

Government of the People's Republic of Bangladesh
Ministry of Water Resources
Water Resources Planning Organization (WARPO)

Integrated Coastal Zone Management Plan Project

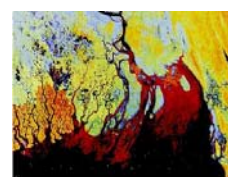
**Generating Sustainable Employment
in the Coastal Zone of Bangladesh**
--- Present situation and future potentials



Working Paper
WP042

Dhaka
July, 2005

Program Development Office
Sponsored by the Government of the Netherlands and the United Kingdom
Executed by ARCADIS Euroconsult, the Netherlands



PDO-ICZMP

**Program Development Office
for
Integrated Coastal Zone Management Plan
(PDO-ICZMP)**

**Generating Sustainable Employment
in the Coastal Zone of Bangladesh
--- Present situation and future potentials**

Md. Shahjahan Mian
Environmental & Resources Economist

Working Paper
WP042

Saimon Center, Road 22, House 4/A, 4th and 5th floor
Gulshan 1, Dhaka 1212
Tel & Fax: 8826614; Tel: 9892787; Email: pdo@iczmpbd.org
Web: www.iczmpbangladesh.org

Dhaka, July, 2005

TABLE OF CONTENTS

TABLE OF CONTENTS.....	I
LIST OF TABLES	II
ACRONYMS	III
1 INTRODUCTION.....	1
1.1 Objectives.....	1
1.2 Scope of the study	1
1.3 Methodology	2
2 PRESENT EMPLOYMENT SITUATION.....	3
2.1 Population.....	3
2.2 Labor force	4
2.3 Male labor	4
2.4 Female Labor.....	4
3 SHARE OF EMPLOYED LABOR FORCE BY SECTOR.....	7
3.1 Sectoral Share of labor	7
3.2 Distribution of labor	8
4 FUTURE EMPLOYMENT POSSIBILITIES.....	9
4.1 Livelihood	9
4.2 Priorities	9
4.3 Agriculture	10
4.4 Crops	10
4.5 Livestock.....	11
4.6 Fisheries	11
4.7 Forestry.....	11
4.8 Non-farm Employment.....	12
5 SOME LIVELIHOOD GROUPS IN COASTAL ZONE.....	13
5.1 Salt farming	13
5.2 Ship Breaking.....	13
5.3 Tourism	14
6 CHALLENGES	15
7 CONCLUSION.....	16
REFERENCES.....	17
APPENDIX-1: POPULATION IN THE COASTAL ZONE BY DIFFERENT AGE GROUP (2001).....	19
APPENDIX-2: FEMALE WORKFORCE IN THE COASTAL ZONE (2001).....	20
APPENDIX-3: GROSS CROPPED AREA, CROPPING INTENSITY AND PADDY PRODUCTION (1996) .	21
APPENDIX-4: LIVESTOCK AND POULTRY POPULATION BY NUMBER, AREA AND SIZE OF HOLDINGS	22

LIST OF TABLES

Table 1: Population projection and workforce.....	3
Table 2: Number of Labor force by Sex	4
Table 3: Share of employed labor force by sector (%)	7
Table 4: Share of Employed labor by broad sector (1999-2000).....	7
Table 5: Distribution of labor force by sectors	8
Table 6: Major livelihood groups involved in various occupations	9

ACRONYMS

BBS	Bangladesh Bureau of Statistics
FD	Forest Department
CDP	Coastal Development Partnership
CZ	Coastal Zone
CDS	Coastal Development Strategy
CZPo	Coastal Zone Policy
DAE	Department of Agriculture Extension
DLS	Department of Livestock Services
DoF	Department of Fisheries
ERD	Economic Relations Division
FAO	Food and Agriculture Organization
GoB	Government of Bangladesh
GDP	Gross Domestic Product
GO	Government Organization
ICZM	Integrated Coastal Zone Management
ICZMP	Integrated Coastal Zone Management Plan
MoFL	Ministry of Fisheries and Livestock
MoWR	Ministry of Water Resources
MoF	Ministry of Finance
MDG	Millennium Development Goals of the United Nations
NGO	Non Government Organizations
PDO	Program Development Office
PDO-ICZMP	Project Development Office- Integrated Coastal Zone Management Plan
PRSP	Poverty Reduction Strategy Paper
RNF	Rural Non-Farm
SME	Small and Medium Enterprise
UNDP	United Nations Development Program
WB	World Bank

1 INTRODUCTION

The coastal zone of Bangladesh is diverse in function and form. Big cities like Chittagong, Khulna, Barisal and many other urban centers are located in the coastal zone. Beside agriculture; a large number of economic activities such as industry, shipping and tourism are concentrated in these areas.

The coast of Bangladesh is known as a zone of vulnerabilities as well as opportunities. It is prone to natural disasters like cyclone, storm surge and flood. The combination of natural and man-made hazards, such as erosion, high arsenic content in ground water, water logging, earthquake, water and soil salinity, various forms of pollution, risks from climate change, etc, have adversely affected lives and livelihoods in the coastal zone and slowed down the pace of social and economic developments in this region.

Because of distinctive characteristics of the coast, scope for production possibilities as well as employment opportunities vary with respect to rural, semi-urban and urban conditions. The zone has diversity of natural resources including coastal fisheries and shrimp, forest, salt and minerals. It has sites for Export Processing Zones, harbors, airports, land ports and tourism complexes and opportunity for other industries. This zone also has high potential for exploitation of both onshore and offshore natural gas. Some of these resources still remained untapped while there are opportunities for using many of them for their significant expansion potentials.

In order to meet basic needs of the coastal people and enhance livelihood opportunities, maximum emphasis has been stressed for creation of employment and earning incomes in the Coastal Zone Policy 2005 (CZPo) as “Alleviation of Poverty through creation of job opportunities and finding options for diversified livelihoods would be the major principles of all economic activities. Economic opportunities based on local resources will be explored to enhance income of the people”.

Following the principles of CZPo; a Coastal Development Strategy (CDS) is being formulated to undertake and integrated development program for promoting economic growth for the entire coast stressing employment (rural and urban) on a priority basis.

Beside agriculture - the largest sector of rural employment; small and medium enterprise (SME) development in the coastal areas has been widely viewed to promote rural non-farm (RNF) employment as a prime vehicle for rapid development. Accordingly, “Attempt, therefore, will be made to implement projects in those un- and under-tapped areas such as floating agriculture, crab fattening, pearl culture, crocodile rearing, cage fingerling development, salt farming, wood-based industries, boat making industries, *Goal Pata*- based industries, etc.” (CDS).

