hardness (5%), Iron (46%), Bacteriological (40%),
16.	Khanewal	145	11	8	134	92	Turbidity (13%), TDS (42%), Hardness (12%), Iron (81%), Bacteriological (20%),
	Sub-Total	**720**	**98**	**14**	**622**	**86**	Turbidity (15%), TDS (27%), Hardness (7%), Iron (66%), Bacteriological (50%),
GRAND TOTAL		**2859**	**891**	**31**	**1968**	**69**	Turbidity (17%), TDS (38%), Hardness (28%), Iron (20%), Bacteriological (29%),

Contd..

Table C-18: Water Quality Status in Rural Areas of Pakistan (Phase-I) (2004-2010)

Sr. No.	Tehsil	Total No. of Samples	Safe Samples		Unsafe Samples		Types of Contamination
			No.	%age	No.	%age	
Islamabad							
1.	**Islamabad**	150	61	41	89	59	Turbidity (4%), TDS (11%), NO_3 (33%) Cl (4%), SO_4(2%), F & Fe (1%), Total Coliforms (40%), E.Coli (20%)
	Sub-Total	**150**	**61**	**41**	**89**	**59**	
District Attock							
1.	Attock	35	1	3	34	97	Turbidity (13%), TDS & NO_3 (19%), Na (18%), SO_4(7%), Cl (11%), Fe (5%), F (4%) Total Coliforms (85%), E.Coli (21%)
2.	Hasanabdal	45	0	0	45	100	
3.	Hazro	90	13	14	77	86	
4.	Fateh Jhang	100	5	5	95	95	
5.	Pindi Ghap	90	15	17	75	83	
6.	Jand	74	13	18	61	82	
	Sub-Total	**434**	**47**	**11**	**387**	**89**	
District Bahawalpur							
1.	Bahawalpur	155	14	9	141	91	Turbidity (31%), TDS (58%) NO_3 (4%), Na (56%), SO_4 (28%), Cl & Fe (37%), F (31%), As (1%), Total Coliforms (50%), E.Coli (4%)
2.	Yazman	660	19	3	641	97	
3.	Hasilpur	110	7	6	103	94	
4.	Ahmadpur	185	33	18	152	82	
5.	Khairpur	110	15	14	95	86	
	Sub-Total	**1220**	**88**	**7**	**1132**	**93**	
District Faisalabad							
1.	Faisalabad	330	19	6	311	94	Turbidity (6%), TDS (71%) NO_3 (4%), Na (73%), SO_4 (40%), Cl (49%), Fe (4%), F (16%), As (0.3%), Total Coliforms (45%), E.Coli (41%)
2.	Jaranwala	250	24	10	226	90	
3.	Samundri	125	6	5	119	95	
4.	Tandiawala	180	39	22	141	78	
	Sub-Total	**885**	**88**	**10**	**797**	**90**	
District Gujranwala							
1.	Gujranwala	200	36	18	164	82	Turbidity & SO_4 (2%), TDS (12%) NO_3 (3%), Na (15%), Cl & F (1%), Fe (12%), Total Coliforms & E.Coli (68%)
2.	Kamoke	175	53	30	122	70	
3.	Noshera Virkan	175	54	31	121	69	
4.	Wazirabad	255	60	24	195	76	
	Sub-Total	**805**	**203**	**25**	**602**	**75**	
District Gujrat							
1.	Sarai Alamgir	97	22	23	75	77	Turbidity (14%) SO_4 (3%), TDS (13%), NO_3 (12%), Na (13%), Fe & Cl (3%), F (2%), Pb (0.4%), As (1%), Total Coliforms (78%), E.Coli (50%)
2.	Kharian	478	49	10	429	90	
3.	Gujrat	542	104	19	438	81	
	Sub-Total	**1117**	**175**	**16**	**942**	**84**	
District Kasur							
1.	Kasur	315	77	24	238	76	Turbidity (11%), TDS (32%), NO_3 (3%), Na (34%), SO_4 (12%), Fe (7%), F (18%), Cl (12%), As (5%), Total Coliforms (68%), E.Coli (49%)
2.	Chunian	200	34	17	166	83	
3.	Patoki	155	29	19	126	81	
	Sub-Total	**670**	**140**	**21**	**530**	**79**	
District Lahore							
1.	Lahoer	260	80	31	180	69	Turbidity (1%), TDS (37%), NO_3 (5%), Na (48%), Cl & Fe (3%), As (7%), Total Coliforms & E.Coli (34%)
	Sub-Total	**260**	**80**	**31**	**180**	**69**	
District Multan							
1.	Multan	325	17	5	308	95	Turbidity (55%), TDS (22%), NO_3 (0.4%), Na (21%), SO_4 & Cl (13%), Fe (81%), F (1.5%), As (2%), Total Coliforms (48%), E.Coli (24%)
2.	Shujabad	85	06	7	79	93	
3.	Jalalpur	115	08	7	107	93	
	Sub-Total	**525**	**31**	**6**	**494**	**94**	

Contd..

Table C-18: Water Quality Status in Rural Areas of Pakistan (Phase-I) (2004-2010)

Sr. No.	Tehsil	Total No. of Samples	Safe Samples		Unsafe Samples		Types of Contamination
			No.	%age	No.	%age	
District Rawalpindi							
1.	Kahuta	155	28	18	127	82	Turbidity (14%), TDS (15%), NO_3 (29%), Na (18%), SO_4 (2%), Fe (4%), F (1%), Cl (7%), Total Coliforms (73%), E.Coli (70%)
2.	Kallar Sayyedan	85	18	21	67	79	
3.	Murree	85	20	24	65	76	
4.	Taxila	41	20	49	21	51	
5.	Kotlisatian	54	14	26	40	74	
6.	Gujar Khan	375	47	12	328	88	
7.	Rawalpindi	330	43	13	287	87	
	Sub-Total	**1125**	**190**	**17**	**935**	**83**	
District Sialkot							
1.	Sialkot	585	264	45	321	55	Turbidity (5%), TDS (8%), NO_3 (2%), Na (11%), Cl (1%), Total Coliforms & E.Coli (46%)
2.	Daska	550	234	43	316	57	
3.	Pasroor	350	174	50	176	50	
	Sub-Total	**1485**	**672**	**45**	**813**	**55**	
District Sheikhupura							
1.	Ferozwala	440	158	36	282	64	Turbidity (16%), TDS (26%), (%), Na (29%), NO_3 & SO_4 (1%), Fe (10%), F (2%), Cl (8%), Total Coliforms (44%), E.Coli (40%)
2.	Nankana Sahib	320	134	42	186	58	
3.	Safdarabad	125	16	13	109	87	
4.	Seikhupura	195	65	33	130	67	
	Sub-Total	**1080**	**373**	**35**	**707**	**65**	
District Sargodha							
1.	Bhalwal	283	45	16	238	84	Turbidity (12%), TDS (33%), NO_3 (6%), Na (37%), SO_4 (12%), Pb (0.6%), Fe (3%), F (7%), Cl (16%), As (1%), Total Coliforms (77%), E.Coli (38%)
2.	Sargodha	200	27	14	173	86	
3.	Silanwali	80	02	2.5	78	97.5	
4.	Sahiwal	141	11	8	130	92	
5.	Shahpur	125	11	9	114	91	
6.	Kot Momin	05	0	0	05	100	
	Sub-Total	**834**	**96**	**12**	**738**	**88**	
District Abbottabad							
1.	Abbottabad	365	04	01	361	99	Turbidity (9%), TDS (0.5%), NO_3 (22%), Fe (27%), Cl (0.5%), Total Coliforms (97%), E.Coli (63%)
	Sub-Total	**365**	**04**	**01**	**361**	**99**	
District Mangora							
1.	Mutta	65	0	0	65	100	Turbidity (17%), TDS, NO_3 & Fe (1%), Cl (2%), Total Coliforms (93%), E.Coli (83%)
2.	Swat	215	19	9	196	91	
	Sub-Total	**280**	**19**	**7**	**261**	**93**	
District Mardan							
1.	Mardan	220	47	21	173	79	Turbidity (15%), TDS (6%), NO_3 (13%), Na & F (4%), Cl (5%), Total Coliforms (74%), E.Coli (42%)
2.	Takhat Bai	65	11	17	54	83	
	Sub-Total	**285**	**58**	**20**	**227**	**80**	
District Peshawar							
1.	Peshawar	270	08	3	262	97	Turbidity (4%), TDS (6%), NO_3 & Cl (1%), Na (3%), Total Coliforms (97%), E.Coli (62%)
	Sub-Total	270	08	3	262	97	
District Hyderabad							
1.	Hyderabad	325	60	18	265	82	Turbidity (20%), TDS (48%), Na (47%), SO_4 (36%), Fe (23%), Cl (30%), Total Coliforms (23%), E.Coli (17%)
2.	Qasimabad	35	3	9	32	91	
3.	Latifabad	50	10	20	40	80	
	Sub-Total	**410**	**73**	**18**	**337**	**82**	

Contd..

Table C-18: Water Quality Status in Rural Areas of Pakistan (Phase-I) (2004-2010)

Sr. No.	Tehsil	Total No. of Samples	Safe Samples		Unsafe Samples		Types of Contamination
			No.	%age	No.	%age	
District Karachi							
1.	Gaddap	30	2	7	28	93	Turbidity (35%), TDS (56%), Na (63%), SO_4 (32%), Fe (3%), Cl (61%), Total Coliforms (76%), E.Coli (67%)
2.	Binqasim	30	1	3	29	97	
3.	Landhi	5	1	20	04	80	
4.	Kimari	5	0	0	05	100	
5.	Maler	5	0	0	05	100	
	Sub-Total	**75**	**4**	**5**	**71**	**95**	
District Sukkur							
1.	Salehpat	30	16	53	14	47	Turbidity (8%), TDS (35%), Na (27%), SO_4 (10%), Cl (23%), Total Coliforms (16%), E.Coli (6%)
2.	Rohri	96	37	39	59	61	
3.	New Sukkur	14	04	29	10	71	
4.	Panoaqil	120	78	65	42	35	
	Sub-Total	**260**	**135**	**52**	**125**	**48**	
District Khuzdar							
1.	Khuzdar	570	0	0	570	100	Turbidity (8%), TDS (7%), NO_3 (5%), Na (9%), Fe (57%), Cl (7%), Total Coliforms (100%), E.Coli (90%)
2.	Moola	100	0	0	100	100	
3.	Karkh	80	0	0	80	100	
4.	Zehri	100	0	0	100	100	
5.	Naal	120	0	0	120	100	
6.	Wadh	120	0	0	120	100	
	Sub-Total	**1090**	**0**	**0**	**1090**	**100**	
District Loralai							
1.	Bori	138	0	0	138	100	Turbidity (24%), TDS (14%), NO_3 (84%), Na (14%), SO_4 (1%), Fe (34%), F (53%), Total Coliforms (100%), E.Coli (76%)
2.	Duki	86	0	0	86	100	
3.	Mekhtar	76	0	0	76	100	
	Sub-Total	**300**	**0**	**0**	**300**	**100**	
District Quetta							
1.	Quetta	45	05	11	40	89	Turbidity (16%), F (18%), Cl & Fe (2%), Total Coliforms (89%), E.Coli (58%)
	Sub-Total	**45**	**05**	**11**	**40**	**89**	
District Ziarat							
1.	Ziarat	25	0	0	25	100	Turbidity (30%), TDS (10%), NO_3 (23%), Na (10%), SO_4 (7%), Total Coliforms (100%), E.Coli (93%)
2.	Sanjavi	05	0	0	05	100	
	Sub-Total	**30**	**0**	**0**	**30**	**100**	
GRAND TOTAL		**14000**	**2550**	**18**	**11450**	**82**	

Source: Pakistan Council of Research in Water Resources, Ministry of Scince and Technology, Islamabad.

Table C-19: Phase out of HCFC 141b Implemented by UNIDO 2011 to 2014

Name of Industry	Phase out in ODP tons	Application	Location	Industrial Sector	Status
United Refrigeration	32.4	Polyurethane rigid Foam	Hyderabad	Refrigeration Engineering	Completed
Dawalance	24.3	Polyurethane rigid Foam	Karachi	Refrigeration Engineering	Completed
Haier, Lahore	12.8	Polyurethane rigid Foam	Lahore	Refrigeration Engineering	Completed
Varioline	5.2	Polyurethane rigid Foam	Lahore	Refrigeration Engineering	Completed
Shadman Electronics	3.9	Polyurethane rigid Foam	Karachi	Refrigeration Engineering	Under Completion

Source**:-** Ozone Cell, Ministry of Environment

Table C-20: HCFCs Phase out Project Implemented by UNIDO, 2011 to 2015

Name of Industry	Sector	Location	status	Implementing Agency
Dawlance Pvt Ltd	Foam	Karachi	Completed	UNIDO
UnitedRefrigerationIndustries	Foam	Karachi	Completed	UNIDO
Haier	Foam	Karachi	Completed	UNIDO
VariolineIntercool	Foam	Karachi	Completed	UNIDO
Shadman Electronics	Foam	Karachi	Under Completion	UNIDO

Source: Ministry of Climate Change, Islamabad.

SECTION - D

Inventories, Stocks and Background Conditions

This section presents historical background and development in education and health sectors. In addition to the literacy levels, educational infrastructure by type, enrollment at various stages, availability of teachers and student - teacher ratios are worked out. It also highlights availability of health facilities to the population in terms of doctors, nurses, midwives, hospitals, dispensaries, hospitals beds, family planning statistics, immunization coverage, etc. Moreover, the tabular part also includes data on electricity, natural/associated gas reserves, and coal reserves.

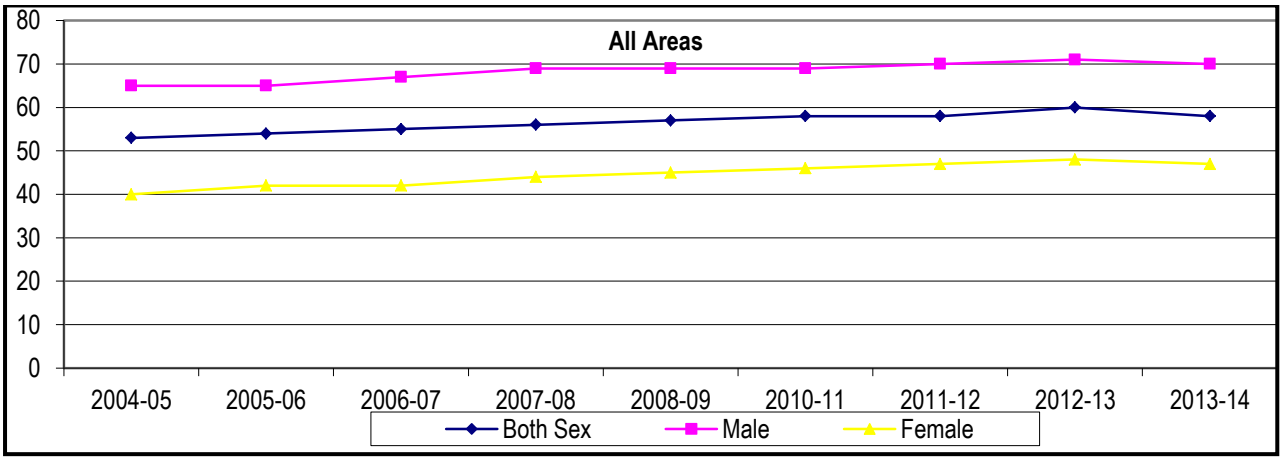
D-I Education

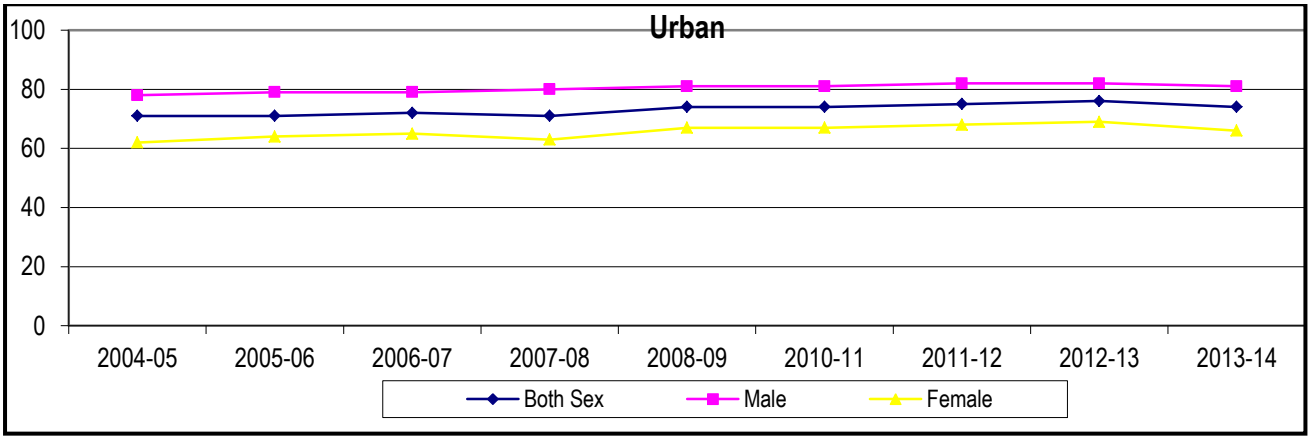
Education is the major cause and consequence of economic and social development and considered as the investment in human capital, which is leading factor for building the nation. Government of Pakistan has been making strenuous efforts to improve the literacy rate and to provide education to all school-going children at all levels.

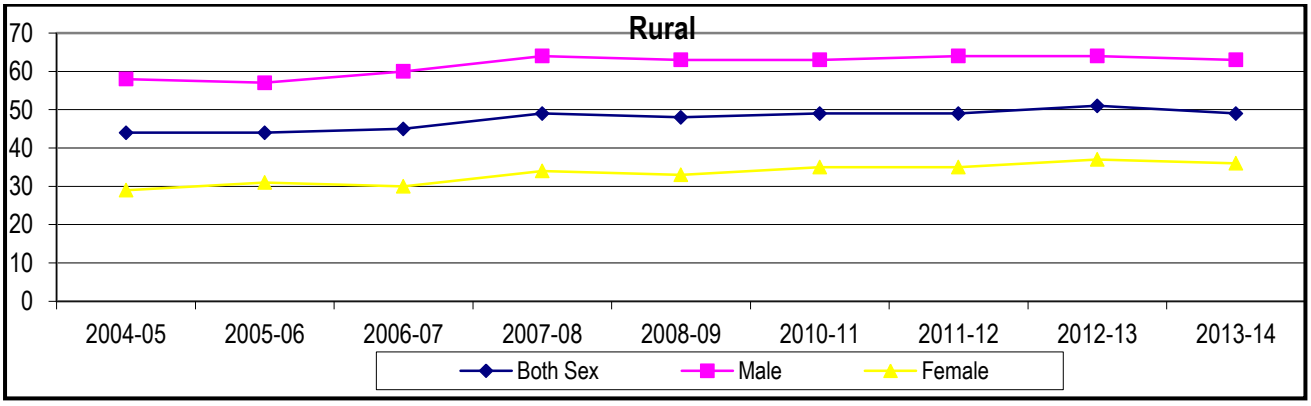
D-I.i Literacy

Literacy is one of the basic driver to catalyze change in socio-economic milieu for better. According to PSLM Survey, literacy rate improved from 57% in 2008-09 to 58% in 2013-14. The comparative literacy rates by sex and area, given in the parenthesis, also scale up, more in the case of females (45%, 47%) than males (69%, 70%) and rural (48%, 49%) than urban 74% with no change. However, the male - female and rural-urban disparities remain quite positive but seem to be converging down the time lane though with sub-optimal speed, more in urban than rural areas. The relevant data has presented in the table (Figure D-1) D-01.

Figure: D-1: Literacy Rates by Sex and Urban-Rural Areas







D-I.ii Enrollment

a. Primary Schools

At the time of independence, the primary level enrollment (class I-V) was 0.770 million which increased to 28.709 million in 2013-14 (Table D-02). It indicates more than 37 times increase in 66 years. In the linear perspective, the annual average growth rate of primary level enrollment (5.63 percent) is almost double of the population growth rate during this period. Nevertheless, expanse of the base and consequential time series fall short of exhaustive outreach of primary education. This notwithstanding, population per school (Table D-I) of the 5-9 year aged, has been decreasing down the time lane from 555 in 1950-51 to 133 in 2013-14.

Figure: D.2: Enrollment in Primary Schools by Sex

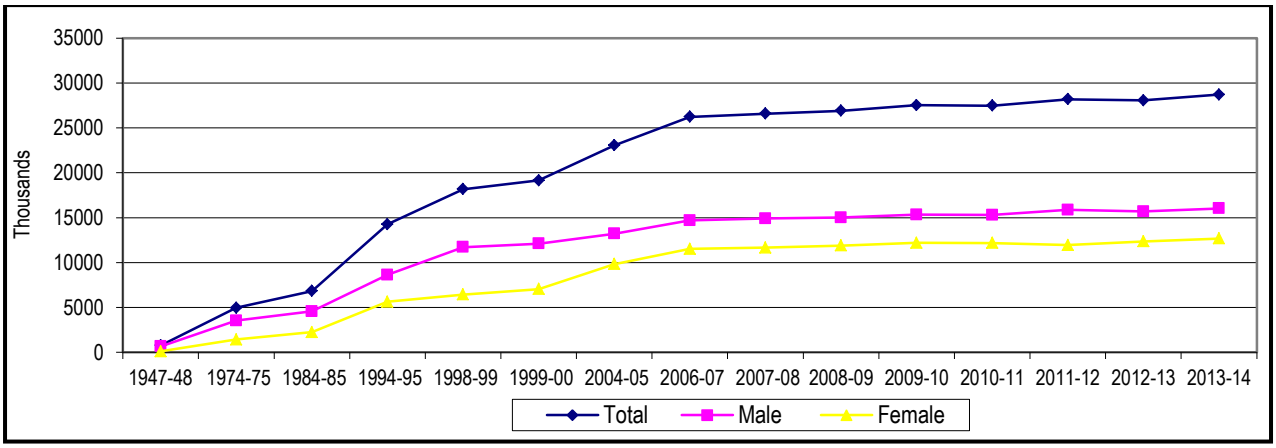


Table D-I: Relationship of Primary Schools and Population Aged (5-9 Years)

Year	Number of Primary Schools	Population 5-9 Years (000)	Population/School
1950-51	9,411	5,225	555
1960-61	20,909	6,472	310
1970-71	45,854	9,853	215
1980-81	59,169	13,434	227
1990-91	114,142	18,301	160
1997-98	156,318	20,215	129
2002-03*	150,809	20,080	133
2007-08	157,407	19,660	125
2008-09	156,654	19,920	127
2009-10	157,466	20,170	128
2010-11	155,495	20,400	131
2011-12	154,650	20,630	133
2012-13	159,680	20,870	132
2013-14	157,875	21,100	133

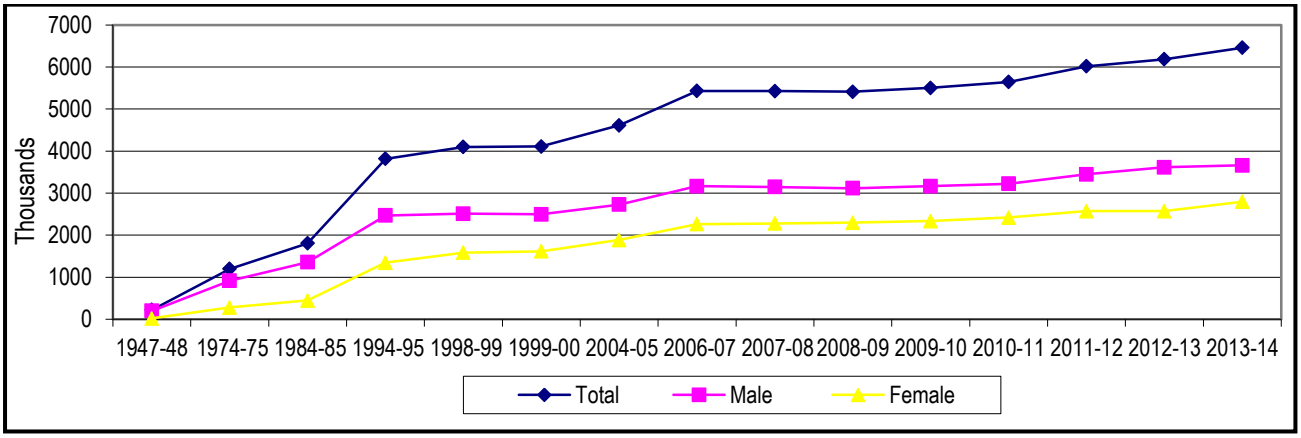
Source:- Population: i) Population Census Organization ii) Planning & Development Division
Enrolment: Academy of Educational Planning & Management, Islamabad
* Pre-Primary Schools figures not included

b. Middle Schools

The middle level enrollment (class VI-VIII) registered 29 fold rise, from 221 thousand in 1947-48 to 6461 in 2013-14 (Table D-02). The average annual growth rate (5.2 percent) is slightly lower as compared to that in primary schools enrollment.

As for sex-wise enrollment (Fig D-3) male enrollment during the period increased at an annual growth rate of 4.5 percent vis a vis 7.7 percent of females. Thus, male-female disparity has been receding owing, probably to attitudinal shift.

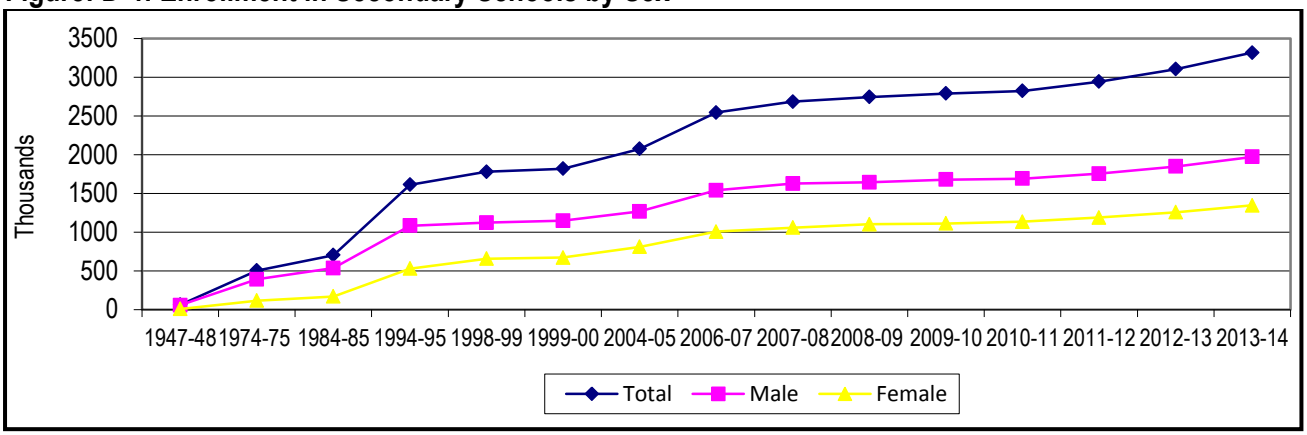
Figure: D-3: Enrollment in Middle Schools by Sex



c. High and Secondary School Vocational Institutions

Enrollment in high school or secondary level school (IXth and Xth classes) or equivalent vocational classes indicates increase at an average annual growth rate of 6.21 percent during 1947-48 to 2013-14. About 62 thousand students were enrolled in high school level classes in 1947-48 compared to 3316 thousand during the year 2013-14 (Table D-02). As for male - female gap (Fig D-4) it has been closing as female enrollment at High School level increased from 14.8 percent of the male enrollments in 1947-48 to 68.3% in 2013-14.

Figure: D-4: Enrollment in Secondary Schools by Sex



d. Arts and Science Colleges

The arts and science colleges include enrollment of class XI and XII (Intermediate) and B.A/B.Sc. students. The enrollment in arts and science colleges registered 36 fold increase in 59 years from 43 thousand in 1954-55 to 1531 thousand in 2013-14 (Table D-02). This level of trending up augurs well for cultivating progressive socio-cultural attitudes.

Auspiciously, gender gap has been shrinking during the period as females enrollment rose 118 fold, from 16% of males enrollment in 1954-55 to 86 % of the same in 2013-14.

e. Professional Colleges

The professional colleges focus on the education of Agriculture, Medical, Engineering, Law, Commerce, Tibb and Homeopathy. The enrollment in the professional colleges increased from 4.4 thousand at the time of independence to 219.5 thousands in 2013-14 at an average annual growth rate of 6.0 percent during the period . Gender gap has been receding as female enrollment witnessed 235 fold increase vis a vis 36 fold of males and fared at 47% of males enrollment in 2013-14 in comparison with 7% at the time of independence (Table D-02).

f. Universities

There were 644 students enrolled in 2 Universities existed in the country at the time of independence. This includes degree and post graduate level enrollments in various subjects. The enrollments in 2013-14 is estimated at about 658.5 thousand in 91 universities of the country (Table D-02). This shows an increase at an annual growth rate of 10.33 percent, the highest among all level of education during the period. Seemingly, university education is more facilitated /subsidized as compared to primary/secondary education. Since university graduate tend to emigrate due to limited opening in the country , the bias in favour of university education is likely to work at the cross purpose of increasing the literacy rate.

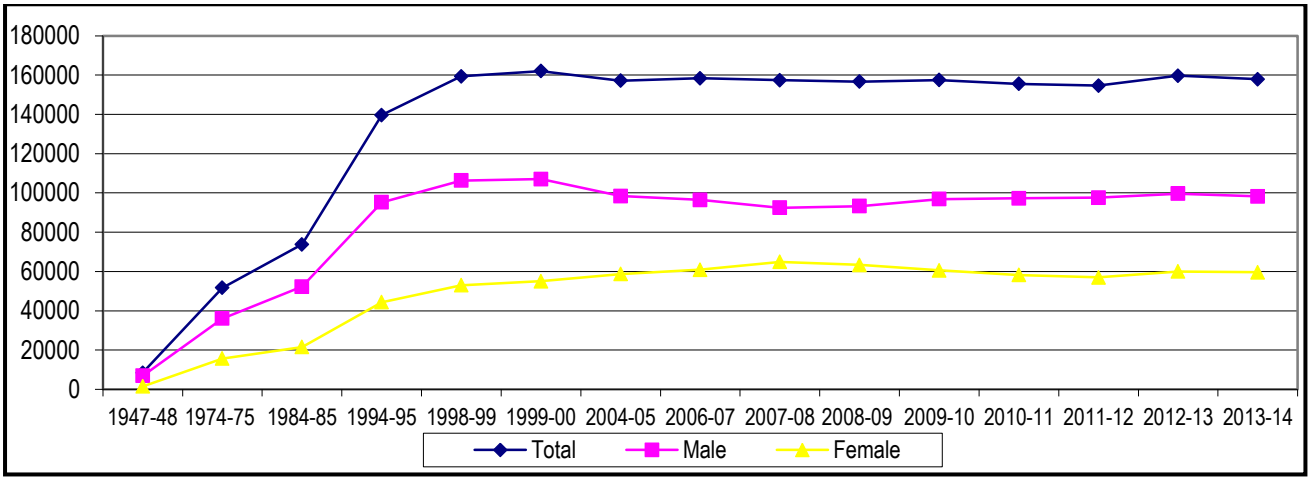
D-I.iii Educational Infrastructure

a. Primary Level Schools

At the time of independence (1947-48) there were 8,413 primary schools in the country. Their number increased to 157875 during 2013-14. Thus primary schools increased with lower average annual growth rate of 4.5 percent as against 5.6 percent of enrollment therein during the same period. Nevertheless, population per primary school declined from 555 in 1950-51 to 133 population in 2013-14 (Table D-I).

The number of primary schools for females (1549) at the time of independence fared at one-fourth of the number of boys primary school (6864). As of 2013-14, the girls primary school have increased 39 fold (59649) vis a vis 14 times (98226) increase in the number of boys primary schools. The former now number more than one-half of the latter's (Figure: D-5).

Figure: D-5: Number of Primary Schools by Sex



There were about 18 thousand primary school teachers available for 8,413 primary schools in 1947-48 i.e. two teachers per school and-one teacher for 43 students. The number of teachers increased to 420.10 thousands in 2013-14. Thus ratio of teachers per school has slightly increased to 3 teachers per school though number of students per teacher also increased from 43 in 1947-48 to 68 in 2013-14.

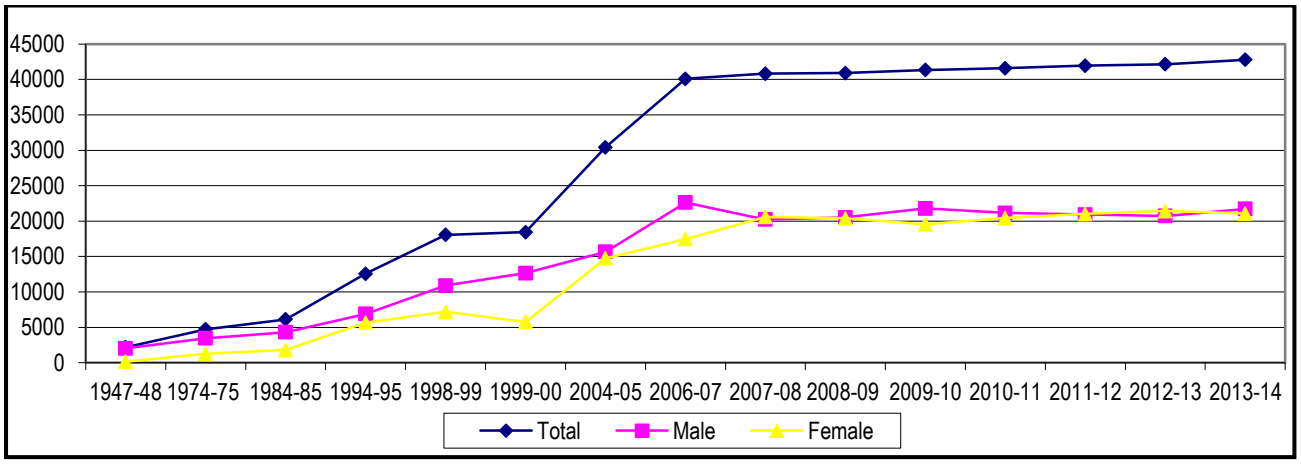
Availability of male primary school teachers increase 14 fold as against 87 fold observed in case of female teachers during 66 years between 1947-48 and 2013-14. The number of teachers per primary school decreased from 2.24. to 2.14 in the case of males while 1.55 to 3.51 for female teachers. However student-teacher ratio has also increased, more for males (43 to 76) than females (46 to 60) (Table D-02).

b. Middle Schools

The availability of middle schools increased 20 times from 2190 at the time of independence (1947-48) to 42,796 schools in 2013-14 (Table D-02). Concomitantly, enrollment per middle school increased from 101 students in 1947-48 to 151 students in 2013-14. Though, number of teachers per middle school increased from 5.5 in 1947-48 to 8.5 teachers in 2013-14, students - teacher ratio also the remain same in during these years.

Sex wise, the availability of boys middle schools in 1947-48 (2037) fared at 13 times of girls middle schools (153), increased 11 times (21722) in 2013-14 vis a vis 138 time of girls middle school (21074) to situate the latter with the former almost equivalently.

Figure: D-6: Number of Middle Schools by Sex

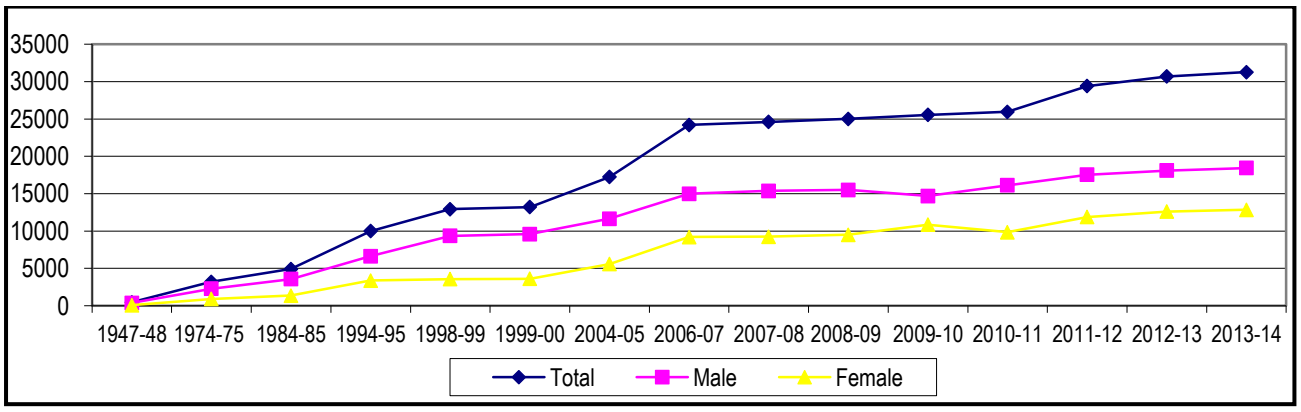


c. High and Secondary Vocational Institutions

Number of high/secondary schools at the time of independence (454) grew at an average annual growth rate of 6.6 percent to 31284 in 2013-14. The corresponding high school numbers resolve into 372 vs.18432 for boys and 82 vs 12852 for girls. The latter's numbers fare at 22 percent and 70 percent of the former, which betokens receding gender gap.

As for enrollment per school, it decreased from 137 to 106 during the period. The corresponding sex wise figures are 145 vs 107 for boys and 98 vs 105 for girls, which bespeak declining availability of high schools for fair sex. However number of teachers per school in 2013-14 (16) do indicate higher number per girl high school (23) vis a vis boys high schools (12). This may, interalia, due to lower number of the former (Table D-02).

Figure: D-6: Number of Secondary Schools by Sex



d. Arts and Science Colleges

The number of arts and science colleges grew 21 fold from 77 in 1954-55 to 1631 in 2013-14 during the span of 58 years. The corresponding number resolves into 58 & 890 for boys and 19 & 747 for girls. The latter's relative profile increased from 33 percent to 84 percent of the former. Enrollment per college more than doubled from 558 to 939 during the period. The corresponding figures for girls (316,949) and, boys (638, 925) indicates that former's size more than quadrupled while the latter's more than doubled during the comparative periods (Table D-02).

e. Professional Colleges

Professional colleges were not available at the time of independence. However, there were 24 professional colleges (Agriculture, Medical, Engineering, Law, Tibb, Commerce and Homeopathic) in the country in 1954-55, which increased 25 fold to 597 in 2013-14. Professional college practice co-education .This notwithstanding, five girls professional colleges were established in 1964-65 which increased to 34 in 2013-14 (Table D-02). Since professional colleges are infrastructure-heavy establishments, their number down the time lane increase modestly (Table D-02). As of 2013-14, there are 27 teachers per college and 14 student per teacher. Out of the total teachers (13300), more than one-third (32%) are females (4300).

f. Universities

The number of universities increased 46 fold from two (2) in 1947-48 to 91 in 2013-14. The ratio of teachers per university increased from 217 for 6 universities available in 1964-65 to 352 for 91 universities in 2013-14. However, student-teacher ratio also increased from 10 to 21 during the comparative periods. This indicates rising clientele for universities.

D-II Health

D-II.i Historical Background

Like other socio-economic sectors, the country inherited very inadequate health infrastructure and manpower at the time of independence. Though a lot of health facilities dot the country's expanse, the related indicators have not improved much. Among the reasons the seminal one is that health sector could not claim a high priority in development plans. This can be judged from the fact that the total expenditure on health & nutrition during 2014-15 was Rs.114.22 billion (0.42 % of GDP), out of which Rs 31.93 billion (48.10%)only were allocated for development expenditure. However, new National Health Policy 2009 has seeks to improve:-

1. Health manpower.
2. Gathering and Using reliable health information.
3. Strategic use of emerging technologies.
4. Health status of the population.
5. Access to essential health services.
6. Measurable reduction in the burden of diseases.
7. Protecting the poor and under privileged population.

The achievement of Millennium Development Goals (MDGs) is a priority area for Pakistan, especially in the health sector. Pakistan is committed to meeting these goals by 2015 by launching new policy initiatives. Through a major health intervention program and strategies, it is aimed to reduce the under-five mortality rate to 52 per 1000, infant mortality rate to 40 per 1000, and maternal mortality ratio to 140 by 2015. Whereas the proportion of 1 year-old children immunized against measles is targeted to be increased to 85% and the proportion of births attended by skilled health personnel to 90% by 2015. In addition, plans have been formulated to combat TB, Malaria, HIV/AIDS and Hepatitis, along with other communicable disease.

D-II.ii Health Infrastructure

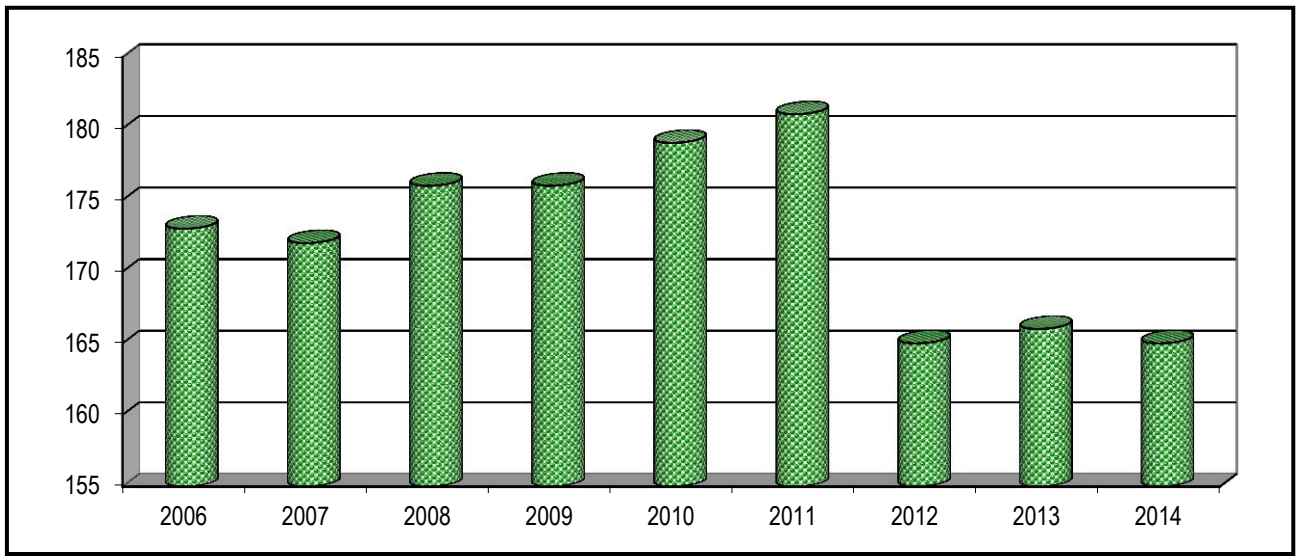
a. Hospitals

At the time of independence there were 292 hospitals in the country i.e. one hospital was available for about 111 thousand population. The number of hospital tripled in 67 years to 1142 in 2014 (Table D-08). The annual average growth rate of hospitals is 2.0 percent, which is below the annual population growth rate in the country during last 67` years. Thus, increasing population, as well as, pacy urbanization result into more

pressure on the hospitals which are mainly situated in major urban localities. It is estimated that population per hospital which was 111 thousand per hospital in 1947 raised to 164 thousand per hospital in 2014. (Fig D-8).