1.1 Objectives

This paper is an attempt to provide some preliminary idea on present employment situation of the coastal people and possible avenues in the sectors over a period of time with probable change in occupations. This may also provide some basic idea as a Working Paper for finalization of a Coastal Development Strategy (CDS) on the present coastal employment scenario and avenues to be created in future in different sectors and professional fields. Moreover; this is an approach to reduction of poverty and unemployment in the coastal areas consisted with national Poverty Reduction Strategy Paper (PRSP) and Millennium Development Goals (MDG) of the United Nations.

1.2 Scope of the study

The coastal zone of Bangladesh is diverse, complex and conflicting in terms of physical and environmental settings. Sometimes diversity promotes complexity in planning and management of resources for generation of income and employment of the people. Since coastal zone is prone to

natural disaster; employment of people demands high priority. Here contributions of both public and private sectors are essential for creation of job opportunities.

Supply of labor, capital investment and resource use are some of the important factors that enhance growth of economy; create opportunities of earning incomes and employment of the people.

1.3 Methodology

This study is an attempt to deliver one of the supporting papers enabling the formulation of CDS; an important output of ICZMP. The basic information for analysis in this connection are available from BBS Population Census, Agriculture Census, Bangladesh Economic Review 2003 and 2004, Labor Force Survey, 1995-96 & 1999-2000, Publications of the World Bank, Bangladesh office, Departmental Reports and a number of supporting studies conducted by PDO-ICZMP. Based on available data; projection for future employment has been indicated under changed circumstances and coastal scenario.

2 PRESENT EMPLOYMENT SITUATION

2.1 Population

Population of a country is the driving force for supply of labor and promotion of her workforce. The coastal zone of Bangladesh is characterized by a fast growing population and workforce. A total of 36.8 million people live in the coastal zone of Bangladesh (2001 census). Extent of poverty in coastal zone is relatively high compared to remaining part of the country 52% are absolute poor and 25% are extreme poor. Per capita GDP of coastal districts is Tk. 18,198 at current price. 46% of the total population is below 15 years of age. Agricultural laborer, small farmer, fisher and urban poor constitute 71% of the 6.85 million households in the coastal districts.

The coastal population is projected to grow to about 43.9 million in 2015 and 60.8 million in 2050¹ (Table 1). As a result workforce (economically active population) will continue to be 53% of the total population. In urban areas will find to increase (4.5 - 16.0 million) at an increasing rate while rural areas may suffer from skilled labor for agriculture & other operations.

Table 1: Population projection and workforce

Year	Total	Urban				Rural	Workforce		
		Total	Ctg. SMA	Khulna SMA	Others		Total	Urban	Rural
2001	36.8	8.5	3.4	1.3	3.8	28.3	19.5	4.5	15.0
2005	38.8	9.5	3.9	1.5	4.1	29.3	20.6	5.1	15.5
2010	41.3	11.0	4.6	1.7	4.7	30.3	21.9	5.9	16.1
2015	43.9	12.8	5.4	2.0	5.4	31.1	23.3	6.8	16.5
2020	46.4	14.8	6.2	2.3	6.2	31.7	24.6	7.8	16.8
2030	51.5	19.3	8.1	3.0	8.1	32.2	27.3	10.2	17.1
2040	56.3	24.5	10.3	3.9	10.3	31.9	29.8	13.0	16.9
2050	60.8	30.2	12.7	4.8	12.8	30.6	32.2	16.0	16.2

Source : BBS - Based on adjusted Population Census data-2001.

Assuming a declining growth of coastal urban population from 2.82 percent per annum in 2001 to 2.00 percent in 2050, urban population would increase from 8.5 million in 2001 to 30.2 million in 2050. Thus the share of urban population would increase from current 23 percent to 44 percent in the mid-twenty first century, leaving rural population to the extent of 56 percent. There will be a serious effect in the field of employment in urban areas: if not in rural areas due to rural-urban migration.

Based on a conservative estimate (assuming a declining growth), about half of the coastal population will live in urban areas in the mid-twenty first century. This means more squatters and slums, more street children and more pressure on urban infrastructures unless these issues are addressed properly. (PDO-ICZMP-Living in the coast : People & Livelihoods).

Regarding generation of incomes or more precisely employment of coastal people; it is important to know the job avenues under changed scenario like rural-urban migration, occupational adjustments and work fields. In this connection the number of active working groups i.e labor force presently engaged or to be engaged need to be properly assessed. Accordingly the coastal population of 19 districts as per BBS Population Census 2001 has been categorized by age under three distinct groups as Group-1 Infant & Child (0-14 yrs.); Group-2 Working force (0-14 yrs.); Group-3 Old & dependent (60+ yrs.). (Detailed in Appendix-1)

¹ Assumption has been made based on projections that population in Bangladesh will grow at an annual rate of 0.71% during 2025-2050 (World Bank, 1994). Here, declining growth has been considered in a linear fashion for convenience of analysis.

It can be depicted from the above age group that only 53% of the total population in the coastal zone is the active working force

2.2 Labor force

The coastal zone provides 33% or 17.4 million (BBS, 2002e) of the total national labor force of 53.5 million for the 15 years and above age group. Of this, 37% is female.

In Bangladesh 72% urban active labor force and 60% rural active labor force is male. In urban CZ 71% and in rural CZ 61% is male active labor force. The rural and urban male labor composition is almost the same as the national rate but the rural active labor force is slightly higher in CZ. (*Where Land Meets The Sea- A profile of Coastal Zone of Bangladesh p/111*)

“Economically active” population (15-59 years) in the coastal areas is 53 percent; against county’s 55 percent of the total population (*Appendix-1*). In future, dependent population (below 15 years) would decline mainly because of declining fertility and mortality rates. This phenomenon is likely to be offset by more adolescent population pursuing studies and they will not be available for work

The share of employed national labor force by different sectors of the economy according to Labor Force Survey 1995-96 and 1999-2000 can be depicted from the following table:

Table 2: Number of Labor force by Sex

(in thousand)

Place	1995-96			1999-2000		
	Total	Male (%)	Female (%)	Total	Male (%)	Female (%)
Coastal zone	16,708	62	38	17,418	63	37
Bangladesh	50,337	62.5	37.5	53,514	62.2	37.8

Source: Labor Force Survey 1995-96 and 1999-2000. and PDO-ICZMP, 2004. *Where Land Meets the Sea: A Profile of the Coastal Zone of Bangladesh.*

2.3 Male labor



With the growth of population the number of labor force in the coastal zone increases. Again; percentage of male labor engaged in the coastal zone is almost same from rest of the country and is increasing day by day. But the nature of job is different to some extent with a few specialty of work like onshore and offshore fishing, ship breaking, salt farming and others.