However, population per hospital bed declined from 2,360 in 1947 to 1,593 in 2014-15 to indicate availability of more beds in the hospitals (Table D-08).

Figure: D-8: Population per Hospital (000)



b. Dispensaries

The dispensaries are normally supervised by an MBBS doctor and supported by a Lady Health Visitor, dispenser, midwife, aya, chowkidar and sweeper. There were 722 dispensaries in 1947, which increased to 5499 in 2014. It shows more than 8 times increase in number of dispensaries in 67 years (Table D-08). The annual average growth rate of dispensaries was higher i.e. 3.0 percent as against 2.0 percent for hospitals.

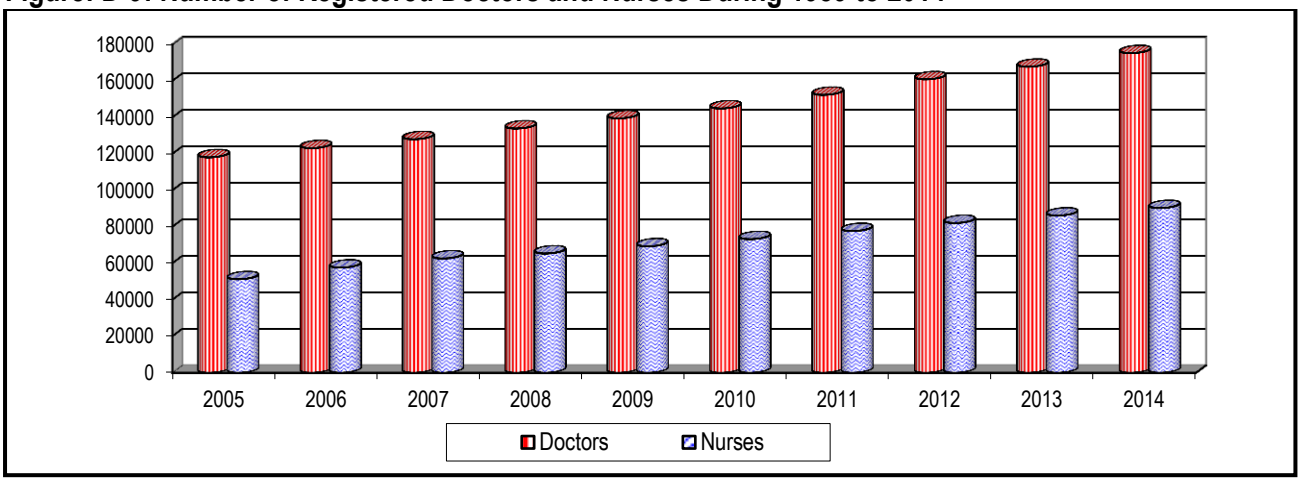
c. Maternal and Child Health Centre (MCH)

The Maternal and Child Health Centres (MCH) are established mostly in the rural areas, to provide services to expectant mothers and new born babies. Centres are supervised by Lady Health Visitors. The number of MCHs increased 7 times from 91 in 1947-48 to 671 in 2014 with an annual average growth rate of 3.0 percent during the comparative periods.

d. Beds in Hospitals and Dispensaries

The hospitals and dispensaries have the facilities to admit patients in need of continued medical care or surgical treatment. There were about 14 thousand beds in the hospitals and dispensaries in 1947 which increased more than eight (8) times in last 67 years to 118 thousand in 2014. Similarly, the number of beds per population also increased from one bed for about two thousand four hundred people in 1947-48 to one thousand and six hundred people in 2014.

Figure: D-9: Number of Registered Doctors and Nurses During 1989 to 2014



D-II.iii Health Manpower

a. Doctors

There were only 48,342 registered doctors in 1989 in the country for about 132 million population i.e. one doctor for twenty seven hundred persons. However, as of 2014 there are more than 175 thousand registered doctors in the public and private sectors in the country, translating into one doctor for 1073 persons (Table D-07). The number of registered doctors grew with an average annual growth rate of 5.1 percent during 1989 to 2014.

b. Nurses

The nurses play very important role in the health care services. The number of registered nurses grew with an average annual growth rate of 6.92 percent from 15861 in 1989 to 90276 in 2014. This translates impressively in to improved availability of nurses from one per 132.85 million people in 1998 to one per 8375 people. However, the number of nurses is one-half of the number of doctors in 2014 (Table D-07) which falls short of the desirable calculus of health manpower.

c. Dentists

The number of registered dentists registered 8 fold increase with an annual growth rate of 8.3 percent from 1911 in 1989 to 15106 in 2014. This translates into one dentist for about thirty nine thousand population in 1998 as against 14 thousand per dentist in 2014 (Table D-07). However, population per dentist is still very high. The dentists are available mainly in big hospitals and large cities, and as such, rural population which is almost 67 percent of the total population in the country seems short shifted in this regard.

D-II.iv Basic Health Indicators

Table below gives a comparison of some basic demographic indicators of a few Asian countries for 2013. It indicates that infant mortality rate is higher in Pakistan as compared to other countries, even higher than Bangladesh, Nepal and India. The life expectancy at birth is slightly higher than India and Bangladesh, however, it is lower than that of Nepal, Sri Lanka, Thailand, Indonesia China, Philippines and Malaysia.

Table D-II: Basic Health Indicators, Pakistan and Other Countries of Region

Country	Life Expectancy (year 2013)	Infant Mortality Rate per 1000 (year 2013)	Under 5 Mortality Rate per 1000 (year 2013)	Maternal Mortality Rate Per 100000 (2013)	Population Growth Rate(%) 2013
Pakistan	**66.6**	**69.0**	**85.5**	**170.0**	**1.92**
India	66.5	41.4	52.7	190.0	1.24
Bangladesh	70.7	33.2	41.1	170.0	1.22
Sri Lanka	74.2	8.2	9.6	29.0	0.76
Nepal	68.4	32.2	39.7	190.0	1.17
Bhutan	68.3	29.7	36.2	120.0	1.62
China	75.4	10.9	12.7	32.0	0.49
Malaysia	75.0	7.2	8.5	29.0	1.62
Indonesia	70.8	24.5	29.3	190.0	1.21
Philippines	68.7	23.5	29.9	120.0	1.73
Thailand	74.4	11.3	13.1	26.0	0.34

Source**:-** World Bank, Economic Survey 2014-15

D-III Family Planning

The Family Planning Programme in the country was first introduced in 1953 by a non-governmental organization " Family Planning Association of Pakistan". However, the Population Welfare Programme in the public sector has been operating since 1960. The achievement of family planning programme has been modest but seem to be attracting more people in matrimonial bond. The last population census indicates decline in fertility as intercensal growth rate decreased from 3.06 during 1972-81 to 2.6 during 1981-98.

At present the population welfare programme is operating both in the public and private sectors and a net-work of service delivery out-lets of Ministries of Population Welfare and Health as well as Social Marketing of Contraception (Private Sector) is providing family planning services to the desirous clients.

D-III.i Knowledge of Methods

The knowledge of specific method has substantially increased during last 16-17 years. According to "Pakistan Demographic and Health Survey" conducted in 1990-91, the knowledge of at least one method was 77.9 percent which has increased to 95.5 percent in 2007 (Pakistan Demographic and Health Survey 2012-13). Table below presents method specific knowledge of currently-married women aged 15-49 years.

Table D-III: Currently Married Women age 15-49 by Knowledge of Specific Method

(Percent)

Contraceptive Method	PFFPS 1996-97	PRHFPS 2000-01	SWRHFPS 2003	PDHS 2006-07	PDHS 2012-13
Any Method	94.3	95.7	95.4	95.9	98.9
Female Sterilization	88.5	88.8	85.9	86.7	90.9
Male Sterilization	31.0	31.6	41.5	40.7	51.0
Injectables	86.0	90.2	88.2	89.5	95.5
IUD	82.4	84.4	82.1	74.8	86.0
Pill	86.6	91.1	90.7	91.7	95.4
Condom	61.2	69.9	65.2	68.1	82.3
Implants	14.9	19.9	26.9	32.1	33.6
Rytehm	33.7	23.8	25.4	49.2	41.9
Withdrawal	40.7	42.4	35.7	48.9	67.1
Other Method	3.7	1.9	1.7	2.9	1.8

Source:- National Institute of Population Studies, 2012-13

D-III.ii Contraceptive Performance and Use

The population welfare programme in the country is providing services of contraception through public or private sector out lets. The modern methods like pills, IUD, injectable, Sterilization, Condom are being dispensed to the visiting clients at the service delivery points. The performance of contraceptive delivery services through population welfare programme is given in table D-IV. According to the latest survey conducted in 2006-07, the contraceptive prevalence rate among the currently married women aged 15-49 years was 29.6 percent. Table below gives contraceptive prevalence rates by method.

Table D-IV: Current Contraceptive Prevalence Rates by Method and Sources

(Percent)

Method	PCPS 1994-95	PFFPS 1996-97	PRHFPS 2000-01	SWRHFPS 2003	PDHS 2006-07	PDHS 2012-13
Any Method	17.7	23.7	27.6	32.1	29.6	35.4
Method for Women	8.8	12.5	-	18.7	-	-
Pill	0.7	1.6	1.9	3.1	2.1	1.6
IUD	2.1	3.4	3.5	4.4	2.3	2.3
Injectables	1.0	1.4	2.6	3.4	2.3	2.8
Vaginal Methods	0.0	0.1	0.0	-	-	-
Female Sterilization	5.0	6.0	6.9	7.5	8.2	8.7
Implant	-	-	-	0.3	0.1	-
Method for men	7.9	8.8	-	11.5	-	-
Condom	3.7	4.2	5.5	6.4	6.8	8.8
Withdrawl	4.2	4.6	5.3	4.9	4.1	8.5
Male Sterilization	-	-	-	0.2	0.1	0.3
Method for either use	1.0	2.4	-	2	-	-
Periodic Abstinence	1.0	1.9	1.6	1.7	-	-
Other	-	0.5	0.5	0.3	0.2	0.4
Rythm	-	-	-	-	3.6	0.7

Source:- National Institute of Population Studies, 2012-13.

D-IV Extended Programme of Immunization (EPI)

This programme was launched in 1979 on a very comprehensive scale with the prime objective to reduce morbidity and mortality resulting from six deadly diseases (Polio, Diphtheria, Whooping Cough, Tetanus, Measles and Tuberculosis) through immunizing children of less than one year of age and Tetanus immunization to all women of the child-bearing age. The programme extends service delivery from all health facilities in public and private sectors and by special out reach and mobile approach. Twice in a year, special campaigns are launched to boost up immunization coverage in the country. The data on immunization is not easy to collect or interpret as coverage is often reported on the basis of respondent's recollection than written records. The service statistics also falls short of adequacy and reliability. However, the survey results of Pakistan Social & Living Standards Measurement are given in the table below to draw up the perspective. A sort of improvement towards universal coverage seems to be in reach in medium term.

Table D-01 Literacy Rates (10 years & above) by Province, Sex and Area

Year/Area	Total			Urban			Rural		
	Both sex	Male	Female	Both sex	Male	Female	Both sex	Male	Female
PAKISTAN									
2004-05	53	65	40	71	78	62	44	58	29
2005-06	54	65	42	71	79	64	44	57	31
2006-07	55	67	42	72	79	65	45	60	30
2007-08	56	69	44	71	80	63	49	64	34
2008-09	57	69	45	74	81	67	48	63	33
2010-11	58	69	46	74	81	67	49	63	35
2011-12	58	70	47	75	82	68	49	64	35
2012-13	60	71	48	76	82	69	51	64	37
2013-14	58	70	47	74	81	66	49	63	36
PUNJAB									
2004-05	55	65	44	72	78	66	47	59	35
2005-06	56	66	47	73	80	67	47	58	37
2006-07	58	67	48	73	79	68	50	61	38
2007-08	59	70	48	72	78	66	53	66	40
2008-09	59	69	50	76	82	71	51	63	39
2010-11	60	70	51	76	80	71	53	64	42
2011-12	60	70	51	75	80	70	52	65	41
2012-13	62	71	54	77	82	72	55	66	45
2013-14	61	71	52	76	82	71	53	65	43
SINDH									
2004-05	56	68	41	72	80	62	38	56	18
2005-06	55	67	42	72	80	65	37	54	17
2006-07	55	67	42	73	80	65	36	52	16
2007-08	56	69	42	73	81	64	40	57	20
2008-09	59	71	45	73	81	65	43	61	22
2010-11	59	71	46	75	82	68	42	60	22
2011-12	60	72	47	78	85	70	41	58	23
2012-13	60	72	47	77	84	70	42	59	22
2013-14	56	67	43	72	80	63	37	53	21
KHYBER PAKHTUNKHWA									
2004-05	45	64	26	61	75	47	41	61	23
2005-06	46	64	30	59	73	45	44	62	27
2006-07	47	67	28	61	75	46	44	65	24
2007-08	49	68	33	64	79	51	46	65	29
2008-09	50	69	31	62	76	48	47	67	27
2010-11	50	68	33	63	77	50	48	67	29
2011-12	52	72	35	65	80	51	50	70	31
2012-13	52	72	35	66	78	52	49	69	31
2013-14	53	72	36	68	81	55	49	70	32
BALOCHISTAN									
2004-05	37	52	19	60	74	42	32	47	13
2005-06	38	54	20	59	77	40	31	46	13
2006-07	42	58	22	61	76	42	35	52	15
2007-08	46	66	23	64	84	41	39	58	16
2008-09	45	62	23	64	78	47	38	57	16
2010-11	41	60	19	61	79	40	35	54	13
2011-12	46	65	23	62	79	44	40	60	16
2012-13	44	62	23	65	81	47	37	55	15
2013-14	43	59	25	59	74	45	36	54	17

Source Pakistan Bureau of Statistics (PIHS 1995-96 to 1998-99 & PSLM 2004-05 to 2013-14)

Table D-02: Number of Institutions, Enrollment and Number of Teachers by Sex and Level of Educational Institutions

Institute/Year	Number of Institutions			Enrollment (000. No.)		
	Total	Male	Female	Total	Male	Female
	1	2	3	4	5	6
Primary Schools						
1947-48	8,413	6,864	1,549	770	660	110
1974-75	51,744	36,066	15,678	4,971	3,541	1,430
1984-85	73,812	52,261	21,551	6,828	4,576	2,252
1994-95	139,634	95,234	44,400	14,264	8,626	5,638
1998-99	159,330	106,272	53,058	18,169	11,719	6,450
1999-00	162,076	107,032	55,044	19,148	12,104	7,044
2004-05	157,157	98,414	58,743	23,051	13,218	9,833
2006-07	158,375	96,480	60,895	26,223	14,700	11,523
2007-08	157,407	92,466	64,941	26,579	14,907	11,672
2008-09	156,654	93,277	63,377	26,903	15,009	11,894
2009-10	157,466	96,894	60,572	27,534	15,328	12,206
2010-11	155,494	97,267	58,228	27,476	15,297	12,179
2011-12	154,650	97,608	57,042	28,191	15,870	11,946
2012-13	159,680	99,620	60,060	28,075	15,691	12,366
2013-14 P	157,875	98,226	59,649	28,709	16,027	12,682
Middle Schools						
1947-48	2190	2037	153	221	200	21
1974-75	4,713	3,447	1,266	1,196	917	279
1984-85	6,132	4,315	1,817	1,805	1,359	446
1994-95	12,571	6,888	5,683	3,816	2,469	1,347
1998-99	18,072	10,884	7,188	4,098	2,512	1,586
1999-00	18,435	12,668	5,767	4,112	2,497	1,615
2004-05	30,418	15,662	14,756	4,612	2,727	1,885
2006-07	40,094	22,622	17,472	5,431	3,167	2,264
2007-08	40,829	20,234	20,595	5,427	3,148	2,279
2008-09	40,919	20,526	20,393	5,414	3,116	2,298
2009-10	41,340	21,793	19,547	5,504	3,167	2,337
2010-11	41,591	21,164	20,427	5,644	3,223	2,421
2011-12	41,945	20,928	21,017	6,020	3,447	2,573
2012-13	42,147	20,729	21,418	6,188	3,614	2,653
2013-14 P	42,796	21,722	21,074	6,461	3,663	2,798
Secondary Schools						
1947-48	454	372	82	62	54	8
1974-75	3,199	2,288	911	504	390	114
1984-85	4,920	3,566	1,354	702	534	168
1993-94	9655	6421	3234	1399	960	439
1994-95	10,005	6,626	3,379	1,611	1,082	529
1998-99	12,931	9,357	3,574	1,778	1,122	656
1999-00	13,211	9,601	3,610	1,817	1,147	670
2004-05	17,233	11,644	5,589	2,074	1,265	809
2006-07	24,206	14,993	9,213	2,544	1,539	1,005
2007-08	24,620	15379	9241	2,683	1,625	1,058
2008-09	25,013	15,508	9,505	2,743	1,643	1,100
2009-10	25,548	14,694	10,854	2,789	1,678	1,111
2010-11	25,966	16,129	9,837	2,822	1,689	1,133
2011-12	29,426	17,534	11,892	2,942	1,754	1,188
2012-13	30,702	18,095	12,607	3,103	1,847	1,256
2013-14 P	31,284	18,432	12,852	3,316	1,971	1,345

i) Primary Schools include pre-primary schools data as well
ii) Secondary Schools include both high school and secondary vocational institutions
iii) Schools include Public & Private sector data iv) P = Provisional data (Sindh data is repeated)
P = Provisional

Contd…

Table D-02: Number of Institutions, Enrollment and Number of Teachers by Sex and Level of Educational Institutions

Institute/Year	Number of Institutions			Enrollment (000. No.)		
	Total	Male	Female	Total	Male	Female
	1	2	3	4	5	6
Arts and Science Colleges						
1947-48	40	35	5	-	-	-
1954-55	77	58	19	43	37	6
1974-75	361	265	96	208	150	58
1984-85	467	314	153	373	256	117
1994-95	678	421	257	704	428	276
1998-99	840	501	339	780	429	351
1999-00	889	531	358	792	420	372
2004-05	1174	659	515	1009	514	495
2006-07	1231	692	539	1097	544	553
2007-08	1283	717	566	1076	530	546
2008-09	1393	790	603	1215	638	577
2009-10	1497	824	673	1306	689	617
2010-11	1499	819	680	1254	655	599
2011-12	1556	838	718	1316	686	630
2012-13	1610	873	737	1470	794	676
2013-14 P	1631	890	747	1531	823	709
Professional Colleges						
1947-48	-	-	-	4.4	4.1	0.3
1954-55	24	24	0	8.2	7.4	0.8
1964-65	45	40	5	17.4	14.4	3.0
1974-75	83	75	8	44.7	36.6	8.1
1984-85	99	91	8	59.2	49.5	9.7
1994-95	167	157	10	101.0	73.3	27.7
1998-99	308	290	18	163.4	122.3	41.1
1999-00	324	309	15	161.0	120.0	41.0
2004-05	408	387	21	186.8	138.5	48.3
2006-07	416	397	19	187.2	136.3	50.9
2007-08	447	424	23	222.2	153.1	69.1
2008-09	466	445	21	218.2	153.1	65.1
2009-10	512	487	25	229.6	162.6	67.0
2010-11	598	559	39	237.8	164.7	73.1
2011-12	549	521	28	208.6	144.9	63.7
2012-13	534	506	28	196.7	134.2	62.5
2013-14 P	597	563	34	219.5	149.0	70.5
Universities						
1947-48	2	(a)	(a)	0.6	0.5	0.1
1954-55	4	(a)	(a)	2.0	1.9	0.1
1964-65	6	(a)	(a)	13.2	10.5	2.9
1974-75	10	(a)	(a)	21.4	16.9	4.5
1984-85	21	(a)	(a)	54.0	45.6	8.4
1994-95	25	(a)	(a)	80.6	59.5	21.1
1998-99	26	25	1	91.6	66.2	25.4
1999-00	26	25	1	114.0	86.6	27.4
2004-05	52	49	3	234.1	145.0	89.1
2006-07	61	56	5	296.8	185.3	111.5
2007-08	67	62	5	318.3	196.3	122.0
2008-09	67	62	5	312.2	194.1	118.1
2009-10	72	67	5	357.5	230.1	127.4
2010-11	72	67	5	398.0	246.8	151.2
2011-12	76	70	6	477.0	303.8	173.2
2012-13	84	76	8	559.0	350.2	208.8
2013-14 P	91	83	8	658.5	408.0	250.5

Note:- (a) There is co-education system in universities

Contd...

(2013) Arts & Science colleges, Professional Colleges & Universities contain public sector data only.

P = Provisional

Table D-02: Number of Institutions, Enrollment and Number of Teachers by Sex and Level of Educational Institutions

Institute/Year	Number of Teachers (000 No.)			Student Per Teacher		
	Total	Male	Female	Total	Male	Female
	7	8	9	10	11	12
Primary Schools						
1947-48	17.8	15.4	2.4	43	43	46
1974-75	125.5	83.1	42.4	40	43	34
1984-85	179.0	121.8	57.2	38	38	39
1994-95	375.2	228.5	146.7	38	38	38
1998-99	422.6	248.8	173.8	43	47	37
1999-00	402.4	232.6	169.8	48	52	42
2004-05	450.1	243.6	206.5	51	54	48
2006-07	456.0	243.4	212.6	58	60	54
2007-08	452.6	236.6	216.0	59	63	54
2008-09	465.3	249.1	216.2	58	60	55
2009-10	441.7	232.8	208.9	62	66	58
2010-11	440.5	230.4	210.1	62	66	58
2011-12	427.4	228.8	198.6	66	71	60
2012-13	428.8	219.6	209.1	66	71	59
2013-14	420.1	210.6	209.5	68	76	60
Middle Schools						
1947-48	12.0	11.2	0.8	18	18	26
1974-75	43.5	30.7	12.8	27	30	22
1984-85	57.4	40.4	17.0	31	34	26
1994-95	144.6	63.7	80.9	26	39	17
1998-99	178.5	70.3	108.2	23	36	15
1999-00	193.9	76.3	117.6	21	33	14
2004-05	246.7	95.2	151.5	19	29	12
2006-07	313.5	110.2	203.3	17	29	11
2007-08	320.6	112.4	208.2	17	28	11
2008-09	320.5	111.5	209.0	17	28	11
2009-10	331.5	114.9	216.6	17	28	11
2010-11	334.9	114.6	220.3	17	28	11
2011-12	351.4	117.5	233.9	17	29	11
2012-13	362.6	121.1	241.5	17	30	11
2013-14	364.8	121.2	243.6	18	30	11
Secondary Schools						
1947-48	6.8	6.0	0.8	9	9	10
1974-75	53.6	37.7	15.9	9	10	7
1984-85	82.7	57.3	25.4	8	9	7
1994-95	234.5	130.1	104.4	7	8	5
1998-99	238.7	129.5	109.2	7	9	6
1999-00	257.1	139.3	117.8	7	8	6
2004-05	290.8	150.3	140.5	7	8	6
2006-07	430.5	215.6	214.9	6	7	5
2007-08	439.3	217.5	221.8	6	8	5
2008-09	449.0	221.5	227.5	6	7	5
2009-10	457.3	224.8	232.5	6	8	5
2010-11	463.5	225.9	237.6	6	8	5
2011-12	469.4	195.9	273.5	6	9	4
2012-13	501.8	212.0	289.8	6	9	4
2013-14 P	511.0	212.2	298.8	7	9	5

Contd…

Table D-02: Number of Institutions, Enrollment and Number of Teachers by Sex and Level of Educational Institutions

Institute/Year	Number of Teachers (000 No.)			Student Per Teacher		
	Total	Male	Female	Total	Male	Female
	7	8	9	10	11	12
Arts and Science Colleges						
1964-65	5.4	4.0	1.4	24	26	17
1974-75	9.6	7.0	2.6	22	21	22
1984-85	14.0	9.7	4.3	27	26	27
1994-95	22.8	14.7	8.1	31	29	34
1998-99	26.9	16.6	10.3	29	26	34
1999-00	27.7	17.1	10.6	29	25	35
2004-05	31.0	18.0	13.0	33	29	38
2006-07	33.4	19.8	13.6	33	28	41
2007-08	34.4	20.9	13.5	31	25	41
2008-09	35.8	21.5	14.3	34	30	40
2009-10	39.6	23.5	16.0	33	29	38
2010-11	40.2	23.6	16.6	31	28	36
2011-12	40.3	23.1	17.2	33	30	37
2012-13	44.3	25.7	18.6	33	31	36
2013-14 P	44.5	25.8	18.7	34	32	38
Professional Colleges						
1964-65	1.2	1.0	0.2	15	14	15
1974-75	2.6	2.1	0.5	17	17	16
1984-85	3.9	3.3	0.6	15	15	16
1994-95	6.6	5.2	1.4	15	14	19
1998-99	8.9	7.1	1.8	18	17	23
1999-00	9.0	7.2	1.8	18	17	23
2004-05	10.0	8.0	2.0	19	18	24
2005-06	11.2	8.5	2.7	18	18	19
2006-07	11.0	8.2	2.8	17	17	18
2007-08	12.2	9.1	3.1	18	17	22
2008-09	12.2	8.7	3.5	18	18	18
2009-10	14.1	10.3	3.8	16	16	18
2010-11	14.9	11.0	3.9	16	15	19
2011-12	14.6	10.4	4.2	14	14	15
2012-13	13.3	9.0	4.3	15	15	15
2013-14 P	16.0	11.0	5.0	14	13	14
Universities						
1964-65	1.3	1.2	0.1	10	9	27
1974-75	2.5	2.2	0.3	9	8	15
1984-85	3.6	3.1	0.5	15	15	17
1994-95	5.3	4.4	0.9	15	14	23
1998-99	4.9	4.1	0.8	19	16	32
1999-00	5.9	4.7	1.2	19	18	23
2004-05	13.2	9.6	3.6	18	15	25
2005-06	14.0	9.9	4.1	16	14	23
2006-07	16.2	11.2	5.0	18	16	23
2007-08	19.1	13.4	5.7	17	15	21
2008-09	19.1	13.1	6.0	16	15	20
2009-10	19.6	13.8	5.8	18	17	22
2010-11	20.9	14.4	6.5	19	17	23
2011-12	23.0	15.8	7.2	21	19	24
2012-13	23.5	15.8	7.7	24	22	27
2013-14 P	32.0	21.0	11.0	21	19	23

Source:- 1 Central Bureau of Education 2. Pakistan Bureau of Statistics
3. Academy of Educational Planning & Management, Ibd. 4. Provincial Bureaus of Statistics.
Note:- Professional Colleges include Agriculture, Engineering, Medical, Commerce, Law, Home Economics, Education, Educational Research, Physical Education, Tibb, Homeopathic and Fine Arts Institutions.
P = Provisional

Table D-03: Professional Colleges by Type and Sex

(Number)

Year	All Professional Colleges		Agricu-lture (a)	Engin-eering (b)	Medical (c)		Comm-erce (d)	Law	Home Econo-mics	Education (e)		Others (f)
	Total	Female	Total	Total	Total	Female	Total	Total	Total	Total	Female	Total
1993-94	165	10	5	10	25	2	52	36	4	21	4	12
1994-95	167	10	5	10	25	2	54	36	4	21	4	12
1995-96	260	16	5	10	25	2	58	41	4	21	4	96
1996-97	264	16	5	9	26	2	62	41	4	22	4	95
1997-98	293	19	5	13	26	2	72	43	4	22	4	108
1998-99	308	18	5	13	28	2	78	46	4	22	4	112
1999-00	324	15	5	11	28	2	80	50	4	22	4	124
2000-01	352	18	5	12	27	2	84	50	4	22	4	148
2001-02	374	20	5	13	28	2	87	53	4	22	4	162
2002-03	382	19	4	13	29	2	88	54	4	22	4	168
2003-04	416	20	5	16	30	2	100	56	4	22	4	183
2004-05	408	21	4	15	30	2	100	56	4	20	4	179
2005-06	432	23	4	13	31	2	105	58	4	23	4	194
***2006-07**	416	19	4	*3	33	3	95	58	4	21	3	198
2007-08	447	23	4	2	33	3	117	62	4	24	3	201
2008-09	460	21	4	2	33	3	128	62	4	24	1	203
2009-10	512	25	4	2	38	3	164	62	4	27	2	211
2010-11	598	39	4	3	35	2	241	62	4	40	3	209
2011-12	549	28	4	2	41	2	215	47	4	43	2	193
2012-13	534	28	4	2	44	2	242	42	4	39	3	157
2013-14 P	597	34	4	2	49	2	254	49	4	57	7	178

Source:- i) Central Bureau of Education ii) Provincial Bureaus of Statistics

Note:- (a) Includes Forestry and Animal Husbandry Colleges

(b) Includes colleges of Textile Technology.

(c) Includes colleges of Dentistry and Institute of Hygiene and Preventive Medicines

(d) Includes Institute of Business Administration, University of Karachi.

(e) Includes Institutes of Educational Research of the University of Punjab, Sindh and also Colleges of Physical Education.

(f) Includes Tibb, Homoeopathic and Fine Arts.

* Decrease in Number of Engineering Colleges is due to excluding of Polytechnic Colleges of Punjab province.

P = Provisional

Table D-04: Teachers in Professional Colleges by Type and Sex

(Number)

Year	All Types		Agriculture		Engineering		Medical		Commerce	
	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
1999-00	9,043	1,765	183	4	785	10	3,252	799	1,519	112
2000-01	9,131	1,769	112	4	887	13	2,902	691	1,600	133
2001-02	9,358	2,015	170	8	635	15	2,796	747	1,819	217
2002-03	9,841	2,107	127	6	636	15	3,064	815	2,013	194
2003-04	10,659	2,178	171	12	853	30	3,031	781	2,185	241
2004-05	9,961	2,048	126	5	873	36	2,805	684	1,908	194
2005-06	11,158	2,706	82	3	843	29	3,558	1,114	2,350	310
2006-07	11,049	2807	111	3	162	10	3,829	1,133	2,380	323
2007-08	12,211	3174	124	8	91	16	3,634	984	3,142	651
2008-09	1,206	3,533	124	8	91	16	3,869	1,130	3,114	719
2009-10	14,127	3,835	125	8	85	20	4,796	1,316	3,791	761
2010-11	14,911	3,857	126	8	125	6	4,253	1,307	5,058	1,034
2011-12	14,630	4,242	148	9	54	3	5,069	1,970	4,432	902
2012-13	13,326	4,261	126	10	65	4	5,707	2,214	4,212	874
2013-14 P	15,968	5,003	150	11	65	4	6,697	2,731	4,481	930

Year	Law		Home Economics		Education		All Others (a)	
	Total	Female	Total	Female	Total	Female	Total	Female
1999-00	804	49	223	221	592	255	1,685	315
2000-01	837	67	220	218	577	251	1,996	392
2001-02	836	77	242	240	583	262	2,277	449
2002-03	783	74	249	247	582	248	2,387	508
2003-04	1,035	84	247	245	610	254	2,527	531
2004-05	978	127	232	230	510	225	2,529	547
2005-06	955	127	255	253	612	229	2,503	641
2006-07	965	161	243	241	520	202	2,839	734
2007-08	968	161	227	225	455	211	3,570	918
2008-09	934	174	213	213	400	203	3,461	1,070
2009-10	986	167	224	224	570	320	3,550	1,019
2010-11	1,106	159	218	218	685	385	3,340	740
2011-12	946	162	228	228	729	387	3,024	581
2012-13	631	113	240	240	624	323	1,721	483
2013-14 P	914	166	236	236	678	344	2,747	581

Source:- i) Central Bureau of Education. ii) Provincial Bureaus of Statistics
(a) = All others include Tibb, Homoeopathic and Fine Arts.
P = Provisional

Table D-05: Number of Secondary Vocational Institutions by Kind

Year	Commerce/ Commercial	Industrial / Vocational	Polytechnics / Technical
1993-94	143	190	51
1994-95	144	191	56
1995-96	214	204	58
1996-97	211	204	62
1997-98	211	203	58
1998-99	215	207	55
1999-00	216	194	55
2000-01	218	196	71
2001-02	200	192	70
2002-03	164	209	78
2003-04	181	235	87
2004-05	178	234	91
2005-06	180	220	103
2006-07	182	222	104
2007-08	181	234	98
2008-09	180	265	100
2009-10	187	282	125
2010-11	186	284	134
2011-12	188	289	136
2012-13	188	346	135
2013-14 P	191	351	136

Source**:-** i). Ministry of Education
ii). Provincial Directorates of Technical Education
P = Provisional

Table D-06: Enrollment in Secondary Vocational Institutions by Kind and Sex

(Number)

Year	Type of institutions								
	Commerce/Commercial			Industrial/Vocational			Polytechnic/Technical		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1993-94	24,144	23,663	481	10,805	2,029	8,776	27,547	25,607	1,940
1994-95	25,798	25,231	567	10,757	2,076	8,681	38,517	36,760	1,757
1995-96	21,307	20,758	549	12,669	4,809	7,860	40,795	38,936	1,859
1996-97	24,054	23,278	776	11,789	4,786	7,003	44,124	41,176	2,948
1997-98	22,470	21,680	790	13,037	5,413	7,624	35,617	32,590	3,027
1998-99	20,364	19,720	644	12,328	4,771	7,557	25,250	22,454	2,796
1999-00	22,947	22,283	664	8,305	1,933	6,372	33,350	30,782	2,568
2000-01	22,305	21,612	693	8,053	1,719	6,334	31,435	28,760	2,675
2001-02	24,750	24,175	575	8,412	1,549	6,863	31,423	28,597	2,826
2002-03	24,270	23,579	691	10,596	3,452	7,144	33,663	30,943	2,720
2003-04	26,924	26,002	922	17,424	7,611	9,813	33,122	30,227	2,895
2004-05	39,180	37,846	1,334	21,885	9,834	12,051	46,292	42,521	3,771
2005-06	54,570	52,514	2,056	33,566	12,529	21,037	60,937	56,222	4,715
2006-07	58,796	56,777	2,019	23,413	6,644	16,769	62456	58,601	3,855
2007-08	68,823	65,830	2,993	28,974	8,531	20,443	73,626	68,959	4,667
2008-09	66,055	63,218	2,837	25,396	10,679	14,717	69,382	65,189	4,193
2009-10	66,060	63,882	2,178	29,489	12,007	17,482	79,572	75,672	3,900
2010-11	64,192	61,638	2,554	19,154	6,347	12,807	77,291	73,469	3,822
2011-12	64,047	58,631	5,416	22,601	6,023	16,578	74,456	71,982	2,474
2012-13	60,176	57,806	2,370	33,216	8,829	24,387	78,272	74,643	3,629
2013-14 P	63,414	60,918	2,496	31,253	8,617	22,636	79,929	76,121	3,808

Source:- i) Ministry of Education
ii) Provincial Directorates of Technical Education

P = Provisional

Table D-07: Medical Personnel in Pakistan

(Number)

Year	Doctors	Dentists	Nurses	Qualified Lady Health visitors	Registered Midwives	Pharmacists
1989	48,342	1,911	15,861	2,917	13,779	3,484
1990	52,935	2,068	16,948	3,106	15,009	3,718
1991	56,616	2,184	18,150	3,463	16,299	3,601
1992	61,081	2,269	19,389	3,796	17,678	3,772
1993	64,038	2,394	20,245	3,920	18,641	4,322
1994	67,224	2,584	21419	4,107	19,759	4,955
1995	71,718	2,747	22,299	4,185	20,910	5,820
1996	75,239	2,933	24,776	4,407	21,662	6,015
1997	79,474	3,154	28,661	4,589	21,840	6,855
1998	83,696	3,434	32,938	4,959	22,103	7,723
1999	88,117	3,857	35,979	5,299	22,401	8,515
2000	92,838	4,165	37,528	5,443	22,525	9,620
2001	97,260	4,612	40,019	5,669	22,711	10,515
2002	102,644	5,058	44,520	6,397	23,084	11,320
2003	108,164	5,531	46,331	6,599	23,318	12,120
2004	113,309	6,128	48,446	6,741	23,559	13,330
2005	118,113	6,734	51,270	7,073	23,897	15,225
2006	123,146	7,438	57,646	8,405	24,692	16,565
2007	128,042	8,215	62,651	9,302	25,261	18,320
2008	133,925	9,012	65,387	10,002	25,534	19,215
2009	139,488	9,822	69,313	10,731	26,225	20,350
2010	144,901	10,508	73,244	11,510	27,153	21,565
2011	152,368	11,649	77,683	12,621	30,722	22,850
2012	160,880	12,692	82,119	13,678	31,503	23,975
2013	167,759	13716	86,183	14,388	32,677	25,340
2014	175,223	15,106	90,276	15,325	33,687	26,522

Source:- i. Health Division ii. Provincial Health Directorates
iii. PMDC And Nursing Council iv. Pakistan Pharmacy Council.

Table D-08: Hospitals, Dispensaries, Maternity & Child Health Centres and Beds

(Number)

Year (As on Ist January)	Hospitals	Dispen-saries	Maternity and Child Health Centres	Rural Health Centre	Basic Health Unit/Sub Health Centre	T.B. Clinic	Total Beds
1995	827	4,253	859	498	4,986	260	85,805
1996	858	4,513	853	505	5,143	262	88,454
1997	865	4,523	853	513	5,121	262	89,929
1998	872	4,551	852	514	5,155	263	90,659
1999	879	4,583	855	530	5,185	264	92,174
2000	876	4,635	856	531	5,171	274	93,907
2001	907	4,625	879	541	5,230	272	97,945
2002	906	4,590	862	550	5,308	285	98,264
2003	906	4,554	907	552	5,290	289	98,684
2004	916	4,582	906	552	5,301	289	99,908
2005	919	4,632	907	556	5,334	289	101,490
2006	924	4,712	906	560	5,336	288	102,073
2007	945	4,755	903	562	5,349	290	103,285
2008	948	4,794	908	561	5,310	293	103,037
2009	968	4,813	906	572	5,345	293	103,708
2010	972	4,842	909	577	5,344	304	104,137
2011	980	5,039	851	579	5,449	345	107,537
2012	1,092	5,176	628	640	5,478	326	111,802
2013	1,113	5,413	687	667	5,471	329	118,378
2014 (P)	1,142	5,499	671	669	5,438	334	118,041

Source **:-** i. Health Division
ii. Health Directorate
p = Provisional data inrespect of Punjab Province

Table D-09: Electricity Balances (Public Utilities only)

(GWh)

Sector	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Total Generation	98213	95661	91616	95358	94385	95091	96122	103670
Auxiliary Consumption	3623	3688	2067	2260	2170	2382	3340	3767
Net purchases from PASMIC	(137)	(30)	(10)	(43)	(69)	(168)	4	9
Imported	171	199	227	249	269	274	375	419
Net Supply	94623	92142	89767	93305	92414	92815	93161	100340
Consumption	72712	73400	70371	74348	77099	76761	76789	83409
T & D Losses	21912	18742	19396	18957	15315	16054	16372	16932
(as % of Net Supply)	23.2%	20.3%	21.6%	20.3%	16.6%	17.3%	17.6%	16.9%

Source:- Pakistan Energy Year Book-2014 published by Hydrocarbon Development Institute of Pakistan

Table D-10: Natural Gas Reserves as on June 30th, 2014

(Trillion Cubic Feet)

	Non Associated Gas Fields	Operator Company	Original Recoverable Reserves	Cumulative Production	Balance Recoverable Reserves	Heating Value Btu/cu. Ft
1.	Savi Ragha	BG	0.03000	-	0.03000	1159
2.	Zamzama	BHP	1.71834	1.46670	0.25164	802
3.	Rodho	Dewan Petr	0.26100	0.02642	0.23458	1000
4	Radho (Chiltan)	"	0.52000	0.03672	0.48328	875
5	Badhra	Enl Pak	0.24100	0.07600	0.16500	940
6	Bhit	"	1.58400	1.36600	021800	840
7	Kadanwari	"	0.68800	0.55500	0.13300	882
8	Lundali	"	0.00210	0.00206	0.00004	777
9	Mari	MPCL	6.99000	4.49000	2.50000	735
10	Marisml/SUL	"	0.05877	0.03614	0.02263	860
11	Mari PKL	"	0.02155	0.01269	0.00886	710
12	Mari Deep	"	1.21000	0.09300	1.11700	560
13	Koonj	"	0.00450	0.00219	0.00231	870
14	Sujwal	"	0.02240	0.00502	0.01738	1020
15	Zarghun South	"	0.07672	-	0.07672	871
16	Makori	MOL	0.22100	0.05200	0.16900	1091
17	Manzalai	"	0.57000	0.39700	0.17300	1032
18	Mamikhel	"	0.08000	0.04700	0.03300	1073
19	Maramzai	"	0.36300	0.07200	0.29100	1075
20	Bagla	OGDCL	0.01130	0.00274	0.00856	950
21	Baloch	"	0.00157	0.00114	0.00043	1148
22	Bhal Syedaan	"	0.00379	0.00351	0.00029	1156
23	Bahu	"	0.10010	0.02762	0.07248	467
24	Bobi	"	0.05507	0.03067	0.02441	1182
25	Chak-2	"	0.02851	0.00489	0.02363	1125
26	Chak-7A	"	0.00200	0.00121	0.00079	1176
27	Chak-63	"	0.02961	0.00011	0.02950	1211
28	Chak-63 SE	"	0.00330	-	0.00330	793
29	Chak-66	"	0.00400	-	0.00400	768
30	Chak-66 NE	"	0.00538	0.00038	0.00500	806
31	Chak-5 Dim South	"	0.02559	0.01460	0.01099	1182
32	Chandio	"	0.03030	-	0.03030	912
33	Dakhni/Dakhni Deep	"	0.40273	0.25272	0.15001	1065
34	Dars & Dars Deep	"	0.04310	-	0.04310	1078/1095
35	Dachrapur	"	0.00870	0.00135	0.00735	928
36	Dhamraki	"	0.00976	0.00772	0.00204	1182
37	Dhodak	"	0.22706	0.21893	0.00813	1143
38	Gopang	"	0.00640	0.00032	0.00608	1254
39	Hakeem Daho	"	0.15150	-	0.15150	1050
40	Hundi	"	0.02957	0.02889	0.00068	860
41	Jhal Magsi South	"	0.04170	-	0.04170	934
42	Kunar Deep & West	"	0.96300	0.07070	0.89230	1029
43	Kunnar South	"	0.06300	-	0.06300	1066
44	Lala Jamali	"	0.07980	-	0.07980	831

Contd..