The gender composition of active labor force in CZ follows the national standard for men and women (*Where Land Meets The Sea- A profile of Coastal Zone of Bangladesh p/111*)

2.4 Female Labor

The female labor force shows urban CZ as 29% and rural CZ as 39% as against the Bangladesh urban average of 28% and rural 40% (BBS, 2002e).

The role of women as active labor force in farm and off farm activities cannot be exaggerated. In activities like fish processing, fry collection, net making, crab and shell collection, extraction of forest products etc. participation of women and children as workforce in the coastal zone is likely to be higher. Influx of female labor in the market is undoubtedly a positive indication towards

reduction on male member dependence in the family, ensuring gender equity in earning capability and enabling direct assistance to alleviation of poverty.



Women, apart from household affairs; play a vital role and serve as a major part of the Bangladeshi work force. But the status of women in Bangladesh as active workforce remained considerably inferior to that of men in general and coastal area in particular. In fact; they have limited or little access to markets, productive services, education, health care, and other economic activities. As a result acute poverty at the margin appears to be hitting hardest at women.

Women in the in the coastal zone are more venerable than the men. In a study it has been revealed that “Women’s Role in Society indicates that about 82 percent of women lived in rural areas in the late 1980s. The majority of rural women, perhaps 70 percent, were in small cultivator, tenant, and landless households; many worked as laborers part time or seasonally, usually in post-harvest activities, and received payment in kind or in meager cash wages. Another 20 percent, mostly in poor landless households, depended on casual labor, gleaning, begging, and other irregular sources of income; typically, their income was essential to household survival. The remaining 10 percent of women were in households mainly in the professional, trading, or large-scale landowning categories, and they usually did not work outside the home. Accordingly, the female labor force participation rate doubled between 1974 and 1984, when it reached nearly 8 percent. Female wage rates in the 1980s were low, typically ranging between 20 and 30 percent of male wage rates”. (*Women’s Role in Society - A Country Study: Bangladesh-- U.S Library of Congress, September 1988*)

The contribution of female labor has been considered substantial but largely unacknowledged. In coastal areas; rural women are mostly responsible for post-harvest activities of crop and fish processing, keeping livestock, poultry, and small gardens. Women in cities are engaged in domestic and traditional jobs but their number is increasing in manufacturing jobs, especially in the readymade garments cottage and small industries. And those with more education work in government, health care, and teaching, but their numbers remained very small. Continuing high rates of population growth and the declining availability of work based at home it means that more women sought employment outside the home. In coastal zone only 25.9% women between 15-49 years of age are found to be engaged as work force which is less than country’s average of 28.2%. Dist- wise participation of women in CZ as work force is given in Appendix 2. Highest participation of female labor is found at Satkhira (31.1%) and lowest at Chandpur (21.1%) among the 19 coastal districts.

3 SHARE OF EMPLOYED LABOR FORCE BY SECTOR

Laborers employed under different sectors are an important indicator to ascertain the nature of the labor market. Laborers employed during last ten years under different sectors have been shown in the following table.

Table 3: Share of employed labor force by sector (%)

Sector	1995-96	1999-2000
1. Agriculture, Forestry & Fishery	63.2	62.3
2. Mining & quarrying	---	0.7
3. Manufacturing	7.5	7.4
4. Power, gas & water	0.2	0.2
5. Construction	1.8	2.1
6. Trade, hotel & services	11.2	12.0
7. Transport, maintenance & communication	4.2	4.6
8. Finance, business & services	0.4	0.7
9. Commodities & personal services	9.3	10.0
10. Others	2.2	---
Total	100	100

Source: Bangladesh Economic Review 2004 /Labor Force Survey, 1995-96 & 1999-2000

It can be depicted from the above table that maximum labor i.e about two third has been employed in the agriculture sector over the years followed by Trade, hotel & services and commodities & personal services. In the recent years; tourism in the coastal zone; among others, has been considered as an important area not only for earning income but also for generation of employment.

3.1 Sectoral Share of labor

Employment of labor may be summarized under three broad based sectors i.e Agriculture, Service and Industry as in the following table:

Table 4: Share of Employed labor by broad sector (1999-2000)

Sector	Projection for Coastal Zone		
	Bangladesh (%)	2020 (%)	2050 (%)
Agriculture	62.30	59.20	55.00
Service	27.30	29.70	33.10
Industry	10.40	11.10	11.90
Total	100	100	100

Source: BBS /Labour force Survey-1999-2000 / Bangladesh Economic Review 2003 and 2004.

It is more or less clear from the above table that in case of labor absorption by sector there would be a tendency of gradual decrease in agriculture with mobilization of excess labor to service and industrial sectors. This may happen due to erosion of cultivable land in the coastal areas, more sub-division and fragmentation of holdings for pressure of population on land; and decrease in productivity of soil for climatic change. Unless effective measures are taken with creation of more jobs in service and industrial sectors rather than agriculture; there is every possibility of under employment in agriculture sector.

But in recent years there has been rapid changes in labor market by broad sectors. Report on Labor Force Survey 2002-2003 revealed that employment in Agriculture sector has fallen down to 51.7%

followed by Non-agriculture sector 48.3%. Again under non-agriculture; service accounts for 34.6% followed by industry 13.7% (BBS- December 2004).

3.2 Distribution of labor

Over the past decades; natural and man made destruction of ecosystem; there has been noticeable changes of in the labor market. Employment in agriculture will decline at the rate of 0.25% and 0.23% per annum by 2020 and 2050 respectably. On the other hand non-farm/non-agriculture i.e. industrial sectors will have positive impact through higher rate of employment at the rate of 0.16% and 0.14% respectably. Again; approximately two out of three urban jobs are now to be found in manufacturing, trade and hotel/restaurant activities and -- 28 percent of the total -- in such peri-urban agro-enterprises as poultry and other livestock raising, food processing, fisheries and even forestry. This sector is already creating jobs faster than the economy as a whole. By 2020 urban and peri-urban workers can be expected to number 40 million, twice the portion of the employed workforce today.(World Bank -Bangladesh 2020--A Long run perspective study). The present employment position and future employment in the coastal zone compared to rest of the country by sector may be drawn from the following table.