Table D-10: Natural Gas Reserves as on June 30th, 2014

(Trillion Cubic Feet)

	Non Associated Gas Fields	Operator Company	Original Recoverable Reserves	Cumulative Production	Balance Recoverable Reserves	Heating Value Btu/cu. Ft
45	Loti	"	0.47589	0.33193	0.14396	836
46	Maru	"	0.03088	0.00070	0.03018	-
47	Maru South	"	0.01050	0.00066	0.00984	-
48	Mela	"	0.18500	0.03910	0.14590	1170
49	Mithrao	"	0.02524	0.01600	0.00924	1182
50	Nashpa	"	0.27747	0.06095	0.21652	1130
51	Nim	"	0.00381	-	0.00381	1233
52	Nim West	"	0.00380	-	0.00380	993
53	Nandpur	"	0.16869	0.14882	0.01987	157
54	Noraijagir	"	0.00865	0.00829	0.00036	1202
55	Nur	"	0.01440	0.00131	0.01309	1013
56	Pakhro	"	0.00315	0.00291	0.00024	997
57	Panjpir	"	0.06003	0.05591	0.00412	157
58	Pasakhi Deep	"	0.37760	0.02986	0.34774	895
59	Pasakhi East	"	0.01340	-	0.01340	1012
60	Pasakhi WD	"	0.04240	-	0.04240	1142
61	Pirkoh	"	1.05310	1.03660	0.01649	854
62	Qadirpur	"	5.82893	2.92763	2.90130	887
63	Resham	"	0.00604	0.00034	0.00570	1215
64	Reti	"	0.03510	0.00043	0.03467	-
65	Sadkal	"	0.08011	0.07413	0.00598	1200
66	Sari	"	0.02002	0.01909	0.00093	880
67	Shah	"	0.02690	-	0.02690	1284
68	Shekhan	"	0.01168	0.00168	0.01000	1040
69	Tando Allah Yar	"	0.02342	0.00002	0.02340	888
70	Tando Allah Yar North	"	0.00090	-	0.00090	888
71	Thora Deep	"	0.05380	-	0.5380	1028
72	Uch	"	5.26503	1.20266	4.06237	470
73	Unar	"	0.03410	-	0.03410	1034
74	Latif	OMV	0.24750	0.10578	0.14172	992
75	Miano	"	0.60470	0.52083	0.08387	990
76	Sawan	"	1.55500	1.35306	0.20194	990
77	Tajjal	"	0.05760	0.04454	0.01306	989
78	Ratana	OPL	0.15650	0.05489	0.10161	1083
79	Badar	PEL	0.09000	0.04370	0.04623	572
80	Kandara	"	1.85800	-	1.85800	143
81	Khanpur	"	0.02360	0.00671	0.01689	851
82	Hamza	"	0.02260	-	0.02260	644
83	Hasan	"	0.11644	0.05577	0.06067	639
84	Sadiq	"	0.01187	0.00301	0.00886	654
85	Bela	POL	0.01810	0.00137	0.01673	1017
86	Domial	"	0.01266	0.00176	0.01090	1112
87	Adhi	PPL	0.57600	0.22300	0.35300	1250
88	Adam	"	0.02300	0.01300	0.01000	1162
89	Chachar	"	0.03700	0.01800	0.01900	785

Contd..

Table D-10: Natural Gas Reserves as on June 30th, 2014

(Trillion Cubic Feet)

Non Associated Gas Fields		Operator Company	Original Recoverable Reserves	Cumulative Production	Balance Recoverable Reserves	Heating Value Btu/cu. Ft
90	Kandhkot	"	1.68000	1.07600	0.60400	835
91	Mazarani	"	0.18300	0.04100	0.14200	1010
92	Shahdad	"	0.03100	-	0.03100	1050
93	Sui & Sui Deep	"	12.81900	10.50900	2.31000	975
94	Wafiq	"	0.9700	-	0.09700	650
95	Rrehmat	Petronas	0.03900	0.03900	-	978
96	Mehar	"	0.09070	0.00449	0.08621	1082
97	Saqib	"	0.02188	0.02053	0.00135	1036
98	Sara	Tullow	0.03900	0.02700	0.01200	802
99	Suri	"	0.03300	0.02950	0.00350	815
100	Haseeb	Hycarbex	0.17400	0.01057	0.16343	793
101	Ali	UEPL	0.01612	0.01227	0.00386	1045
102	Ahmad	"	0.00051	0.00051	-	944
103	Amdani		0.00024	-	0.00024	617
104	Bakhsh Deep		0.01248	0.00257	0.00991	899
105	Baqar Deep	"	0.01182	0.00920	0.00262	1023
106	Bilal/Bilalnorth/Siraj South	"	0.09040	0.09023	0.00017	986
107	Bhatti & Nakurji	"	0.09210	0.09170	0.00040	1100
108	Bukhari & Bukhari Deep	"	0.11694	0.11326	0.00368	1007
109	Buzdar & Buzdar South	"	0.00345	0.00345	-	943
110	Buzdar South Deep	"	0.03892	0.02054	0.01837	985
111	Feteh Shah & F.S. North	"	0.00874	0.00612	0.00262	1055
112	Gagani		0.00009	0.00008	0.00001	900
113	Golarchi	"	0.08061	0.08038	0.00023	1017
114	Haider Deep	"	0.02950	0.02949	0.00001	971
115	Jabo	"	0.01710	0.01504	0.00206	912
116	Jalal	"	0.03870	0.03575	0.00296	1030
117	Jarar Deep		0.00685	0.00418	0.00267	1006
118	Jhaberi	"	0.01093	0.00910	0.00183	734
119	Jhok		0.00012	0.00009	0.00003	1093
120	Jogwani(Duphri-4)	"	0.06800	0.05844	0.00955	981
121	Junathi South	"	0.00485	0.00485	-	1020
122	Kamal North	"	0.03269	0.02114	0.01154	1299
123	Kausar/Usman	"	0.01915	0.01388	0.00527	949
124	Kato	"	0.00372	0.00362	0.00011	1221
125	Khaskeli North	"	0.00049	0.00049	-	1170
126	Khorewah	"	0.18212	0.16181	0.01832	1096
127	Khorewah Deep	"	0.01155	0.00983	0.00172	1048
128	Koli	"	0.01648	0.01641	0.00007	1015
129	Liari Deep	"	0.00957	0.00889	0.00068	1146
130	Lodano	"	0.00421	0.00206	0.00215	1065
131	Lodano Deep	"	0.00318	0.00248	0.00070	1018
132	Mahi	"	0.00482	0.00482	0.00084	1028
133	Malah	"	0.00125	0.00047	0.00078	1154
134	Mewa	"	0.00058	0.00048	0.00009	1033

Contd..

Table D-10: Natural Gas Reserves as on June 30th, 2014

(Trillion Cubic Feet)

	Non Associated Gas Fields	Operator Company	Original Recoverable Reserves	Cumulative Production	Balance Recoverable Reserves	Heating Value Btu/cu. Ft
135	Missri	"	0.01159	0.01018	0.00140	753
136	Mulaki	"	0.00293	0.00275	0.00018	1099
137	Mukhdumpur	"	0.05780	0.05164	0.00616	1117
138	Mukhdumpur Deep	"	0.02461	0.02140	0.00321	984
139	Matli	"	0.05015	0.05005	0.00010	1022
140	Naimat Basal	"	0.01684	0.00542	0.01142	1007
141	Naimat West	"	0.22450	0.01085	0.21365	755
142	Nando	"	0.00315	0.00000	0.00315	1112
143	Nurpur Deep	"	0.00207	0.00131	0.00075	970
144	Pir	"	0.00892	0.00839	0.00053	1041
145	Pir Apan	"	0.00497	0.00497	0.00000	847
146	Piaro Deep	"	0.00530	0.00257	0.00272	1103
147	Qasim Deep		0.00679	0.00266	0.00413	938
148	Raj	"	0.00664	0.00393	0.00271	966
149	Ragni Deep	"	0.00076	0.00001	0.00074	919
150	Rajpari		0.00000	0.00000	-	1223
151	Rind	"	0.00286	0.00286	-	1101
152	Rahim	"	0.00657	0.00637	0.00020	1409
153	Sakhi Deep	"	0.02699	0.02560	0.00139	1020
154	Sakhi South Deep	"	0.02111	0.02111	-	1013
155	Shah Dino	"	0.00261	0.00256	0.00005	820
156	Sonro	"	0.03308	0.02891	0.00417	957
157	Sohrab Deep	"	0.08321	0.00314	0.08007	1022
158	Sumar Deep	"	0.01820	0.00415	0.01405	1102
159	Sutiari Deep	"	0.13334	0.00194	0.13141	711
160	Tangri Deep	"	0.01003	0.00750	0.00253	1039
161	Tando Ghulam Ali	"	0.01385	0.01049	0.00336	928
162	Thebo	"	0.00063	0.00044	0.0019	1110
163	Turk	"	0.16833	0.16253	0.00518	1115
164	Turk Deep	"	0.11921	0.10119	0.01802	1092
165	Umar	"	0.00091	0.00041	0.00050	1139
166	Zaur	"	0.03268	0.03213	0.00056	1258
167	Zaur Deep	"	0.01791	0.01534	0.00258	1144
168	Zaur West	"	0.00053	0.00053	-	1127
169	Zaur South	"	0.00135	0.00135	-	1162
170	POGC Rehman	"	0.41000	0.00379	0.40621	846
	Associated Gases	-	1.59311	1.15870	0.43441	-
	TOTAL: TCF	-	**55.80916**	**32.16842**	**23.64074**	-
	Normalized TCF at 900 but/cu.ft.	-	**51.28032**	**32.12015**	**19.16017**	-
	Million:TOE	-	**1101.62**	**690.01**	**411.60**	-

Source:- Pakistan Energy Year Book-2014 published by Hydrocarbon Development Institute of Pakistan

Table D-11: Associated Gas Reserves as on 30th June, 2014

(Trillion cubic feet)

Oil Field	Operator	Original Recoverable Reserves	Cumulative Production	Balance Recoverable Reserves	Heating Value Btu/cu.ft
01 Makori East	MOL	0.27800	0.02000	0.25800	1182
02 Chanda	"	0.06888	0.03115	0.03773	828
03 Fimkassar	"	0.01413	0.01281	0.00132	1560
04 Jakhro	"	0.01450	0.00132	0.01318	845
05 Kal	"	0.00258	0.00220	0.00038	1326
06 Kunar	"	0.04962	0.03306	0.01656	1202
07 Lashari Centre	"	0.00250	0.00250	-	1120
08 Missakaswal	"	0.02414	0.02166	0.00249	1408
09 Missan	"	0.00003	0.00003	-	1078
10 Pasakhi	"	0.00821	0.00756	0.00066	1334
11 Rajian	"	0.00584	0.00268	0.00317	1370
12 Sono	"	0.00290	0.00290	-	1553
13 Tando Alam	"	0.00337	0.00337	-	1346
14 Thora	"	0.00256	0.00256	-	1328
15 Toot	"	0.03918	0.03515	0.00403	1205
16 Bhangali	OPL	0.01079	0.00926	0.00153	1358
17 Dhurnal	"	0.13223	0.13090	0.00133	1270
18 Dhulian	POL	0.22458	0.21627	0.00831	1282
19 Meyal	"	0.29700	0.27924	0.01776	1209
22 Pariwali	"	0.12590	0.07846	0.04744	1193
21 Pindori	"	0.07896	0.07164	0.00732	1257
22 Turkwal	"	0.00404	0.00361	0.00043	1355
23 Ali Zaur	UEPL	0.00196	0.00196	-	1513
24 Bachal	"	0.00229	0.00218	0.00010	1034
25 Dabhi,Dhabi North & Sorth	"	0.05025	0.04967	0.0058	1017
26 Duphri	"	0.00895	0.00738	0.00156	1024
27 Ghunghro	"	0.00150	0.00150	-	n.a.
28 Halipota	"	0.00490	0.00347	0.00144	1017
29Jagir	"	0.00232	0.00219	0.00013	1184
30Jhaberi South	"	0.00492	0.00492	-	999
31Khaskeli	"	0.00807	0.00807	-	1129
32Khaskheli DT	"	0.00002	0.00002	-	n.a.
33Laghari	"	0.00665	0.00665	-	n.a
34 Liari	"	0.00347	0.00347	-	1172
35 Mazari*	"	0.02680	0.02343	0.00337	989
36 Mohano	"	0.00092	-	0.00092	n.a.
37 M.Ismail Deep	"	0.04245	0.03980	0.00265	1049
38 Nari	"	0.00805	0.00805	-	996
39 Rahim North	"	0.00370	0.00317	0.00053	882
40 Sakhi	"	0.00845	0.00845	-	1190
41 Shekhano	"	0.00784	0.00683	0.00101	1007
42Tajedi	"	0.00014	0.00014	-	n.a
43 Tangri	"	0.00574	0.00527	0.00047	1149
44 Others**	"	0.00379	0.00379		n.a.
TOTAL: TCF	-	**1.59311**	**1.15870**	**0.43441**	-
Normalized TCF at 900 btu/cu.ft.	-	**1.72510**	**1.51093**	**0.21417**	-
Million TOE	-	**37.06**	**32.46**	**4.60**	-

Source:- Pakistan Energy Year Book-2014 published by Hydrocarbon Development Institute of Pakistan

(*) Includes Mazari South and "Mazari South Deep

(**) Includes Akri North, Bari, Keyhole G, M Ismail, Muban, Paniro and Rajo

Table D-12: Pakistan Coal Resources as on 30th June, 2014

Province Coal Field	Seam Thickness Range (Metres)	Resources (Million Tonnes)						
		Total	Measured Reserved	Mine able Reserves	Indicated	Inferred	Hypoth-etical	Status
1	2	3	4	5	6	7	8	9
Balochistan								
Barkhan-Chamalang	0.3-2.0	6	1	-	-	5	-	Dev.
Duki	0.2-2.3	50	14	-	11	25	-	Dev.
Mach-Abegum	0.6-1.3	23	9	-	-	14	-	Dev.
Sor Range-Degari	0.3-1.3	50	15	-	-	19	16	Dev.
Pir Ismail Ziarat	0.4-0.7	12	2	-	2	8	-	Dev.
Khost-Sharig-Harnai	0.3-2.3	76	13	-	-	63	-	Dev.
Sub-Total:	-	217	54	-	13	134	16	
Khyber Pakhtunkhwa								
Hangu/Orakzai	0.43-0.6	82	1.0	-	4.5	76	-	Dev.
Cherat/Gulla Khel	0.8-1.2	9	0.5	-	-	8	-	Dev.
Sub-Total:	-	91	1.5	-	4.5	84	-	-
Punjab								
Makarwal	0.3-2.0	22	5	-	8	9	-	Dev.
Salt Range	0.15-1.2	213	50	-	16	2	145	Dev.
Sub-Total:	-	235	55	-	24	11	145	-
Sindh								
Lakhra	0.3-3.3	1328	244	-	629	455	-	Dev.
Sonda-Thatta	0.3-1.5	3700	60	-	511	2197	932	Non-Dev.
Jherruck	0.3-6.2	1823	106	-	810	907	-	Non-Dev.
Ongar	0.3-1.5	312	18	-	77	217	-	Non-Dev.
Indus East	0.3-2.5	1777	51	-	170	1556	-	Non-Dev.
Meting-Jhimpir	0.3-1.0	161	10		43	108	-	Dev.
Badin	0.55-3.1	850	150	-	0	200	500	Non-Dev.
Thar Coal*	0.2-22.81	175506	7025	-	17130	38650	112700	Non-Dev.
Sub-Total:	-	185456	7664	-	19370	44290	114132	-
Azad Kashmir								
Kotli	0.25-1.0	9	1	-	1	7	-	Dev.
Sub-Total:	-	9	1	-	1	7	-	-
Total:	-	186007	7775.5	-	19412.5	44526	114293	-

Contd.

* Measured reserved to Thar have been reduced by GSP after drilling and recalculation to remove overlaps in previous estimates. For Block-wise reserve/resources of Thar

hvAb: High volatile A bituminous coal
hvBb: High volatile B bituminous coal
hvCb: High volatile C bituminous coal
SubA: Sub bituminous A coal
SubB: Sub bituminous B coal
SubC: Sub bituminous C coa

LigA: Lignite A coal
LigB: Lignite B coal
LigC: Lignite C coal

Table D-12: Pakistan Coal Resources as on 30th June, 2014

Province Coal Field	Coal Quality Proximate Analysis (%)					Rank as per ASTM Classification	Heating Value Range (mmmf) (Btu/lb)
	Moisture	Volatile Matter	Fixed Carbon	Ash	Total Sulphur		
1	10	11	12	13	14	15	16
Balochistan							
Barkhan-Chamalar	1.1-2.9	24.9-43.5	19.4-47.1	9.1-36.5	3.0-8.5	hvCb to hvAb	12500-14357
Duki	3.5-11.5	32.0-50.0	28.0-42.0	5.0-38.0	4.0-6.0	SubB to hvAb	10131-14164
Mach-Abegum	7.1-12.0	34.2-43.0	32.4-41.5	9.6-20.3	3.2-7.4	SubA to hvCb	11110-12937
Sor Range-Degari	3.9-18.9	20.7-37.5	41.0-50.8	4.9-17.2	0.6-5.5	SubA to hvBb	11245-13900
Pir Ismail Ziarat	6.3-13.2	34.6-41.0	19.3-42.5	10.3-37.5	3.2-7.4	SubA to hvCb	10786-11996
Khost-Sharig-Hamal	1.7-11.2	9.3-45.3	25.5-43.8	9.3-34.0	3.5-9.55	SubB to hvAb	9637-15499
Khyber Pakhtunkhwa							
Hangu/Orakzai	0.2-2.5	16.2-33.4	21.8-49.8	5.3-43.3	1.5-9.5	SubA to hvAb	10500-14149
Cherat/Gulla Khel	0.1-7.1	14.0-31.2	37.0-76.9	6.1-39.0	1.1-3.5	SubC to hvAb	9386-14171
Punjab							
Makarwal	2.8-6.0	31.5-48.1	34.9-44.9	6.4-30.8	2.8-6.3	SubA to hvAb	10688-14029
Salt Range	3.2-10.8	21.5-38.8	25.7-44.8	12.3-44.2	2.6-10.7	SubC to hvAb	9472-15801
Sindh							
Lakhra	9.7-38.1	18.3-38.6	9.8-38.2	4.3-49.0	1.2-14.8	LigB to SubC	5503-9158
Sonda-Thatta	22.6-48.0	16.1-36.9	8.9-31.6	2.7-52.0	0.2-15.0	SubC to hvBb	8878-13555
Jherruck	9.0-39.5	20.0-44.2	15.0-58.8	5.0-39.0	0.4-7.7	SubC to hvCb	8800-12846
Ongar	9.0-39.5	20.0-44.2	15.0-58.8	5.0-39.0	0.4-7.7	LigB to SubA	5219-11172
Indus East	9.0-39.5	20.0-44.2	15.0-58.8	5.0-39.0	0.4-7.7	LigA to SubC	7782-8660
Meting-Jhimpir	26.6-36.6	25.2-34.0	24.1-32.2	8.2-16.8	2.9-5.1	LigA to SubC	7734-8612
Badin	-	-	-	-	-	-	11415-11521
Thar Coal*	29.6-55.5	23.1-36.6	14.2-34.0	2.9-11.5	0.4-2.9	LigB to SubA	6244-1104
Azad Kashmir							
Kotli	0.2-6.0	5.1-32.0	26.3-69.5	3.3-50.0	0.3-4.8	LigA to hvCb	7336-12338

Source:- Pakistan Energy Year Book-2014, Published by Hydrocarbon Development Institute of Pakistan
mmmf: Moist mineral matter free

Table D-13: Bunkering of Petroleum Products

(Unit:Qty. in Tonnes)
(QTY. IN TOE)
(Value in Million US $)

Products	Year							
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
JP-1	171032	164390	153600	177652	158387	199921	183527	198705
	176437	169585	158454	183266	163392	206239	189326	204984
	(123.58)	(164.12)	(122.95)	(143.91)	(152.73)	(230.99)	(202.65)	(213.73)
Kerosene	-	12	-	-	-	-	-	-
	-	12	-	-	-	-	-	-
	-	(0.01)	-	-	-	-	-	-
HSD	4929	283	24876	29531	26670	8028	9183	6994
	5182	298	26152	31046	28038	8440	9654	7353
	(3.09)	(0.29)	(13.30)	(21.50)	(23.58)	(14.71)	(10.15)	(7.76)
LDO	12954	12209	12723	7065	3597	961	199	-
	13495	12719	13255	7360	3747	1001	207	-
	(7.04)	(7.07)	(7.14)	(4.40)	(2.27)	(0.85)	(0.18)	-
Furnace Oil	85131	120313	131677	194515	146350	91130	84462	88733
	82892	117149	128214	189399	142501	88733	82241	86399
	(27.81)	(59.48)	(55.19)	(92.21)	(77.87)	(65.14)	(56.62)	(56.39)
Total	274046	297207	322876	408763	335004	300040	277371	294432
	278006	299763	326075	411071	337679	304413	281429	298736
	(161.52)	(230.97)	(198.58)	(262.02)	(256.45)	(311.69)	(269.60)	(277.88)

Source:- Pakistan Energy Year Book-2014 Published by Hydrocarbon Development Institute of Pakistan

Table D-14: Immunization Coverage

(000 Number)

Year	B.C.G	Polio				D.P.T			
		I	II	III	BR	I	II	III	BR
1995	3,448	4,681	3,141	3,136	256	3,639	3,125	2,876	225
1996	4,841	6,170	4,282	3,994	143	4,805	4,294	4,012	137
1997	4,804	6,261	4,221	3,947	92	4,740	4,213	3,936	89
1998	4,951	6,363	4,204	3,973	69	4,698	4,163	3,831	63
1999	5,582	7,585	4,559	4,131	57	5,070	4,530	4,273	-
2000	4,995	6,369	4,027	3,812	460	4,693	4,141	3,918	45
2001	5,070	6,318	4,079	4,024	227	4,689	4,176	4,113	47
2002	4,777	6,386	4,015	3,780	138	4,558	4,039	3,796	23
2003	5,115	6,952	4,282	4,035	106	4,769	4,228	3,983	6
2004	4,862	6,865	4,098	3,916	78	4,428	4,025	3,840	2
2005	5,203	7,484	4,387	4,160	49	4,581	4,127	3,919	-
2006	5,364	8,097	4,870	4,739	33	5,275	4,886	4,756	-
2007	5,790	8,743	5,179	5,070	47	1,711	1,523	1,479	-
2008	5,884	8,985	5,034	4,819	61	-	-	-	-
2009	6,133	9,535	5,403	5,277	36	-	-	-	-
2010	5,925	9,626	5,527	5,422	81	-	-	-	-
2011	5,813	9,543	5,356	5,218	86	-	-	-	-
2012	6,062	10,023	5,446	5,330	-	-	-	-	-
2013	6,186	10,369	5,539	5,398	-	-	-	-	-
2014	6,151	10,585	5,495	5,369					