Table 5: Distribution of labor force by sectors

(in million)

Sector	1999-2000			Projection for coastal zone			
	Bangladesh	<-->	Coastal Zone	2020		2050	
	Employed	%	Employed	To be emp.	%	To be emp.	%
1. Agriculture	37.57	62.3	11.53	14.13	59.2	17.53	55.0
Crop & Livestock	26.30	43.6	8.07	9.27	38.8	10.88	34.2
Fishery	7.50	12.4	2.49	3.30	13.8	4.53	14.2
Forestry	3.77	6.3	1.16	1.57	6.6	2.11	6.6
2. Mining & quarrying	0.42	0.7	0.13	0.19	0.8	0.29	0.9
3. Manufacturing	4.46	7.4	1.37	1.85	7.8	2.60	8.2
4. Power, gas & water	0.12	0.2	0.04	0.05	0.2	0.08	0.3
5. Construction	1.27	2.1	0.39	0.55	2.3	0.81	2.5
6. Trade, hotel & services	7.24	12.0	2.22	3.01	12.6	4.45	14.0
7. Transport, maintenance & communication	2.77	4.6	0.85	1.25	5.2	1.90	6.0
8. Finance, business & services	0.42	0.7	0.13	0.18	0.8	0.27	0.8
9. Commodities & personal services	6.03	10.0	1.85	2.63	11.0	3.89	12.2
10. Others	0.00		0.02	0.02	0.1	0.03	0.1
Total	60.30	100.00	18.50	23.87	100.00	31.85	100.00

Note: 1. Assumption is based on the growth rate of population

2. Probable change(2020 & 2050)s in labor force by sector are .

<u>Sector</u>	<u>2020 (Change %)</u>	<u>2050 Change (%)</u>
1. Agriculture, Forestry & Fishery	-5	-7
Crop & Livestock	-11	-12
Fishery	+11	+3
Forestry	+5	+1
2. Mining & quarrying	+13	+15
3. Manufacturing	+5	+5
4. Power, gas & water	+15	+15
5. Construction	+10	+10
6. Trade, hotel & services	+5	+11
7. Transport, maintenance & communication	+14	+14
8. Finance, business & services	+10	+10
9. Commodities & personal services	+10	+11
10. Others	0	0

4 FUTURE EMPLOYMENT POSSIBILITIES

4.1 Livelihood

In the coastal area, land and water resources are considered as the basis for determining scope of rural employment. Coastal livelihood mostly depends on how much land and water resources are utilized for generating income. Again; multiple use of local resources (land & water) is highly related to operating skill (labor force) in one hand and capital investment on the other.

Table 6: Major livelihood groups involved in various occupations

Livelihood groups in the coastal zone	Households (year 2001)	
	Number in million (estimated) ²	Percentage
Agriculture laborer	1.81	26.4
Small farmer	1.79	26.1
Fisher	0.53	7.8
Urban poor	0.70	10.2
Others	2.02	29.5
Total coastal zone	6.86	100.0

Source: 1. BBS, 1999; 2001

2. PDO-ICZMP, 2003. Coastal Livelihoods: situation and context (Working Paper 015), June 2003.

Since the coastal zone is diverse and distinct to some extent; there are some income generating activities in which coastal people have their preferential access to these but not properly counted or considered important. These are:

- salt farming
- fish processing (drying)
- fry collection
- net making
- shrimp farming
- crab and shell collection
- extraction of forest resources (wood, tree leaves, *golpata*, honey, wax etc.)
- boat making & boat plying
- ship breaking
- basket making and handicrafts
- horse riding and photography
- selling cold drinks, tea, chips etc.
- sheltering from sun-shine and rain
- collection of honey, wax and wood.

Peoples involvement (partial or whole) and rate of income derived from these sort of activities are matters of consideration as regards to poverty alleviation as well as their contribution to GDP.

4.2 Priorities

In the state of degrading climatic change, erosion of arable land, dwindling of forest and other resources, effect of urbanization and rural migration even from resource base areas in the coastal zone; a fast growing population and workforce will seek employment in non-farm occupations. Unless priorities are fixed and effective measures are taken or avenues created; there will be negative effect in labor market with declining trend in generation of income and employment. The same situation has been expressed by FAO/UNDP as “While nearly half of this workforce is absorbed in the agriculture, forestry and fisheries subsectors, an increasing amount of labour will

seek employment in non-farm occupations. Finding productive and remunerative employment for these workers will be one of the main challenges of the twenty-first century.” (FAO Guidelines – Integrated coastal area management and agriculture, forestry and fisheries.p/16 Rome1998).

4.3 Agriculture

Labor force belonging to 15-59 year of age which is 53% of the total population in the coastal zone against 55% of national average may be termed as working class and are currently employed as active labor under different sectors (*Appendix-I*).

Agriculture sector comprises at least four sub-sectors such as Crops, Livestock, Fisheries and Forestry. In Bangladesh, and especially in some islands of coastal zone, the river deltas of Meghna and Padma with their fertile alluvial soils makes its agriculture an attractive scenario through production of crops, fish and forest resources.

Agriculture, being the single largest sector of the economy contributes about one fourth to the country's GDP but employ nearly two-third of labor force (62.3%). Hence agriculture has been playing a vital role in socio-economic progress and sustainable development through upliftment of rural economy, ensuring food security, generation of employment, reduction of poverty and so on. But the contribution of this sector in case of employment is assumed to be reduced from 62.3% to 59.2% and 55% by 2020 and 2050 respectably with some adjustments within its sub sectors. This may happen due to urban growth in the coastal zone; the high potential of urban goods and services.. The important components of broad based agriculture are crops, livestock, fisheries and forestry. Production potentials as well as absorption of labor force in the years to come; and its probable impact on employment can be assessed through substantial contribution of agriculture; and to ensuring food security and creating employment.

4.4 Crops

With the growing need for increased population a national projection for production of cereal crops, among others; has been formulated as 160 mmt. (present), 275 mmt. by 2010 and 313 mmt by 2020 (*MoA/DAE-Challenge & Prospects of agriculture for 21st Century, Agricultural Conference Report-2004 p/26*).