Year	HBV			T.T					Measles
	I	II	III	I	II	III	IV	V	
1995	-	-	-	2,871	2,234	751	240	100	2,991
1996	-	-	-	3,830	3,042	9,889	401	166	4,428
1997	-	-	-	3,733	2,912	1,097	446	251	4,242
1998	-	-	-	3,861	3,037	1,025	426	220	4,150
1999	-	-	-	4,282	3,325	1,056	485	308	4,794
2000	-	-	-	4,091	3,274	928	318	152	4,277
2001	-	-	-	4,179	3,286	869	311	164	4,547
2002	1,772	1,291	966	4,678	3,540	1,278	310	159	4,106
2003	4,483	3,893	3,576	3,591	2,970	1,423	338	164	4,163
2004	4,213	3,880	3,617	3,391	2,649	765	293	132	4,125
2005	4,458	4,065	3,841	4,539	2,858	793	519	157	4,387
2006	5,053	4,692	4,571	4,069	3,133	895	286	176	5,050
2007	1,618	1,441	1,401	3,878	3,048	810	239	141	5,386
2008	-	-	-	4,307	3,385	866	279	152	5,278
2009	-	-	-	4,920	3,792	938	285	169	5,298
2010	-	-	-	5,050	4,065	8,970	268	165	8,099
2011	-	-	-	5,090	4,121	8,129	234	127	8,211
2012	-	-	-	5,362	4,279	8,151	230	128	9,086
2013	-	-	-	5,157	4,235	7,832	312	130	10,113
2014	-	-	-	4,536	3,702	5,777	185	106	9,907

Year	PENTAVALENT**			PNEUMOCCAL(PCV10)		
	I	II	III	I	II	III
2009	5,925	5,461	5,339	-	-	-
2010	5,863	5,555	5,407	-	-	-
2011	5,606	5,267	5,129	-	-	-
2012	5,773	5,400	5,276	-	-	-
2013	5,922	5,553	5,412	3,589	3,195	3,008
2014	5,844	5,491	5,371	5,526	5,197	5,072

Source:- i.Health Division ii. National Institute of Health
Note:- Since 2002 data for HBV started instead of DT
B.C.G= Bacillus + Calamus + Guerin D.P.T= Diphtheria, Prtussis and Tatanus
T.T= Tetanus + Toxoid H.B.V= Hepatitis B Vaccine

Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Pakistan

Year	IUD (No. of cases)	Sterilization (No. of cases male/female)	Oral Pills (No. of cycles)	Condom (In gross)	Injectable (vials)	Foam (bottles)	Couple year of Protection (CYP)
1986-87	315,769	69,439	1,445,372	699,514	384,190	104,977	-
1987-88	507,884	77,386	1,879,216	954,188	434,603	139,405	-
1988-89	379,432	79,167	1,562,513	971,372	567,852	123,274	-
1989-90	599,900	79,717	1,637,961	922,107	672,457	135,329	-
1990-91	646,598	69,684	1,623,419	911,458	740,133	105,386	-
1991-92	750,125	79,663	1,018,360	599,659	841,088	53,943	-
1992-93	638,901	85,164	860,765	296,548	662,298	16,382	-
1993-94	542,999	85,436	844,065	305,289	878,776	89,198	-
1994-95	713,922	93,553	1,017,405	564,158	1,026,290	116,483	-
1995-96	692,474	99,336	1,235,905	666,150	1,079,867	27,475	-
1996-97	632,880	96,652	1,477,514	807,304	1,196,998	3,285	-
1997-98	873,326	105,513	2,467,032	980,404	1,646,392	5,334	-
1998-99	1,047,634	126,589	2,828,628	817,371	1,968,686	-	-
1999-00	979,342	139,024	3,411,784	646,628	2,101,028	-	-
2000-01	891,726	121,595	4,237,238	832,420	1,714,953	-	-
2001-02	1,056,743	124,412	4,189,899	852,058	1,873,495	-	-
2002-03	1,146,786	130,412	5,562,431	970,112	2,014,536	-	-
2003-04	1,043,951	143,328	6,641,867	995,932	1,972,259	-	-
2004-05	872,302	157,228	8,066,826	702,560	2,143,917	-	6,687,540
2005-06	975,015	170,968	8,022,341	958,427	2,536,885	-	7,550,278
2006-07	1,262,249	187,724	8,820,538	1,133,404	3,086,735	-	9,103,208
2007-08	1,365,465	205,440	6,681,477	1,151,950	3,096,786	-	9,563,867
2008-09	1,309,420	187,542	5,335,096	920,282	2,792,802	-	8,761,760
2009-10	1,317,609	178,374	5,752,340	1,127,155	3,190,884	-	8,990,128
2010-11	1,208,367	120,302	5,802,085	1,123,281	2,997,210	-	8,031,124
2011-12	1,315,298	119,582	6,223,180	1,036,655	2,705,346	-	8,090,921
2012-13	1,420,464	103,842	6,573,102	1,038,691	2,986,989	-	8,613,944
2013-14	1,668,640	110,171	6,793,922	1,341,667	2,810,660	-	9,574,104

Note:- Total figures of Pakistan do not tally due to inclusion of the performance of NGOs, TGIs, SMC

Contd…

Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Balochistan

Year	IUD (No. of cases)	Sterilization (No. of cases male/female)	Oral Pills (No. of cycles)	Condom (In gross)	Injectable (vials)	Foam (bottles)	Couple year of Protection (CYP)
1986-87	8,894	876	46,601	21,954	12,314	2,782	-
1987-88	11,006	939	61,008	29,428	12,706	3,762	-
1988-89	10,489	536	48,414	25,437	15,154	3,584	-
1989-90	17,092	544	46,482	15,230	16,433	3,690	-
1990-91	19,921	641	52,479	16,751	18,412	1,619	-
1991-92	21,401	643	38,795	10,087	21,459	493	-
1992-93	14,932	845	24,096	2,327	11,570	279	-
1993-94	13,435	894	30,190	4,040	22,349	2,868	-
1994-95	12,872	1,136	47,597	5,883	21,567	4,274	-
1995-96	11,590	1,299	53,733	5,012	23,532	696	-
1996-97	12,537	1,467	71,612	5,051	32,215	-	-
1997-98	19,250	1,642	85,762	6,372	51,448	-	-
1998-99	19,162	1,772	91,776	9,278	50,217	-	-
1999-00	19,140	1,398	109,341	11,859	52,371	-	-
2000-01	13,868	1,282	126,766	14,170	38,999	-	-
2001-02	16,114	1,453	89,456	10,113	39,783	-	-
2002-03	13,700	1,528	83,495	9,263	36,796	-	-
2003-04	11,995	1,674	101,020	10,575	35,233	-	-
2004-05	14,640	2,201	128,722	13,096	42,216	-	108,874
2005-06	15,759	2,163	156,161	15,559	44,728	-	117,109
2006-07	18,805	2,069	173,168	17,537	46,758	-	130,113
2007-08	19,769	1,984	193,104	19,948	46,334	-	136,079
2008-09	20,254	2,017	191,533	19,732	46,824	-	137,968
2009-10	18,689	1,876	190,636	17,447	47,594	-	128,536
2010-11	16,738	1,400	170,075	17,047	44,140	-	115,859
2011-12	16,842	1,377	133,821	15,043	41,349	-	108,394
2012-13	16,085	1,083	114,043	14,798	38,155	-	99,867
2013-14	16,611	1,181	126,840	14,590	39,299	-	103,807

Contd…

Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Khyber Pakhtunkhwa

Year	IUD (No. of Cases)	Sterilization (No. of cases male/female)	Oral Pills (No. of cycles)	Condom (In gross)	injectable (vials)	Foam (bottles)	Couple year of Protection (CYP)
1986-87	39,607	4,887	188,115	40,330	45,056	6,405	-
1987-88	92,797	5,653	335,326	49,241	52,654	15,249	-
1988-89	55,867	6,441	239,016	36,493	69,014	9,408	-
1989-90	68,087	5,671	198,848	27,782	69,031	7,331	-
1990-91	52,339	5,753	224,353	34,236	66,129	4,577	-
1991-92	73,535	6,781	145,997	23,531	83,763	1,121	-
1992-93	74,877	6,447	94,953	7,238	60,554	808	-
1993-94	64,724	7,969	124,041	9,334	101,082	9,340	-
1994-95	68,454	8,252	137,922	17,220	113,730	12,934	-
1995-96	62,259	9,822	174,655	19,111	114,198	2,633	-
1996-97	48,911	8,738	208,787	16,786	156,110	2	-
1997-98	61,330	8,492	263,079	23,145	225,533	-	-
1998-99	67,389	10,154	316,978	29,341	277,552	-	-
1999-00	60,057	9,121	346,383	38,200	285,208	-	-
2000-01	52,380	9,870	457,649	48,571	253,881	-	-
2001-02	62,472	9,763	281,624	31,853	202,032	-	-
2002-03	109,556	9,341	341,424	35,627	240,611	-	-
2003-04	73,515	8,215	305,502	31,508	220,939	-	-
2004-05	76,093	7,021	342,512	35,394	282,955	-	468,907
2005-06	87,572	6,439	436,662	46,659	341,848	-	531,129
2006-07	118,928	6,509	587,885	61,555	396,873	-	677,733
2007-08	140,219	6,482	639,163	66,995	454,519	-	772,301
2008-09	151,725	6,298	626,712	67,378	435,459	-	806,013
2009-10	152,678	5,257	716,291	63,611	457,117	-	802,872
2010-11	164,427	4,816	725,466	68,090	459,556	-	845,998
2011-12	186,785	4,506	784,569	82,799	390,370	-	923,250
2012-13	169,078	4,319	901,828	98,586	412,654	-	887,349
2013-14	219,023	4,413	950,211	113,343	441,425	-	1,066,718

Contd…

Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Punjab

Year	IUD (No. of cases)	Sterilization (No. of cases male/female)	Oral Pills (No. of cycles)	Condom (In gross)	Injectable (vials)	Foam (bottles)	Couple year of Protection (CYP)
1986-87	190,365	31,460	846,628	519,232	221,462	53,566	-
1987-88	311,370	36,048	1,007,544	616,050	232,496	77,020	-
1988-89	206,758	33,649	761,429	589,626	299,216	62,816	-
1989-90	366,887	31,554	822,902	361,313	328,775	69,022	-
1990-91	390,224	29,526	675,396	239,847	355,062	23,906	-
1991-92	462,997	36,147	292,356	163,846	397,372	3,007	-
1992-93	363,654	33,030	154,660	40,756	202,097	2,736	-
1993-94	266,844	39,198	244,794	47,650	300,291	40,895	-
1994-95	357,210	44,445	416,405	79,264	377,963	55,498	-
1995-96	345,987	46,711	497,152	76,901	374,429	13,445	-
1996-97	318,784	45,089	636,946	75,309	407,535	337	-
1997-98	464,161	52,951	746,898	95,138	546,292	-	-
1998-99	603,346	68,944	1,023,433	135,317	714,728	-	-
1999-00	559,556	77,577	1,065,448	162,027	679,719	-	-
2000-01	505,955	66,190	1,370,707	193,520	512,517	-	-
2001-02	659,455	75,432	930,506	149,724	559,610	-	-
2002-03	685,222	72,094	829,974	129,767	590,236	-	-
2003-04	558,320	86,033	806,209	128,377	543,668	-	-
2004-05	462,311	90,711	699,573	112,807	492,206	-	3,009,862
2005-06	489,508	92,236	701,847	107,497	534,462	-	3,127,407
2006-07	587,937	104,470	1,049,896	165,002	629,555	-	3,724,560
2007-08	679,185	107,897	1,449,589	226,019	705,671	-	4,189,653
2008-09	659,179	97,777	1,391,853	222,681	705,266	-	3,985,863
2009-10	550,804	80,059	1,405,201	191,841	712,742	-	3,356,621
2010-11	463,347	79,626	1,446,485	206,437	642,741	-	2,895,870
2011-12	508,034	80,109	1,493,212	245,096	506,005	-	3,225,326
2012-13	476,805	66,542	1,533,147	268,878	481,899	-	2,968,060
2013-14	482,739	70,096	1,612,655	275,316	469,100	-	3,042,433

Contd…

Table D-15: Performance of Contraceptive Delivery Services through Population Welfare Programme, Sindh

Year	IUD (No. of cases)	Sterilization (No. of cases male/female)	Oral Pills (No. of cycles)	Condom (In gross)	Injectable (vials)	Foam (bottles)	Couple year of Protection (CYP)
1986-87	43,077	10,656	280,217	105,798	37,472	13,045	-
1987-88	49,790	12,500	338,376	142,358	36,440	18,839	-
1988-89	58,929	12,329	339,812	138,631	59,114	19,168	-
1989-90	87,910	11,218	397,744	96,884	98,713	23,667	-
1990-91	114,063	11,578	436,846	106,286	140,023	8,842	-
1991-92	118,955	14,861	267,900	76,981	144,125	1,170	-
1992-93	85,216	15,845	140,947	13,288	78,091	1,146	-
1993-94	99,637	17,191	201,545	26,999	164,336	19,669	-
1994-95	167,677	18,016	221,132	37,075	187,896	25,420	-
1995-96	121,343	20,210	262,835	32,872	174,090	1,995	-
1996-97	117,605	20,644	268,095	34,055	209,426	-	-
1997-98	166,370	20,317	333,670	42,118	305,773	-	-
1998-99	206,741	21,559	399,956	47,095	349,547	-	-
1999-00	173,298	25,936	428,736	55,184	363,742	-	-
2000-01	135,975	26,077	514,530	67,746	259,830	-	-
2001-02	119,524	22,044	382,851	50,302	237,352	-	-
2002-03	120,120	32,349	362,405	48,912	242,415	-	-
2003-04	121,401	32,625	406,786	58,482	248,273	-	-
2004-05	112,342	37,762	432,566	62,494	243,740	-	1,005,302
2005-06	129,563	43,013	499,424	70,611	302,468	-	1,155,533
2006-07	175,419	42,912	602,928	84,844	413,412	-	1,358,088
2007-08	193,369	45,462	651,746	94,148	480,752	-	1,478,814
2008-09	181,391	45,300	616,985	91,322	481,131	-	1,429,800
2009-10	141,763	38,492	758,353	83,779	491,690	-	1,209,995
2010-11	129,140	23,983	788,688	92,915	491,977	-	1,070,892
2011-12	128,776	22,860	805,184	112,114	371,559	-	976,571
2012-13	88,045	18,008	691,497	117,148	342,839	-	765,073
2013-14	90,368	21,400	666,194	127,442	320,378	-	819,719

Source:- i) Population Welfare Division ii) Pakistan Bureau of Statistics

REGIONAL COMPARISON

Table 1: Midyear Population

Regional Member	Population (million)						Population Growth Rates (%)					
	1990	1995	2000	2005	2010	2013	1990	1995	2000	2005	2010	2013
Developing Member Economie Central and West Asia												
	190.0	**212.3**	**231.8**	**251.7**	**279.2**	**292.5**	**4.8**	**3.1**	**1.8**	**1.0**	**2.0**	**0.9**
Afghanistan	17.6	19.2	21.0	23.6	26.0	27.5	1.9	1.6	1.4	1.5	2.0	1.9
Armenia	...	3.3	3.2	3.2	3.3	3.0	...	...	-0.3	0.1	0.4	-0.1
Azerbaijan	7.2	7.7	8.1	8.5	9.1	9.4	1.4	1.2	1.1	1.2	1.2	1.3
Georgia [a]	5.4	4.8	4.4	4.3	4.4	4.5	0.4	-2.8	-0.8	0.1	1.2	-0.3
Kazakhstan	16.4	15.8	14.9	15.1	16.3	17.0	-1.6	-2.0	-0.3	0.9	1.4	1.4
Kyrgyz Republic	4.4	4.5	4.9	5.1	5.4	5.7	2.0	0.6	1.4	1.2	0.3	2.0
Pakistan	109.7	124.5	140.0	154.0	173.5	181.7	2.7	2.5	2.3	1.9	2.1	0.6
Tajikistan	5.3	5.7	6.2	6.9	7.6	8.2	3.9	1.1	2.1	2.1	2.2	2.2
Turkmenistan	3.7	4.2	4.5	4.7	5.0	5.2	1.7	2.3	1.2	1.1	1.3	1.3
Uzbekistan	20.4	22.7	24.7	26.2	28.6	30.2	...	1.8	1.4	1.2	2.9	1.6
East Asia												
	1214.5	**1286.1**	**1345.8**	**1387.8**	**1423.2**	**1444.4**	**1.4**	**1.1**	**0.8**	**0.6**	**0.5**	**0.5**
China, People's Rep of[a]	1143.3	1211.2	1267.4	1307.6	1340.9	1360.7	1.4	1.1	0.8	0.6	0.5	0.5
Hong Kong, China	5.7	6.2	6.7	6.8	7.0	7.2	0.3	2.0	0.9	0.4	0.7	0.5
Korea, Rep. of	42.9	45.1	47.0	48.1	49.4	50.2	1.0	1.0	0.8	0.2	0.5	0.4
Mongolia	2.2	2.2	2.4	2.6	2.7	2.9	2.4	1.4	1.7	1.2	1.8	2.1
Taipei,China	20.4	21.4	22.3	22.8	23.2	23.4	1.2	0.9	0.8	0.4	0.2	0.2
South Asia												
	980.7	**1082.1**	**1188.1**	**1284.7**	**1378.7**	**1432.5**	**4.0**	**1.9**	**1.8**	**1.5**	**1.3**	**1.3**
Bangladesh	109.8	120.2	129.3	138.6	148.6	154.7	2.2	1.9	1.4	1.5	1.4	1.4
Bhutan	0.5	0.6	0.6	0.6	0.7	0.7	1.3	1.3	1.3	1.3	1.8	1.7
India	835.0	923.0	1016.0	1101.0	1182.1	1228.8	2.1	2.1	1.8	1.5	1.4	1.3
Maldives	0.2	0.2	0.3	0.3	0.4	0.4	2.5	2.0	1.5	3.3	2.3	3.5
Nepal	18.1	20.0	22.6	24.5	26.3	27.3	2.1	2.5	2.5	1.4	1.4	1.4
Sri Lanka	17.0	18.1	19.4	19.6	20.7	20.5	1.5	1.1	1.3	0.9	1.0	1.0
Southeast Asia												
	437.1	**478.3**	**517.9**	**554.5**	**595.1**	**621.8**	**1.8**	**1.9**	**1.5**	**1.4**	**1.8**	**1.3**
Brunei Darussalam	0.3	0.3	0.3	0.4	0.4	0.4	2.9	4.0	2.5	1.8	1.8	1.6
Cambodia	8.6	10.5	12.5	13.3	14.3	15.0	3.6	5.2	1.3	1.3	1.5	1.5
Indonesia	179.4	194.8	206.3	219.9	237.6	248.8	2.0	1.7	1.2	1.3	2.7	0.6
Lao PDR	4.1	4.6	5.1	5.6	6.3	6.7	2.1	2.2	2.0	2.0	2.2	2.5
Malaysia	18.1	20.7	23.5	26.0	28.6	29.9	2.5	2.6	2.5	2.1	1.8	1.5
Myanmar	40.8	44.7	50.1	55.4	59.8	61.6	1.9	1.9	2.0	2.0	1.1	1.1
Philippines	60.9	68.4	76.8	84.7	92.3	97.4	2.3	2.3	2.3	1.9	1.7	1.7
Singapore	3.0	3.5	4.0	4.3	5.1	5.4	2.9	3.1	1.7	2.4	1.8	1.6
Thailand	55.8	59.4	62.2	63.0	63.8	66.8	1.1	1.2	0.7	0.2	0.2	0.4
Viet Nam	66.0	71.4	77.1	81.9	86.9	89.7	1.9	1.7	1.4	1.2	1.1	1.1

… = data not available at cutoff date. 0.0 = magnitude is less than half of unit employed.
a Population figures for Georgia and the People's Republic of China refer to 1 January and 31 December, respectively.
b Population figures for the Pacific developing member economies are in thousands while the regional total for the Pacific are in millions.
c For reporting economies only
Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Table 2: Migration and Urbanization