Land is the most limiting factor for crop production. In case of coastal zone land erosion is a common natural factor. Erosion is most severe in the Meghna estuary. It has been recorded that a huge land of 86,366 ha eroded during 1972-2000 (*MES-2000*). Most of these land were inhabited cropland or used for farming and other activities. This situation may continue over the years to come and as a result crop production will reduce (except increase in crop intensity and management practices) with adverse effect on employment in crop cultivation In this connection there is a prediction passed by the Civil Society's Task Force Reports-2001 as “almost 17% land of Bangladesh may go under saline water in the next century due to the Greenhouse effect.” (*CPD-Developing a Policy Agenda for Bangladesh p/47*). The problem seems to be not only common but acute for coastal zone. This may turn cropland into severe salinity with decline in agricultural productivity and adverse effect on employment As a protective measure, in the same report, CPD also suggested that “a new research institute should be established in the southern part of Bangladesh devoted to research on agriculture in saline prone zones.” Incan be mentioned here that 220 ha. arable land is being reduced for use in other purposes like construction of roads, industry, houses etc. daily (*MoA/BARI-Challenge & Prospects of agriculture for 21st Century, Agricultural Conference Report-2004 p/20*). In order to combat the growing situation and uphold production targets for growing population genetic improvement in crop production with application of modern techniques may be adopted.

Under the growing demand for food and unemployment; Coastal zone, among others, needs certain change in its agricultural scenario with further intensification to increase higher yields from rice and

diversification to garner new earnings from higher-value crops such as vegetables, fruits, fish, and livestock products instead of staple cereals only. District-wise acreage under production of rice with cropping intensity and especially HYV paddy can be seen in Appendix-3.

4.5 Livestock

Livestock population; except poultry, in the coastal zone is comparatively thin from rest of the country. The number of bovine, goat and sheep per sq.km is 126, 43 and 1.42 in the coastal zone against national average of 146, 65 and 3.77 respectively. Sheep and goat are kept by 25-40% of the households; coastal zones are not the best areas for the health of these animals, and they are less encountered in the coastal areas.. But the number of Poultry birds in CZ is relatively higher which is 876 against national average of 840 per sq.km. (*Appendix-4*). These indicate that there is opportunity for further improvement in this subsector and more employment in livestock may be possible; and especially for landless and destitute women in raising poultry, dairy, goat and sheep. So there are sample scopes for further development in this subsector.

At present specialized livestock farms-poultry, dairy are hardly found in the coastal zone, with the exception of a few chicken farms close to urban centers. Majority of farmers in rural areas hold some livestock mostly for domestic purposes. (Draught power, egg, milk, and meat production).

4.6 Fisheries

Fisheries sector directly contributes to food security in the form of protein supply in one hand and provides one of the major livelihoods to the population. A large proportion of the total fish production of many coastal countries; with some exceptions; is usually derived from coastal fisheries. Because coastal areas everywhere provide habitat for about 90% of marine fish in commercial and subsistence fisheries; at all or some stages in the lives of the fish (*FAO Guidelines – Integrated coastal area management and agriculture, forestry and fisheries.Rome 1998*)



In Bangladesh; Fisheries is one of the prospective subsectors and one of the important livelihoods to the coastal people. The fisheries subsector provides 1.2 million full and 10.2 million people's partial employment (*National Fisheries Policy-1998*). Fishery is the second largest sector of economy and employs 14% households against 8% of national average though it stands third in respect of sectoral export earnings of Bangladesh. Current fish production (Inland& Marine) in the country is 2.3mmt and it has been projected to produce 2.7 mmt or 4.0 mmt by 2010 under lower or higher rate of growth respectably (annual growth rate 1.5% or 5.4%). (*The Future for Fisheries–World Bank-DANIDA-2003*). It can be mentioned that Shrimp is the second largest exportable item of the country which earns about Tk. 2,000 crore annually as 'frozen fish' export. (*Bangladesh Frozen Foods Exporters Association's Report-2004*). Bangladesh Frozen Foods Exporters Association has also prepared a action plan to raise export of shrimp and fish from 30,000 mt. to 2,25,000 mt. by 2008 and thus to earn a sum of Tk.10,000 crore (US\$ 1.6 billion) as per their 'Vision 2008' under 'Seal of Quality'. Accordingly employment opportunity will also be created in the course of shrimp cultivation, processing and export promotion activities.

4.7 Forestry

Forest resources contribute about 3% to national GDP and 10% to agricultural GDP. About 2% total labor force is engaged in this sector. The total forest is about 2.6 million ha. Which is about 17% of the total land area of the country (BFD).



The coastal zone appears to be enriched in forest resources that includes Sundarban, Chittagong, Cox's Bazar and other coastal areas. But the area and the carrying capacity of forest have been declining as a result of increasing demand for cultivable land, wood and forest products (*BFD-Participatory Forstry Newsletter, Bull. No.2 June 2004*). As a result employment opportunity in forestry is also shrinking but at the same time some people are being partly engaged through introduction of social forestry program.

4.8 Non-farm Employment

In case of promoting Rural Non-Farm (RNF) employment the World Bank in its recent study outlined that “the RNF sector accounts more than 40 percent of all rural employment and more than half of rural household income. This sector has displayed impressive dynamism during the 1990s with faster growth of income and employment (4.2 and 2.7 percent) relative to the growth of agricultural income and employment (0.3 and 1 percent)” Moreover; to enhance and deepen rural growth WB indicated to implement a comprehensive and well – sequenced series of policy and institutional reforms-s aiming to provide i) *an enabling rural investment climate and ii) effective institutional mechanism for implementing reforms, and delivering public services* that will enable the RNF sector to take a leading role in rural productivity growth as well as employment generation. (*WB-Promoting the Rural Non- Farm Sector in Bangladesh vol 1. Oct. 2004*)

The coastal zone; apart from agricultural products i.e raw materials for industry is also enriched in natural resources such, gas, oil, sunshine, waves etc.. These enable as a good sources of energy for CZ and need to be explored for creation of employment in this sector.

Industry and Service Sectors account for more or less 10% to 30% absorption of labor respectively. With gradual change in agricultural scenario; there might be some changes in labor market having tendency to migrate from rural to urban areas for employment. Under the gradual process of urbanization; surplus agriculture labor will be absorbed in industry and service sectors in spite of existing and increased demand of agriculture and its sub-sectors. It can be mentioned that Tourism in the coastal zone shall have the bright prospect to employ more labor with its growing as well as attractive economic importance in the days to come.

5 SOME LIVELIHOOD GROUPS IN COASTAL ZONE

Despite natural calamities; people living in the coastline have some special advantages in earning their incomes and generation of employment. These are due to exploitation of natural resources characterized by local conditions and coastal environment. Important among these are fishing, salt farming, ship breaking and tourism. In case of fishing; there are national (DoF/BFIDC), local and community based institutions to look into the nature of employment and well-being of fishers (inland and marine). Their contribution to the nation building activities cannot be exaggerated. But the farmers /workers engaged in salt farming, ship breaking and others are less secured or protected from institutional support and wage earning point of view. Their number as workers and wage earners differ from each other and fluctuate by seasonal variations.

5.1 Salt farming



About 15 percent of total rural households in the district of Cox's Bazar are directly involved in salt farming. They meet bulk of the demand for raw salt in the country. More than 2.5 million people are dependent & 0.5 million are directly involved in the salt production industry in the coastal zone. As of June 2003, 38,328 salt farmers operated on 23,735 ha of land in Cox's Bazar. Moheshkhali upazila has the highest concentration of salt farmers. Their number is 10,118 and they operate on one-third of the total land area under salt farming in Cox's Bazar (BSCIC, 2003). Salt

farmers are mostly poor and operate their business on a small scale basis. Their average size of farm is 0.62 ha. only.

They work under adverse conditions. They are in close proximity to the open sea and often face natural hazards. Sometimes they are to face adverse climatic conditions when the whole output is washed away by heavy rain and downpour; and storm surge. (*Living in the Coast People and Livelihoods*).

5.2 Ship Breaking

A good number of workers (skilled/ semi-skilled) are working in ship breaking industries. Ship breaking industries are mostly concentrated in the Coastal Zone i.e Sitakunda (Chittagong) and Khulna. At present there are 29 ship-breaking industry operating in the country where 8 have emerged as factories. Ship scraps are the main source of MS rod in the country. At least 2,000 workers regularly and 25,000 casually are engaged in ship breaking industry, and about 70-80 ships are scrapped annually.



The sector contributes Tk 9.0 billion to the government exchequer as tax annually as it meets 80 percent demands of the country's MS rods and steel. In this connection it can be mentioned that UN ban on oil tankers that use a single layer of steel to separate their cargo from the sea, - a policy that took effect from April 5,2005 is likely to hit the local ship breaking industry easing the price of mild steel (MS) rod. By 2010, as many as 1402 ships carrying 104.6 million tons, or a quarter of global tanker capacity, would have to be scrapped and 'most of the ships

abolished under the UN rules will be dismantled on beaches of Bangladesh and India, the world's two largest market for ship scraps'. (*The Bangladesh Observer April 19,2005*). Hence there are opportunities for employment and earning more incomes from ship breaking by the workers as well as industry owners.

5.3 Tourism

Now tourism has been developed as an industry. There are a good number of local people including children who earn their livelihood from carrying bags, languages, supplying snacks, fresh water and others of visiting tourists but their exact number is not known.



In a report it has been revealed that the tourism industry in Bangladesh recorded increased scenario in attracting tourist arrivals surpassing the earlier record of 207,246 that reached in the year of 2002. Again; foreign visitors accounted a total of 244,509 trips to Bangladesh in 2003 which is an exceptional growth of 17.98%. (*BPC-2004*)

In a study of WTO Tourism 2020 Vision; there has been a forecast of annual growth rate of 6.10% between 1995 and 2020 for South Asia. Accordingly Bangladesh forecasts at least 5 lakh visitor arrivals by 2020. But the country expects much more tourist arrival than the WTO estimates and the figure may reach to 8.5 lakh in 2020 (*Bangladesh Tourism Vision- 2020*).

6 CHALLENGES

The paper is an attempt to provide some basic idea on present employment situation and possible investment climate for generation of employment in the years to come in CZ under diversified field of activities; and substantial reduction of poverty as a part of fulfilling national PRSP objectives. To combat ever increasing rate of unemployment and under employment; some reform measures may be considered with active participation of GO, NGO and private sectors for strengthening the coastal economy as a whole. This is undoubtedly a gigantic task and needs integrated approach with holistic coastal management plan to address existing poverty and thus to promote income and employment opportunities for future generation considering the issues of rural-urban migration for employment, declining trend in agricultural productivity, fish reserves, forest and other resources.

From experience and evidences it can be argued that without economic growth, jobs do not materialize; the incomes of the poor do not rise significantly. This view has been expressed by the World Bank, Bangladesh office in its study report. Further; the study details as “For the nation two decades into the coming century, the study foresees substantial reduction of poverty by 2020 an average annual GDP growth rate of seven to eight percent during next 25 years instead of the lackluster 4 percent average of the preceding 25 years; an economy capable of creating 50 million new jobs over 25 years and putting poverty into retreat; population growth rates cut from 1.82 percent to 1.15 percent and infant mortality reduced by more than half - from 79.9 to 38.2 percent; a fully literate nation assured of basic health care, bringing forth cadres of skilled workers who will be capable contenders in high-tech, information-oriented, global markets; forest cover restored to 15 (as opposed to 6) percent of the nation’s land; and cities and towns linked by new systems of road and rail and home to 36.5 (as opposed to 20) percent of the Bangladeshi population with greatly expanded provision for clean water, sanitation, and low-income housing”. (*World Bank -Bangladesh 2020--A Long run perspective study*).

The study also indicated some non farm sectors where surplus agricultural labor can find jobs and be absorbed in urban and peri-urban areas in the manner as “The search for employment will bring, as it already does, workers and their families by the millions to the industrial and service sectors where growth is strongest and can become even stronger. Approximately two out of three urban jobs are now to be found in manufacturing, trade and hotel/restaurant activities and -- 28 percent of the total - - in such peri-urban agro-enterprises as poultry and other livestock raising, food processing, fisheries and even forestry. This employment sector is already creating jobs faster than the economy as a whole. By 2020 urban and peri-urban workers can be expected to number 40 million, twice the portion of the employed workforce today.” (*World Bank -Bangladesh 2020--A Long run perspective study*).

The same situation also prevails in the coastal zone; and the above criteria regarding creation job opportunities in different fields are more or less applicable for the people of coastal area. Moreover; the coastal people as hard workers have some sort of advantages too. This is due to diversified nature of work and multidimensional field of activities on land and/or water in one hand; and their tolerable physical fitness to work during foul weather or even under changed climatic conditions on the other.

7 CONCLUSION

The coastal zone of Bangladesh is an area of multiple activities at rural and urban levels. The traditional resources based economic activities are mainly generated from coastal aquatic resources, forestry and agriculture; and side by side with industry, shipping and tourism. These are the basic fields of earning incomes and generation of employment for rural and urban people in CZ. To enhance income and thus to generate employment by reducing poverty; integration of these sectors as well as resource base activities through participatory management, need to be streamlined in such a way as to create favorable conditions for growth of strong coastal economy as a whole and enhance welfare of the people living along the coast.