Regional Member	Net International Migration Rate[a] (per 1,000 population)					Urban Population (% of total population)				
	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	1990	1995	2000	2005	2013
Developing Member Economies										
Central and West Asia										
Afghanistan	44.4	-6.5	1.2	-5.6	-2.6	16.7	18.2	20.0	20.3	22.9
Armenia	-29.3	-14.2	-9.5	-9.1	-3.4	…	66.3	64.8	64.1	63.4
Azerbaijan	-2.8	-3.0	0.3	0.2	0.0	53.7	52.3	51.1	52.5	53.2
Georgia	-20.7	-15.9	-13.4	-6.8	-5.8	…	52.9(1997)	52.0	52.2	53.8
Kazakhstan	-19.1	-17.6	0.6	-0.1	0.0	57.2(1991)	55.7	56.3	57.1	54.9
Kyrgyz Republic	-12.1	-1.4	-9.7	-4.9	-6.3	37.6	35.6	34.7	34.8	33.6
Pakistan	-2.4	-0.3	-2.3	-2.2	-1.8	30.8(1991)	31.8	33.0	34.0	33.7
Tajikistan	-10.4	-10.9	-3.0	-1.7	-2.5	31.3	27.4	26.6	26.4	26.4
Turkmenistan	2.2	-2.8	-5.0	-2.3	-1.0	45.1	44.8	45.9	47.0	48.7(2011)
Uzbekistan	-2.5	-3.1	-6.1	-3.3	-1.4	40.3	38.3	37.2	36.1	51.4(2011)
East Asia										
China, People's Rep. of	-0.1	-0.1	-0.4	-0.3	-0.2	26.4	29.0	36.2	43.0	53.9
Hong Kong, China	5.2	18.5	-1.2	1.3	4.2	99.5	100.0	100.0	100.0	100.0(2010)
Korea, Rep. of	-2.9	-2.3	-0.4	1.4	1.2	73.8	78.2	79.6	81.3	83.2(2011)
Mongolia	-7.9	-4.5	-1.2	-1.1	-1.1	54.6	51.6	57.2	60.2	68.1
Taipei,China[b]	...	...	...	...	...	50.6	53.1	55.8	57.7	60.2
South Asia										
Bangladesh	-1.6	-1.2	-2.9	-4.9	-2.6	20.6(1993)	21.4	23.1	24.2	25.9(2011)
Bhutan	-32.9	0.1	11.5	4.9	2.7	...	21.0(1996)	21.0	30.9	33.7(2012)
India	0.0	-0.1	-0.4	-0.5	-0.4	25.6	26.6	27.7	28.8	30.5
Maldives	-2.7	-0.9	-0.1	0.0	0.0	26.0	25.6	27.0	35.0	40.5(2010)
Nepal	-1.6	-1.0	-0.9	-0.8	-0.7	8.3	...	14.2(2001)	16.7(2006)	17.0(2011)
Sri Lanka	-2.9	-4.3	-1.0	-3.8	-3.0	17.2	16.6	15.8	17.8	20.5(2011)
Southeast Asia										
Brunei Darussalam	0.8	1.8	2.0	1.8	0.8	65.8	68.6	71.2	73.5	76.0(2011)
Cambodia	8.3	5.1	-1.1	-5.4	-2.3	...	14.8(1998)	16.0	17.7	21.4
Indonesia	-0.4	-0.2	-0.5	-0.6	-0.6	30.9	35.9	42.0	45.9	50.1
Lao PDR	-2.0	-5.1	-6.2	-2.5	-2.2	15.4	17.4	22.0	27.4	35.3(2012)
Malaysia	3.1	3.6	4.0	4.8	3.1	51.1(1991)	56.0	62.0	66.5	73.0
Myanmar	-0.6	0.0	-4.1	-3.1	-0.4	24.8	26.1	29.1	30.4	30.8(2012)
Philippines	-2.1	-2.1	-2.8	-2.8	-1.4	51.9(1993)	48.3	48.0	48.0	49.1(2012)
Singapore	15.3	13.8	20.7	18.8	15.0	100.0	100.0	100.0	100.0	100.0
Thailand	-3.8	2.0	3.4	-2.2	0.3	18.0	18.0	31.1	32.5	45.1(2012)
Viet Nam	-1.1	-0.8	-1.9	-2.0	-0.4	19.5	20.7	24.2	27.1	32.2

… = data not available at cutoff date. 0.0 = magnitude is less than half of unit employed.

a Refers to annual average.

b For urban population, refers to localities of 100,000 or more inhabitants.

Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Table 3: Agriculture Land Use

(% of land area)

Regional Member	Agricultural Land			Arable Land			Permanent Cropland		
	1990	2000	2011	1990	2000	2011	1990	2000	2011
Developing Member Economies									
Central and West Asia									
Afghanistan	58.3	57.9	58.1	12.1	11.8	11.9	0.2	0.1	0.2
Armenia	41.1(1992)	46.5	60.1	14.9(1992)	15.8	15.1	2.1(1992)	1.3	1.9
Azerbaijan	53.4(1992)	57.4	57.7	20.5(1992)	22.1	22.8	3.7(1992)	1.3	2.7
Georgia	46.5(1992)	43.2	35.5	11.4(1992)	11.4	6.0	4.8(1992)	3.9	1.7
Kazakhstan	82.0(1992)	76.6	77.5	13.0(1992)	8.0	8.9	0.1(1992)	0.1	0.1
Kyrgyz Republic	52.6(1992)	55.9	55.9	6.9(1992)	7.1	6.7	0.4(1992)	0.3	0.3
Pakistan	33.6	35.0	34.4	26.6	27.6	26.9	0.6	0.9	1.1
Tajikistan	32.1(1992)	32.7	34.7	6.1(1992)	5.6	6.1	0.9(1992)	0.7	0.9
Turkmenistan	68.6(1992)	68.9	69.5	2.9(1992)	3.4	4.0	0.1(1992)	0.1	0.1
Uzbekistan	65.2(1992)	64.2	62.7	10.5(1992)	10.5	10.1	0.9(1992)	0.8	0.8
East Asia									
China, People's Rep. of	54.2	56.3	55.7	13.3	13.0	12.0	0.8	1.2	1.6
Hong Kong, China	...	...	...	...	...	...	...	...	...
Korea, Rep. of	22.1	20.0	18.1	19.8	17.4	15.4	1.6	2.0	2.1
Mongolia	80.9	84.0	73.1	0.9	0.8	0.4	0.0	0.0	0.0
Taipei,China [a]	24.6	23.5	22.2(2012)	...	...	...	...	...	...
South Asia									
Bangladesh	79.8	72.2	70.1	72.6	64.1	58.6	2.5	3.5	6.9
Bhutan	9.7	13.2	13.5	2.9	2.6	2.5	0.4	0.5	0.5
India	60.9	61.4	60.5	54.8	54.7	52.9	2.2	3.1	4.1
Maldives	26.7	30.0	23.3	10.0	10.0	10.0	13.3	16.7	10.0
Nepal	29.0	29.5	29.7	16.0	16.4	16.4	0.5	0.7	0.8
Sri Lanka	37.3	37.5	41.8	14.4	14.6	19.1	15.9	15.9	15.6
Southeast Asia									
Brunei Darussalam	2.1	1.9	2.2	0.4	0.4	0.6	0.8	0.8	0.9
Cambodia	25.2	27.0	32.0	20.9	21.0	22.7	0.6	0.8	0.9
Indonesia	24.9	25.2	30.1	11.2	11.3	13.0	6.5	7.7	11.0
Lao PDR	7.2	8.0	10.3	3.5	3.8	6.1	0.3	0.4	0.4
Malaysia	22.0	24.0	24.0	5.2	5.5	5.5	16.0	17.6	17.6
Myanmar	16.0	16.5	19.2	14.6	15.2	16.5	0.8	0.9	2.2
Philippines	37.4	37.5	40.6	18.4	16.9	18.1	14.8	15.6	17.4
Singapore	3.0	1.8	1.0	1.5	1.5	0.9	1.5	0.3	0.1
Thailand	41.9	38.8	41.2	34.2	30.6	30.8	6.1	6.6	8.8
Viet Nam	20.7	28.2	35.0	16.4	19.9	21.0	3.2	6.2	11.9

… = data not available at cutoff date, – = magnitude equals zero, 0.0 = magnitude is less than half of unit employed.

a Data do not include the counties of Kinmen and Lienchiang.

Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Table 4: Deforestation and Pollution

	Deforestation Rate[a] (average % change)			Nitrous Oxide Emissions (thousand metric tons CO_2 equivalent)			Methane Emissions (thousand metric tons CO_2 equivalent)		
	1990[b]	2000	2011	1995	2000	2010	1995	2000	2010
Developing Member Economies									
Central and West Asia									
Afghanistan	–	–	–	...	...	...	...	...	...
Armenia	1.27(1993)	1.39	1.60	466	462	986	2428	2565	3329
Azerbaijan	– (1993)	–	–	1832	2032	2647	9111	9951	18401
Georgia	0.05(1993)	0.04	0.09	1712	1995	2267	4112	4137	4864
Kazakhstan	0.17(1993)	0.17	0.17	20257	15965	17454	41703	38574	67542
Kyrgyz Republic	-0.26(1993)	-0.26	-1.77	1529	1559	1465	3693	3486	3968
Pakistan	1.63	1.91	2.55	21241	24760	30050	101536	117129	155236
Tajikistan	-0.05(1993)	-0.05	–	1349	1093	1718	3596	3304	4943
Turkmenistan	– (1993)	–	–	2373	2908	4955	16167	21217	26546
Uzbekistan	-0.54(1993)	-0.52	0.12	6960	9249	11966	33524	37079	46862
East Asia									
China, People's Rep. of	-1.26	-1.13	-1.34	380630	392367	550297	1093620	1043425	1642258
Hong Kong, China	...	...	...	492	513	467	2102	2695	3086
Korea, Rep. of	0.13	0.13	0.11	15264	17958	14686	30080	30925	31984
Mongolia	0.65	0.69	0.75	5264	5107	3478	8876	9218	6134
Taipei,China	0.97	–	–	...	12444	3132(2011)	...	11028	2238(2011)
South Asia									
Bangladesh	0.17	0.18	0.18	18233	19614	26160	85076	89243	103080
Bhutan	-0.35	-0.34	-0.33	...	...	...	...	...	...
India	-0.23	-0.22	-0.21	187400	199496	234136	544388	561558	621480
Maldives	–	–	–	...	...	...	...	...	...
Nepal	1.90	2.30	–	3949	4232	4508	20644	21206	23512
Sri Lanka	1.14	1.27	0.78	1938	2045	2132	11578	9607	11631
Southeast Asia									
Brunei Darussalam	0.39	0.40	0.47	570	395	336	5991	3858	4450
Cambodia	1.08	1.20	1.26	4331	3295	16358	15740	14985	35211
Indonesia	1.61	1.89	0.73	89568	90677	91313	182547	167822	218929
Lao PDR	0.45	0.47	0.50	...	...	...	...	...	...
Malaysia	0.35	0.36	0.42	14397	12944	15010	37011	29242	33599
Myanmar	1.11	1.23	0.97	44219	31194	26266	89507	66941	79131
Philippines	-0.83	-0.77	-0.71	10614	12219	12512	43379	49915	56049
Singapore	–	–	–	1390	6007	1871	1510	1691	2339
Thailand	0.28	0.29	-0.08	22506	20065	30245	80570	83448	104411
Viet Nam	-2.52	-2.06	-1.04	15415	19627	33818	65683	75418	111338

Contd..

Table 4: Deforestation and Pollution

	Other Greenhouse Gases[c] (thousand metric tons CO_2 equivalent)			Organic Water Pollutant (BOD) Emissions (kilograms per day per worker)		
	1990	2000	2010	1990	2000	Latest Year
Developing Member Economies						
Central and West Asia						
Afghanistan	...	...	...	…	0.178(2001)	0.206(2002)
Armenia	–	42	565	…	…	…
Azerbaijan	176	41	283	0.153(1995)	0.153	0.181(2007)
Georgia	–	3	20	…	…	…
Kazakhstan	–	58	584	0.233(1998)	0.237	0.236(2007)
Kyrgyz Republic	–	8	42	0.136(1992)	0.189	0.202(2007)
Pakistan	1009	347	1036	…	…	0.165(2006)
Tajikistan	2806	798	361	0.167	0.223	0.239(2007)
Turkmenistan	–	11	139	…	…	…
Uzbekistan	–	192	981	…	…	…
East Asia						
China, People's Rep. of	12353	56882	249362	…	0.138(2003)	0.130(2007)
Hong Kong, China	379	155	150	…	…	…
Korea, Rep. of	6157	14587	10905	0.124	0.120	0.114(2006)
Mongolia	–	–	–	…	0.203(2003)	0.215(2007)
Taipei,China	…	1966	10314(2011)	…	…	…
South Asia						
Bangladesh	–	–	–	0.146(1995)	0.144(1998)	...
Bhutan	...	...	...	…	…	…
India	9564	13551	20937	…	…	…
Maldives	...	...	...	…	…	…
Nepal	–	–	–	…	0.142(1996)	0.157(2002)
Sri Lanka	–	–	–	…	...	0.195(2006)
Southeast Asia						
Brunei Darussalam	–	101	427	…	...	...
Cambodia	–	–	–	0.172(1993)	0.142(1995)	...
Indonesia	1721	997	1241	0.184(1998)	0.179	0.187(2006)
Lao PDR	...	...	...	…	0.136(1999)	...
Malaysia	598	526	1195	…	0.118	0.123(2006)
Myanmar	–	–	–	…	…	…
Philippines	162	221	459	0.167(1996)	0.156(2001)	0.146(2005)
Singapore	502	1410	3296	0.092(1991)	0.095	0.094(2007)
Thailand	1430	453	1388	0.153(1996)	0.155	0.152(2006)
Viet Nam	–	–	–	0.158(1998)	0.169	0.144(2007)

... = data not available at cutoff date, − = magnitude equals zero, BOD = biochemical oxygen demand, CFC = chlorofluorocarbons, CO_2 = carbon dioxide, ODP = ozone-depleting potential.

a A negative value indicates that deforestation rate is decreasing (i.e., reforestation).

b Values represent the change in forest cover from 1990 to 1991.

c Other greenhouse gas emissions refer to hydrofluoro-carbons, perfluoro-carbons, and sulphur hexafluoride.

Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Table 5: Freshwater Resources

Regional Member	Internal Renewable Freshwater Resources (billion cubic meters per year) 2012	Internal Renewable Freshwater Resources (cubic meters per inhabitant per year) 1992	2002	2012	Annual Freshwater Withdrawals (billion cubic meters)	Water Productivity[a] 2011
Developing Member Economies						
Central and West Asia						
Afghanistan	47	3414	2124	1581	20(2000)	1
Armenia	7	1989	2251	2310	3(2012)	2
Azerbaijan	8	1089	980	872	12(2012)	2
Georgia	58	10874	12577	13339	2(2008)	5
Kazakhstan	64	4004	4401	3955	20(2010)	4
Kyrgyz Republic	49	10932	9780	8939	8(2006)	0
Pakistan	55	469	367	307	184(2008)	1
Tajikistan	63	11490	9909	7924	11(2006)	0
Turkmenistan	1	362	305	272	28(2004)	1
Uzbekistan	16	759	645	573	49(2005)	0
East Asia						
China, People's Rep. of	2813	2295	2123	1998	554(2005)	8
Hong Kong, China	...	...	...	...	...	...
Korea, Rep. of	65	1483	1398	1323	25(2002)	41
Mongolia	35	15508	14245	12446	1(2009)	9
Taipei,China	...	...	...	...	...	...
South Asia						
Bangladesh	105	934	766	679	36(2008)	2
Bhutan	78	179924	135452	105121	0(2008)	4
India	1446	1600	1343	1169	648(2010)	2
Maldives	0	132	106	89	0(2008)	276
Nepal	198	10404	8223	7214	9(2006)	1
Sri Lanka	53	2977	2741	2503	13(2005)	3
Southeast Asia						
Brunei Darussalam	9	31250	24566	20631	...	109
Cambodia	121	12405	9489	8113	2(2006)	4
Indonesia	2019	10918	9389	8179	113(2000)	4
Lao PDR	190	42330	34337	28649	3(2005)	1
Malaysia	580	30200	23757	19836	11(2005)	14
Myanmar	1003	23099	20361	18997	33(2000)	...
Philippines	479	7370	5917	4953	82(2009)	2
Singapore	1	188	145	113	...	938
Thailand	225	3893	3519	3362	57(2007)	4
Viet Nam	359	4999	4354	3958	82(2006)	1

… = data not available at cutoff date, 0 = magnitude is less than half of unit employed, GDP = gross domestic product.

a. GDP in constant 2005 $ per cubic meter of total freshwater withdrawal.

Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Table 6: Energy Production and Imports

Regional Member	Production (kiloton of oil equivalent)						Energy Imports, Net (% of energy use)					
	1990	1995	2000[a]	2005	2010[b]	2011	1990	1995	2000[a]	2005	2010[b]	2011
Developing Member Economies												
Central and West Asia												
Afghanistan	...	...	...	...	...	...	...	...	...	...	...	...
Armenia	149	258	643	869	878	887	98.1	84.3	68.1	65.4	64.6	67.3
Azerbaijan	20775	14742	18808	27253	65515	59958	8.3	-6.0	-66.5	-103.0	-465.5	-377.3
Georgia	2016	1194	1324	980	1312	1117	83.8	67.9	53.8	65.5	58.0	68.5
Kazakhstan	90975	63850	78575	118570	156750	160148	-23.9	-22.2	-120.2	-133.4	-110.6	-105.1
Kyrgyz Republic	2502	1259	1368	1334	1273	1619	66.6	47.2	41.0	46.6	54.6	47.7
Pakistan	34178	41045	46895	60719	64303	65067	20.3	23.3	26.8	20.3	23.7	23.3
Tajikistan	2026	1329	1264	1546	1509	1542	61.8	40.3	41.2	34.0	36.3	35.6
Turkmenistan	73005	32836	45967	61601	47244	65245	-316.8	-139.8	-209.1	-221.4	-108.4	-164.0
Uzbekistan	38646	48668	54962	56405	55107	57268	16.7	-14.1	-8.3	-20.1	-26.0	-19.9
East Asia												
China People's Rep. of	880835	1064500	1129801	1701392	2262039	2432505	-1.2	-1.9	2.7	4.2	10.1	10.8
Hong Kong, China	43	47	50	51	53	53	99.5	99.6	99.6	99.6	99.6	99.6
Korea, Rep. of	22623	21148	34445	42982	44922	46988	75.7	85.4	81.7	79.5	82.0	82.0
Mongolia	2741	2247	1949	3476	14686	19310	19.6	16.6	18.7	-32.4	-325.2	-435.3
Taipei,China	10748	10913	11476	13152	13625	13782	134.4	147.6	142.7	155.0	149.4	146.9
South Asia												
Bangladesh	10758	12777	15144	19269	25760	26090	15.5	19.6	18.5	19.3	16.2	16.6
Bhutan	980	1036	1115	1284	1720	...	-25.2	-23.2	-4.6	-4.2	-26.5	...
India	291816	335773	366389	423857	531304	540939	7.9	12.6	19.9	21.4	26.6	27.8
Maldives	–	–	–	–	–	...	111.6	107.6	113.7	117.1	117.7	...
Nepal	5501	6138	7138	8152	8878	9039	5.0	8.5	12.0	10.7	13.1	13.0
Sri Lanka	4191	4022	4748	4920	5544	5329	24.0	32.4	43.0	45.3	43.7	48.9
Southeast Asia												
Brunei Darussalam	15642	18241	19684	21060	18573	18695	-805.8	-711.8	-725.5	-850.0	-473.2	-387.8
Cambodia	...	2325	2718	2496	3621	3793	...	18.0	20.3	27.4	27.9	28.9
Indonesia	168509	214479	236618	279941	381429	394573	-70.9	-64.0	-52.9	-56.0	-80.5	-88.8
Lao PDR	1085	1244	1678	1934	2368	...	10.4	12.0	-1.6	1.6	16.5	...
Malaysia	47341	62372	74298	91385	85878	84267	-119.7	-84.1	-57.7	-43.9	-18.2	-11.0
Myanmar	10654	10999	15418	22193	22530	22394	0.2	6.9	-20.1	-49.8	-61.0	-59.3
Philippines	17225	15820	19549	21396	23416	23888	39.8	52.8	51.0	44.8	42.2	40.9
Singapore	58	168	168	329	842	934	99.5	99.1	99.1	98.5	97.5	97.2
Thailand	26576	33193	43948	55188	70559	68744	36.6	46.4	39.2	44.3	39.9	42.3
Viet Nam	18280	26432	39919	60759	66388	66596	-2.3	-20.8	-38.9	-46.6	-12.7	-8.8

… = data not available at cutoff date. – = magnitude equals zero.

a Refers to 2002 data for Timor-Leste.

b Refers to 2008 data for Bhutan, the Cook Islands, Fiji, Kiribati, the Maldives, the Marshall Islands, the Federated States of Micronesia, Nauru, Palau, Samoa, Solomon Islands, Timor-Leste, Tonga, and Vanuatu; refers to 2009 data for the Lao People's Democratic Republic.

For net energy imports as % of energy use: World Bank. World Development Indicators Online. http://databank.worldbank.org/data/home.aspx (accessed 10 July 2014); for Bhutan; the Lao People's Democratic Republic; the Maldives, Taipei,China; and the Pacific economies: ADB estimates

Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Table 7: Use of Energy

Regional Member	GDP per Unit Use of Energy (constant 2011 PPP $ per kilogram of oil equivalent)						Energy Use (kilotons of oil equivalent)					
	1990	1995	2000	2005	2010[a]	2011	1990	1995	2000	2005	2010[b]	2011
Developing Member Economies												
Central and West Asia												
Afghanistan	...	...	...	...	...	...	...	...	...	...	...	...
Armenia	1.7	4.3	4.5	6.4	7.8	7.4	7708	1645	2015	2512	2483	2716
Azerbaijan	2.7	1.8	3.2	5.0	12.5	11.5	22662	13903	11296	13427	11586	12561
Georgia	3.1	2.9	5.0	7.3	8.5	8.0	12416	3725	2869	2841	3122	3543
Kazakhstan	2.8	2.4	4.0	4.7	4.3	4.4	73449	52243	35679	50805	74443	78101
Kyrgyz Republic	2.0	3.2	4.4	4.9	5.4	5.2	7486	2384	2317	2497	2805	3097
Pakistan	7.7	7.7	7.6	8.1	8.7	8.9	42857	53538	64067	76227	84311	84845
Tajikistan	3.6	3.3	3.4	5.0	6.8	7.2	5308	2225	2149	2342	2370	2395
Turkmenistan	1.7	1.4	1.6	1.6	2.2	2.3	17518	13692	14871	19166	22675	24710
Uzbekistan	1.3	1.2	1.2	1.7	2.7	2.7	46368	42650	50757	46965	43747	47755
East Asia												
China, People's Rep. of	2.0	2.8	3.9	4.1	4.9	4.9	870667	1044455	1161353	1775677	2516731	2727728
Hong Kong, China	17.8	18.7	16.9	22.0	24.4	23.8	8658	10650	13392	12664	13838	14894
Korea, Rep. of	5.6	5.2	5.2	5.8	6.0	6.0	93087	144756	188161	210176	249964	260440
Mongolia	2.8	3.0	3.9	4.9	5.1	5.7	3408	2695	2397	2625	3454	3607
Taipei,China	...	...	...	...	...	...	29302	37761	53558	62206	68090	65827
South Asia												
Bangladesh	9.0	8.9	9.9	10.0	10.5	11.0	12736	15897	18591	23868	30756	31294
Bhutan	22.4	...	...	14.6	15.4	...	317	413	1064	1204	1335	...
India	5.0	5.3	5.9	7.0	7.7	8.0	316743	384285	457198	539388	723743	749447
Maldives	...	...	...	10.1	10.1	...	43	79	139	181	249	...
Nepal	3.9	4.3	4.5	4.7	5.3	5.3	5789	6712	8108	9132	10218	10391
Sri Lanka	10.3	12.4	11.3	12.8	15.9	16.2	5516	5949	8327	9001	9844	10421
Southeast Asia												
Brunei Darussalam	11.5	10.3	10.4	12.4	8.7	7.6	1727	2247	2385	2217	3240	3832
Cambodia	...	4.1	4.9	7.6	7.2	7.2	...	2837	3412	3436	5024	5333
Indonesia	7.8	8.6	7.5	8.1	9.1	9.8	98623	130817	154768	179461	211296	209009
Lao PDR	...	...	...	...	...	...	1092	1268	1502	1787	2368	...
Malaysia	8.6	8.6	7.8	7.3	7.9	8.0	21549	33882	47110	63507	72645	75907
Myanmar	1.3	1.5	2.1	3.1	5.0	...	10679	11809	12841	14817	13997	14056
Philippines	8.7	8.2	8.3	10.6	12.9	13.4	28616	33541	39872	38756	40512	40452
Singapore	9.1	8.4	11.1	12.0	10.6	11.6	11515	18811	18692	21947	34280	33447
Thailand	8.6	8.8	7.7	7.2	7.3	7.2	41944	61924	72284	99166	117429	119147
Viet Nam	5.5	6.7	7.2	6.9	6.6	6.8	17866	21885	28736	41455	58912	61210

Refers to 2007 data for Bhutan, Fiji, Kiribati, the Maldives, the Marshall Islands, Samoa, Solomon Islands, Timor-Leste, Tonga, and Vanuatu; refers to 2009 data for Myanmar.

Refers to 2007 data for Kiribati, the Marshall Islands, Timor-Leste, and Vanuatu; refers to 2008 data for Bhutan, the Cook Islands, Fiji, the Maldives, the Federated States of Micronesia, Nauru, Palau, Samoa, Solomon Islands, and Tonga; refers to 2009 data for the Lao People's Democratic Republic.

Source: Key Indicators for Asia and the Pacific, 2013 (ADB).

Appendix-I

CONCEPTS AND DEFINITIONS

Environment

The totality of all the external conditions affecting the life, development and survival of an organism is called Environment.

Environment Statistics

Statistics that describe the state and trends of the environment, covering the media of the natural environment (air/climate, water, land/soil), the biota within the media, and human settlements is termed as Environment Statistics. This statistics is integrative in nature, measuring human activities and natural events that affect the environment, the impacts of these activities and events, social responses to environmental impacts, and the quality and availability of natural assets. Broad definitions include environmental indicators, indices and accounting.

Environmental Condition

It is the modification of the environment of one or more organisms by their activities, including reaction and co-action (liberation of oxygen, for example by water plants in an aquarium).

Environmental Degradation

The deterioration in environmental quality from ambient concentrations of pollutants and other activities and processes such as improper land use and natural disasters is known as Environmental degradation.

Environmental Effects

These are the results of environmental impacts on human health and welfare. The term is also used synonymously with environmental impact.

Environmental Functions

Environmental services, including spatial functions, waste disposal, natural resource supply and life support are called Environment Functions.

Environmental Impacts

Direct effect of socio-economic activities and natural events on the components of the environment are called Environmental Impacts.

Environmental Protection

Any activity to maintain or restore the quality of environmental media through preventing the emission of pollutants or reducing the presence of polluting substances in environmental media is called Environmental Protection. It may consist of: (a) changes in characteristics of goods and services, (b) changes in consumption patterns, (c) changes in production techniques, (d) treatment or disposal of residuals in separate environmental protection facilities, (e) recycling and (f) prevention of degradation of the landscape and ecosystems.

Agricultural Land

Agriculture land is the land, which include arable land, land under permanent crops and land under permanent meadows and pastures**.**

Air Pollutants

Substances in air that could, at high enough concentrations, harm human beings, animals, vegetation or material. Air pollutants may thus include forms of matter of almost any natural or artificial composition capable of being airborne. They may consist of solid particles, liquid droplets or gases, or combinations of these forms.

Air Pollution

The presence of contaminant or pollutant substances in the air that do not disperse properly and that interfere with human health or welfare or produce other harmful environmental effects is called air pollution.

Alkalinity

The alkalinity is the capacity of aqueous media to react with hydroxyl ions. Alkalinity is the factor representing the acid-neutralizing capacity of an aqueous system.

Arid Zone

Arid Zone is defined as the area with less than 250 millimetre (mm) of yearly rainfall. The term may include a reference to bioclimatic factors.

Atmosphere

The mass of air surrounding the earth, composed largely of oxygen and nitrogen is called atmosphere.

Bacteria

The single-celled micro-organisms is called bacteria. Some bacteria are useful in pollution control because they break down the organic matter in water and land. Other bacteria may cause disease.

Biochemical Oxygen Demand (BOD)

The dissolved oxygen required by organisms for the aerobic decomposition of organic matter present in water is termed as Biochemical Oxygen Demand (BOD).

Biodiversity

The range of genetic differences, species differences and ecosystem differences in a given area is called biodiversity.

Biogas

The mixture of methane and carbon dioxide is called biogas. The ratio of methane and carbon dioxide in the mixture is 7:3. This mixture is produced by the treatment of animal dung, industrial wastes and crop residues. It is used as an alternative source of energy.

Biomass

Biomass is defined as the total living weight (generally in dry weight) of all organisms in a particular area or habitat. It is sometimes expressed as weight per unit area of land or per unit volume of water.

Brackish Water

The water which contains salts at a concentration significantly lower than that of sea water is known as brackish water. The concentration of total dissolved salts is usually in the range of 1,000-10,000 milligrams per

liter (mg/l).

Carbon Dioxide (CO_2)

It is colour less, odorless and non-poisonous gas that results from fossil fuel combustion and is normally a part of ambient air. It is also produce in the respiration of living organisms (plants and animals) and considered to be the main greenhouse gas, contributing to climate change.

Carbon Monoxide (CO)

It is colourless, odorless and poisonous gas produced by incomplete fossil fuel combustion. Carbon monoxide combines with the haemoglobin of human beings, reducing its oxygen carrying capacity, with effects harmful to human beings.

Catchment Area

The area from which rainwater drains into river systems, lakes and seas is known as Catchment Area.

Chemical Oxygen Demand (COD)

The index of water pollution measuring the mass concentration of oxygen consumed by the chemical breakdown of organic and inorganic matter is called Chemical Oxygen Demand.

Chloro-fluorocarbons (CFCs)

Chloro-fluorocarbons are the inert, non-toxic and easily liquefied chemicals used in refrigerator, air-conditioning, packaging and insulation, or as solvents and aerosol propellants. Because CFCs are not destroyed in the lower atmosphere, they drift into the upper atmosphere where their chlorine components destroy ozone. These are also among the greenhouse gases that may affect climate change.

Chromium

Chromium is heavy metal used in the manufacture of alloys and electroplating. It is a multivalent element that in hexavalent form can be toxic in drinking water ifconcentration exceeds 50 milligrams per liter.

Climate

Climate is the condition of the atmosphere at a particular location (microclimate) or region over a long period of time. It is the long-term summation of atmospheric elements - such as solar radiation, temperature, humidity, precipitation type (frequency and amount), atmospheric pressure and wind (speed and direction)- and their variations.

Coliform Organism

Coliform are the micro-organism which found in the intestinal tract of human being and animals. Its presence in water indicates faecal pollution and potentially dangerous bacterial contamination.

Containment

Containment are the retention of hazardous material so as to ensure that it is effectively prevented from dispersing into the environment, or released only at an acceptable level. Containment may occur in specially built containment spaces.

Decibel (dB)

Decibel is the unit of sound measurement on a logarithmic scale, with sound approximately doubling in

loudness for every increase of 10 decibels.

Desertification

The land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations (drought) and human activities (over exploitation of dry lands) is called desertification.

Disposal of Waste

The waste elimination techniques comprising landfills, containment, underground disposal, dumping at sea and all other disposal methods is called disposal of waste.

Dissolved Oxygen (DO)

The amount of gaseous oxygen (O2) actually present in water expressed in terms either of its presence in the volume of water (milligrams of O2 per littre) or of its share in saturated water (percentage) is called dissolved oxygen.

Dissolved Solids

Disintegrated organic and inorganic material contained in water. Excessive amounts make water unsuitable for drinking or for use in industrial processes are called dissolved solids.

Drinking Water Standards

The standards determining the quality of drinking water in the context of prevailing environmental, social, economic and cultural conditions, with reference to the presence of suspended matter, excess salts, unpleasant take and all harmful microbes is called drinking water standards. Meeting of those standards does not necessarily imply purity.

Earthquake

Earthquake is a sudden shaking or trembling of the earth caused by faulting or volcanic activity.

Effluent

The liquid waste product (whether treated or untreated) discharged from and industrial process or human activity that is discharged into the environment is called effluent.

Emission

Emission is defined as the discharge of pollutants into the atmosphere from stationary sources such as smokestacks, other vents, surface areas of commercial or industrial facilities and mobile sources, for example, motor vehicles, locomotives and aircraft.

Fresh Water

Naturally occurring water having a low concentration of salts is called fresh water. It is generally accepted as suitable for abstraction and treatment to produce potable water.

Flora

Flora consists of all plants life i.e it includes all type of plants species, including ferns, lycopods and masses. It is an important component of the environment and comprises a large variety of life form and is an

integral part of various ecosystem, for example agriculture, including major & minor crops, forestry, trees areas, standing wood volume etc.

Fauna

Fauna consists of all animal life i.e it includes all species of animals, birds, mammals, reptiles, fish, insects and amphibians.

Greenhouse Effect

Greenhouse effect is defined as the effect caused by warming of the earth's atmosphere due to build-up of carbon dioxide and other greenhouse or trace gases that act like a pane of glass in a greenhouse, allowing sunlight to pass through and heat the earth but preventing a counterbalancing loss of heat radiation.

Ground-level Ozone

Amount of ozone present as a secondary pollutant in the lower atmosphere, where its formation can be enhanced by other pollutants. It is highly toxic at levels above 0.1 parts per million (p.p.m).

Ground Water

Freshwater beneath the earth's surface (usually in aquifers) supplying wells and springs. Because groundwater is a major source of drinking water, there is a growing concern over leaching of agricultural and industrial pollutants or substances from underground storage tanks.

Habitat

Habitat is place where an organism or population (human, animal, plant, micro-organism) lives.

Hazardous Air Pollutants

Air pollutants that may reasonably be expected to cause or contribute to irreversible illness or death are called Hazardous Air Pollutants. They include asbestos, beryllium, mercury, benzene, coke oven emissions, radio nuclides and vinyl chloride.

Human Settlements

Integrative concept that comprises (a) physical components of shelter and infrastructure and (b) services to which the physical elements provide support, that is to say, community services such as education, health, culture, welfare, recreation and nutrition.

Industrial Waste

Liquid, solid and gaseous wastes originating from the manufacture of specific products is called industrial waste.

Irrigation

The irrigation is a process of artificial application of water to land to assist in the growing of crops and pastures. It is carried out by spraying water under pressure (spry irrigation) or by pumping water onto the land (flood irrigation).

Landfill

These are the final placement of waste in or on the land in a controlled or uncontrolled way according to

different sanitary, environmental protection and other safety requirements.

Land Reclamation

Land Reclamation is a process of gain of land from the sea, or wetlands, or other water bodies, and restoration of productivity or use to lands that have been degraded by human activities or impaired by natural phenomena.

Marine Pollution

Direct or indirect introduction by humans of substances or energy into the marine environment (including estuaries), resulting in harm to living resources, hazards to human health, hindrances to marine activities including fishing, impairment of the quality of sea water and reduction of amenities is called marine pollution.

Municipal Waste

Wastes produced by residential, commercial and public services sectors that are collected by local authorities for treatment and/or disposal in a central location is called municipal waste.

New and Renewable Energy Source

These are the energy sources including solar energy, geothermal energy, wind power, hydropower, ocean energy (thermal gradient, wave power and tidal power), biomass, draught animal power, fuel wood, peat, oil shale and tar sands.

Night-soil

These are the contents of cesspools and so forth removed at night, especially for use as manure.

Nitrate

Nitrogen-containing compounds are called nitrates. These nitrates can exist in the atmosphere or as a dissolved gas in water.

Noise Pollution

Sound at excessive levels that may be detrimental to human health is called noise pollution.

ppm./ppb./ppt.

parts per million/ parts per billion/parts per trillion, measures of the concentrations of pollutants in air, water, soil, human tissue, food or other products.

Ozone (O_3)

Ozone is pungent, colourless, toxic gas which contains three atoms of oxygen in each molecule. It occurs naturally at a concentration of about 0.01 parts per million (p.p.m) of air. Levels of 0.1 p.p.m. are considered to be toxic. In the atmosphere, ozone provides a protective layer shielding the earth from the harmful effects of ultraviolet radiation on human beings and other biota. In the atmosphere, it is a major component of photo-chemical smog, which seriously affects the human respiratory system.

Ozone Depletion

The process of destruction of ozone in the stratosphere, where it shields the earth from harmful ultraviolet radiation is called Ozone depletion. Its destruction is caused by chemical reactions in which oxides of hydrogen, nitrogen, chlorine and bromine act as catalysts.

ACRONYMS

ACGR	ANNUAL COMPOUND GROWTH RATE
AF	Acre feet
AGR	Annual Growth Rate
Alk	Alkalinity
Amsl	Above mean sea level
ARL	Attock Refinery Limited
As	Arsenic
Avg.	Average
B.A	Bachelor of Arts
B.C.G	Bacillues of Calmette and Guerin
B.Sc	Bachelor of Science
BCM	Billion cubic metre
BDL	Below Detection Limit
BDS	Bachelor of Dental Surgery
Bm_3	Billion cubic metre
BOD	Biological Oxygen Demand
BOD)5	BOD for 5 days
BTU	British Thermal Unit
BTX	Benzyne Toulene Xylene
C	Centigrade
Ca	Calcium
$CaCo_3$	Calcium Carbonate
Cft	Cubic feet
CH_4	Methane
Cl	Chlorine
cm_3	Cubic centimeter
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_3	Carbonate
COD	Chemical Oxygen Demand
Cond	Conductivity
Cr	Chromium
Cu	Copper (Cprum)
Cu.m	Cubic metre
Cub.	Cubic
Cusec	Flow of Water Cubic Feet Per Second
d	Day
D.G. Khan	Dera Ghazi Khan
D.P.T	Diphtheria, Pertussis and Tetanus
D.T	Diphtheria and Tetanus
dBA	Decibel (International scale of noise level)
Kg/c/day	Kilogram per capita per day
DO	DISSOLVED OXYGEN
EC	Electrical Conductivity
Engg.	Engineering
EPM	Department of Environmental Planning and Management, Peshawar University
ERRA	Earthquake Reconstruction & Rehabilitation Authority
F	Fluoride
FATA	Federally Administered Tribal Areas
Fe	Iron
FO	Furnace Oil
Forhigh	Forested, Shrub and Highlands
FSMP	Forestry Sector Master Plan
ft	Feet
GDP	Gross Domestic Product
gm	Gram
GMT	Greenwich Mean Time
GNP	Gross National Product
GTPS	Gas Turbine Power Station
GWh	Gega watts hour
H.Hold	Household
ha	Hectare
HCC	Haveli Canal Circle
HCO_3	Bicarbonate
HDIP	Hydrocarbon Development Institute of Pakistan
HOBC	High Octane Blending Compound
hr	Hour
HSD	High Speed Diesel
HUBCO	The Hub Power company
HUM	Humidity
Irrhigh N	High Productivity Irrigated (North)
Irrhigh S	High Productivity Irrigated (South)
Irrlow N	Low Productivity Irrigated (North)
Irrlow S	Low Productivity Irrigated (South)
IUCN	IUCN-The World Conservation Union
JBO	Jute Batch Oil
JP-1, JP-4	Aviation fuels
K	Potash Fertilizers
K	Postassium
KANUPP	Karachi Nuclear Power Plant
KAPCO	Kot Addu Power Company
KESC	Karachi Electric Supply Corporation
Kg	Kilogram

Kg/h/day	Kilogram per household per day
Kh	Kharif
Km	Kilometer
Km_2	Square Kilometer
KP	Khyber Pakhtoonkhwa
l	Litre
L.L.B	Bachelor of Law and Legislation
LASMO	Lasmo Oil Pakistan Limited
LAT	Latitude
LBDC	Lower Bari Dawab Canal
LCC	Lower Chanab Canal
LDO	Light Diesel Oil
LONG	Longitude
LPG	Liquified Petroleum Gas
m	Metre
M.A	Master of Arts
M.Sc	Master of Science
M.Ton	Metric ton
Ma	Million acres
MAF	Million acres feet
MBBS	Bachelor of Medicine and Bachelor of Surgery
MC	Municipal Committee
Meth	Methyl
Mg	Magnesium
mg	Milligram
mg/l	Milligram Per Litre
MGCL	Mari Gas Company Limited
Micro-s	Microsecond
Min	Minutes
ml/d	Millilitre per day
mm	Millimetre
Mn	Manganese
MPN	Most Probable Number
MT	Metric Tonnes
MTBE	Methyl Tertiary Butyl Ether
MTT	Mineral Turpentine
MW	Mega Watts
MWh	Mega Watts Hour
N	Nitrogeneous Fertilizers
Na	Sodium
NA & AJK	Northern Areas and Azad Jamun & Kashmir
NEQS	National Environmental Quality Standards
NGO	Non-Governmental Organization
NGPS	Natural Gas Power Station
NH_3	Ammonia
Ni	Nickel
nm/cm	Nanometer per centimeter
N-Meth	N-Methyl
NO_2	Nitrite
NO_3	Nitrate
NOx	Nitrogen Oxides
NRL	National Refinery Limited
NTU	Nephelometric turbidity unit
OGDC	Oil and Gas Development Corporation
OH	Hydroxyl ion
OTPS	Oil Thermal Power Station
OXY	Occidental of Pakistan Inc.
P	Phosphorous Fertilizers
PAEC	Pakistan Atomic Energy Commission
PASMIC	Pakistan Steel Mills Corporation
Pb	Lead
PCRWR	Pakistan Council of Research in Water Resources
PCSIR	Pakistan Council for Scientific and Industrial Research
PCSP	Pakistan Contraceptive Prevalence Survey
PDHS	Pakistan Demographic and Health Survey
PFFPS	Pakistan Fertility and Family Planning Survey
pH	Power of Hydrogenion
PM10	Particles at matter having size 10-micron (Respirable dust)
PMDC	Pakistan Mineral Development Corporation
Po_4	Phosphate
POL	Pakistan Oilfields Limited
ppb	Particle passed per billion
PPL	Pakistan Petroleum Limited
ppm	Particle passed per million
PRL	Pakistan Refinery Limited
PSLM	Pakistan Social & Living Standards Measurement Survey
Qty	Quantity
RBC	Reinforcement of Bricks and Cement
RCC	Reinforcement of Concrete and Cement
Rs.	Rupees
TSP	Total Suspended Particle
TSS	Total Surface Salinity
S	Sulphur
Set S	Setteable Solids
SGW	Saline Ground Water
SNGPL	Sui Northern Gas Pipelines Limited
SO_2	Sulphur Dioxide
U/S	Up Stream

SO_4	Sulphates
SPS	Steam Power Station
Sq.	Square
ssagl	Stevenson Screen Above ground level
SSGCL	Sui Southern Gas Company Limited
STEL	Short Term Exposure Limit
T.B	Tuberculosis
T.T	Tetanus Toxoid
TCF	Trillion Cubic Feet
TCU	Time colour unit
TDS	Total Dissolved Solids
TEL	Tapal Energy Limited
TEMP	Temperature
TLV	Threshold Limit Value
TNTC	Too numerious to be counted
TOE	Ton of Oil Equivalent
Tonne	Metric Tonne
TPS	Thermal Power Station
UB	US Barrel
UCC	Upper Chanab Canal
W.DIR	Wind Direction
W.SPD.m/s	Wind Speed Miles per Second
W/M_2	Watt per square meter
WAPDA	Water and Power Development Authority
WASA	Water and Sanitation Agency
WHO	World Health Organization
Zn	Zinc
µg	Micro Gram
µg/m³	Microgram per cubic meter
µm	Micro Mhose
µs	Micro Sem