Coastal zone is diverse in national resources but lacks behind the national average in terms of generating income and employment. Enhancement of agricultural productivity and exploitation of natural resources have ample scope for generating employment in CZ through enabling institutions for creation of investment climate under changed coastal environment.

REFERENCES

- BBS /GoB.** Labor Force Survey 1995-96 and 1999-2000
- BBS, 2002.** Provisional Estimates of Gross Regional Products, 1995-96 to 1999-2000, Bangladesh Bureau of Statistics, Dhaka.
- BBS, 2004.** Labor Force Survey 2002-2003, December 2004
- BFD.** Participatory Forestry Newsletter, Bull. No.2 June 2004.
- BPC, 2004.** National Tourism Organization -- Bangladesh Tourism Vision- 2020, Bangladesh Parjatan Corporation, December 2004.
- CPD, 2001.** Developing a Policy Agenda for Bangladesh Civil Society's Task Force Reports-2001
- FAO/UNDP Guidelines.** Integrated coastal area management and agriculture, forestry and fisheries. Rome, 1998.
- ILO, 2001.** Ship breaking and Safe Work. International Labour Office, Dhaka, March 2001.
- M/o Finance-GoB.** Bangladesh Economic Review 2003 & Bangladesh Economic Review 2004.
- MoA/DAE, 2004.** Challenge & Prospects of agriculture for 21st Century, Agricultural Conference Report-2004.
- MoWR, 2005.** Coastal Zone Policy 2005, Ministry of Water Resources, Government of Bangladesh, March 2005.
- PDO-ICZMP, 2003.** Coastal Livelihoods; situation and context. Program Development Office for Integrated Coastal Zone Management Plan Project, Working paper WP015, Water Resources Planning Organization, Ministry of Water Resources, Bangladesh. Dhaka.
- PDO-ICZMP, 2004a.** Living in the Coast: People and Livelihood. Program Development Office for Integrated Coastal Zone Management Plan Project, Water Resources Planning Organization, Ministry of Water Resources, Bangladesh, Dhaka. March, 2004.
- PDO-ICZMP, 2004b.** Living in the Coast: Problems, Opportunities and Challenges. Program Development Office for Integrated Coastal Zone Management Plan Project, Water Resources Planning Organization, Ministry of Water Resources, Bangladesh. Dhaka. July, 2004.
- PDO-ICZMP, 2004c.** Where land meets the sea: A Profile of the Coastal Zone of Bangladesh, University Press Limited, Dhaka.
- PDO-ICZMP, 2005.** Living in the Coast: Urbanization. Program Development Office for Integrated Coastal Zone Management Plan Project, Water Resources Planning Organization, Ministry of Water Resources, Bangladesh, Dhaka. June 2005
- Saha,T.; Al-Sabir, A.; Montana, L.; Riggers,H.; Bhadra, K.S., 2003.** Bangladesh District Level Socio-demographic and Health Care Utilization Indicators. Dhaka, Bangladesh and Calverton, Maryland (USA): demographic and Health Care Utilization Indicators. Dhaka, Bangladesh and Calverton, Maryland (USA): National Institute of Population Research and Training (NIPORT), and ORC Macro. August 2003.
- World Bank, 1994.** World Population Projections 1994-95 Edition, World Bank, The John Hopkins University Press, Baltimore.
- World Bank, Bangladesh office, 1998.** Bangladesh 2020. A Long run perspective study, University Press Limited, October 1998.

World Bank, 2004. Promoting the Rural Non-Farm Sector in Bangladesh Rural Development Unit – South Asia Region, October 2004.

World Bank, 2005. Attaining The Millennium Development Goals in Bangladesh - Human Development Unit – South Asia Region, February 2005.

GoB/UN, 200. Millennium Development Goals – Bangladesh Progress Report, February 2005.

APPENDIX-1: POPULATION IN THE COASTAL ZONE BY DIFFERENT AGE GROUP (2001)

District	Total population	Group -1 Age (0-14 yrs.)		Group -2 Age (15-59 yrs.)		Group -3 Age (60+ yrs.)	
		Number	%	Number	%	Number	%
Bagerhat	1,516,820	558,341	37	840,773	55	118,009	8
Barguna	845,060	307,433	36	468,586	55	68,957	8
Barisal	2,348,440	972,019	41	1,204,985	51	171,436	7
Bhola	1,703,200	792,329	47	817,025	48	93,846	6
Chandpur	2,241,020	981,343	44	1,082,637	48	176,816	8
Chittagong	6,543,860	2,512,188	38	3,665,870	56	365,802	6
Cox's Bazar	1,759,560	864,648	49	822,242	47	72,846	4
Feni	1,205,980	513,144	43	605,161	50	87,795	7
Gopalganj	1,151,800	487,096	42	586,381	51	78,322	7
Jessore	2,469,680	888,097	36	1,430,439	58	150,650	6
Jhalkati	692,680	276,656	40	360,263	52	55,899	8
Khulna	2,357,940	821,978	35	1,393,543	59	142,184	6
Lakshmipur	1,486,540	670,132	45	713,688	48	102,720	7
Narail	694,900	273,165	39	370,173	53	51,562	7
Noakhali	2,570,640	1,180,952	46	1,211,286	47	177,888	7
Patuakhali	1,464,800	589,289	40	773,414	53	102,243	7
Pirojpur	1,099,780	424,185	39	588,272	53	87,433	8
Satkhira	1,845,120	701,884	38	1,022,566	55	121,040	7
Shariatpur	1,080,680	489,332	45	508,460	47	82,888	8
Coastal Zone	35,078,500	14,304,212	41	18,465,763	53	2,308,337	7
Non-CZ	88,772,620	34,418,819	39	49,082,638	55	5,283,737	6
Bangladesh	123,851,120	48,723,031	39	67,548,401	55	7,592,074	6
Assumption:	<i>Group - 1 = Infant & child</i>						
	<i>Group - 2 = Working force</i>						
	<i>Group - 3 = Old & dependent</i>						

Source: Based on enumerated data of Population Census 2001 (the adjusted census data does not have age-specific member)

APPENDIX-2: FEMALE WORKFORCE IN THE COASTAL ZONE (2001)

Sl.No.	District	Female Population (age 15-49)	Proportion of female Workforce for cash or kind (%)
1	Barguna	216068	27.4
2	Barisal	556983	24.9
3	Bhola	376782	24.5
4	Jhalakhati	171557	24.5
5	Patuakhali	357615	26.7
6	Pirojpur	271988	27.0
7	Chandpur	526943	21.4
8	Chittagong	1612123	24.9
9	Cox's Bazar	376357	21.2
10	Feni	294789	21.7
11	Lakshmipur	345974	22.8
12	Noakhali	598865	19.8
13	Gopalganj	272548	26.5
14	Shariatpur	240666	25.3
15	Bagerhat	376823	29.6
16	Jessore	637526	33.2
17	Khulna	612822	31.9
18	Narail	169381	24.9
19	Satkhira	465731	31.1
	Total Coastal Zone	8481540	25.9
	non Coastal Zone	22108205	29.1
	Bangladesh	30589745	28.2

Source: Bangladesh District Level Socio- demographic and Health Care Utilization Indicators. Dhaka, Bangladesh and Calverton, Maryland (USA): demographic and Health Care Utilization Indicators. Dhaka, Bangladesh and Calverton, Maryland (USA): National Institute of Population Research and Training (NIPORT), and ORC Macro. August 2003.

APPENDIX-3: GROSS CROPPED AREA, CROPPING INTENSITY AND PADDY PRODUCTION (1996)

District	Gross cropped area (ha)	Cropping intensity (%)	Total under paddy (ha)	% of paddy under HYV
Bagerhat	131,142	120	118,157	8.31
Barguna	123,714	154	103,964	12.93
Barisal	210,120	182	158,204	24.07
Bhola	208,926	209	150,294	12.88
Chandpur	142,649	198	101,085	55.67
Chittagong	238,089	182	216,389	49.38
Cox's Bazar	91,515	156	83,782	75.93
Feni	85,883	191	79,408	54.84
Gopalganj	151,532	161	107,570	22.04
Jessore	270,161	183	187,342	66.84
Jhalokati	65,548	165	55,130	11.27
Khulna	128,157	124	112,188	24.14
Lakshipur	128,430	203	101,223	24.22
Narail	100,246	183	40,349	30.04
Noakhali	218,880	169	180,687	19.12
Patuakhali	231,449	174	175,811	9.15
Pirojpur	112,935	152	97,370	15.19
Satkhira	158,283	142	125,683	76.28
Shariatpur	144,085	214	79,062	12.05
Coastal zone	2,941,740	170	2,273,699	32.57
Rest of Bangladesh	8,643,868	175	6,618,115	53.00

Source: BBS, 1999. Census of Agriculture. Bangladesh Bureau of Statistics. Dhaka, July 1999.

APPENDIX-4: LIVESTOCK AND POULTRY POPULATION BY NUMBER, AREA AND SIZE OF HOLDINGS

Sl. No.	District	Area in Sq Km	HH number	Bovine animal			Goat			Sheep			Poultry Birds		
				Total No.	Per sq. km	Per holding	Total No.	Per sq. km	Per holding	Total No.	Per sq. km	Per holding	Total No.	Per sq.km	Per holding
1	2	3	4	5	6 (5/3)	7 (5/4)	8	9 (8/3)	10 (8/4)	11	12 (11/3)	13 (11/4)	14	15 (14/3)	16 (14/4)
1	Bagerhat	3,959	251,453	287,571	73	1.14	109,910	28	0.38	NA	NA	NA	2,041,220	516	8.12
2	Barguna	1,831	146,470	386,892	211	2.64	56,628	31	0.15	396	0.22	0.00	2,095,830	1145	14.31
3	Barisal	2,785	366,421	430,159	154	1.17	115,002	41	0.27	974	0.35	0.00	3,486,493	1252	9.51
4	Bhola	3,403	268,680	271,655	80	1.01	84,101	25	0.31	380	0.11	0.00	2,830,769	832	10.54
5	Chandpur	1,704	359,978	268,801	158	0.75	93,813	55	0.35	314	0.18	0.00	2,424,172	1423	6.73
6	Chittagong	5,283	565,703	548,533	104	0.97	111,393	21	0.20	4,247	0.80	0.01	2,647,344	501	4.68
7	Cox's Bazar	2,492	237,095	287,331	115	1.21	118,351	47	0.41	3,867	1.55	0.02	1,869,476	750	7.88
8	Feni	928	185,093	179,028	193	0.97	47,958	52	0.27	3,856	4.16	0.02	1,723,263	1857	9.31
9	Gopalganj	1,490	183,501	202,609	136	1.10	46,116	31	0.23	77	0.05	0.00	1,015,026	681	5.53
10	Jessore	2,567	390,716	557,818	217	1.43	409,152	159	0.73	240	0.09	0.00	3,592,332	1399	9.19
11	Jhalakhati	749	110,635	167,757	224	1.52	33,961	45	0.20	NA	NA	NA	1,009,195	1347	9.12
12	Khulna	4,394	211,196	341,697	78	1.62	126,065	29	0.37	15,558	3.54	0.07	1,495,879	340	7.08
13	Lakshmipur	1,456	237,716	128,653	88	0.54	46,568	32	0.36	NA	NA	NA	1,591,208	1093	6.69
14	Narail	990	106,380	160,821	162	1.51	70,362	71	0.44	443	0.45	0.00	812,105	820	7.63
15	Noakhali	3,601	373,120	392,357	109	1.05	105,127	29	0.27	4,057	1.13	0.01	4,409,224	1224	11.82
16	Patuakhali	3,221	243,330	548,778	170	2.26	120,498	37	0.22	6,832	2.12	0.03	2,894,803	899	11.90
17	Pirojpur	1,308	216,480	253,392	194	1.17	45,408	35	0.18	300	0.23	0.00	1,954,284	1494	9.03
18	Satkhira	3,858	306,877	378,693	98	1.23	242,308	63	0.64	25,418	6.59	0.08	1,908,570	495	6.22
19	Shariatpur	1,182	189,056	165,032	140	0.87	67,407	57	0.41	NA	NA	NA	1,554,579	1315	8.22
Total		47,201	4,949,900	5,957,577	126	1.20	2,050,128	43	0.34	66,959	1.42	0.01	41,355,772	876	8.35
Bangladesh		147,570	17,828,187	21,537,485	146	1.21	9,575,924	65	0.44	556,182	3.77	0.03	123,974,320	840	6.95

Source: BBS, 1999. Census of Agriculture, Bangladesh Bureau of Statistics, Dhaka, July 1999.