

SUPPORTING REPORT F

Socioeconomy and Domestic Water Usage

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F SOCIOECONOMY AND DOMESTIC WATER USAGE

F.1 Socio-economy

F.1.1 Administrative Structure and Boundaries

The whole territory of the nation of Bulgaria consists of 6 regions as North West Region, North Central Region and North East Region from the north-west to the north-eastward along the southern side of the Danube R. being boundary with Romania, South East Region, South Central Region and South West Region from the south-west to the south-eastward along the southern side of the Balkan Mountain Range running through the central part of the nation from the west to the east. Under those 6 regions, there are 27 districts and the Capital city of Sofia. South end of the nation abuts with Turkey and Greece. Each district consists of several municipalities, and city and/or villages are the lowest administrative units under the municipalities.

Based on Statistical Year Book issued by National Statistical Institute (NSI), total area of the nation is 111,001.9 km² and it consists of 63,764.8 km² of agricultural area, 37,157.5 km² of forest area, 4,603.4 km² of residential area (Settlements and other urbanized areas), 2,010.4 km² of water flows and water area, 2,710.9 km² of Territory for mining and quarrying raw materials and 754.9 km² of roads and infrastructural area.

F.1.2 Population

According to the Statistics, population of the nation has been increased by the year 1985 historically, but after that year, it was decreased as shown the following table (see Figure F.1.1 for its fluctuation pattern). These table and figure show a historical population trend based on the population census.

Historical Population Trend in the Nation of Bulgaria by Census Year

	1887	1892	1900	1905	1910	1920	1926	1934
Rural	593,547	652,328	742,435	789,689	829,522	966,375	1,130,131	1,302,551
Urban	2,560,828	2,658,385	3,001,848	3,245,886	3,507,991	3,880,596	4,348,610	4,775,388
Total	3,154,375	3,310,713	3,744,283	4,035,575	4,337,513	4,846,971	5,478,741	6,077,939
Share Rate of Urban Population to the Total Population	431.44%	407.52%	404.32%	411.03%	422.89%	401.56%	384.79%	366.62%

	1946	1956	1965	1975	1985	1992	2001
Rural	1,735,188	2,556,071	3,822,824	5,061,087	5,799,939	5,704,552	5,474,534
Urban	5,294,161	5,057,638	4,405,042	3,666,684	3,148,710	2,782,765	2,454,367
Total	7,029,349	7,613,709	8,227,866	8,727,771	8,948,649	8,487,317	7,928,901
Share Rate of Urban Population to the Total Population	305.11%	197.87%	115.23%	72.45%	54.29%	48.78%	44.83%

Source: "Statistical Yearbook", 2005, NSI.

This trend is still continuing to the year 2005 according to the said Statistics. However, the pattern of population increase/decrease is not the same for all the regions, districts and/or municipalities (see Table F.1.1). It may depend on their socio-economic background of each district and/or municipalities. Since the year 2001 till 2005, population of the nation has been still decreased as indicated in Table F.1.1. However, only the South West Region has been increased since 2001. In Table F.1.1, the

population trends of some municipalities and city as the Capital Sofia, the Municipality Blagoevgrad (Blagoevgrad) in South West Region and the Municipality Plovdiv (Plovdiv) in the South Central Region are indicated for reference. The population of the Capital Sofia has been constantly increased from 1,178,579 in 2001 to 1,231,622 in 2005. The other population trends of Blagoevgrad and Plovdiv fluctuate year by year, but during last several years (last 2 or 3 years), they have also been increased as shown in the table. Figures F.1.2 – F.1.4 illustrate population projection for the future based on the above data.

According to a survey result of NIS on medical expenditure, the average family size in Bulgaria is less than 3 persons. The following table shows annual fluctuation of family size in Bulgaria.

Fluctuation of Family Size in Bulgaria

	(Persons/HH)				
	2001	2002	2003	2004	2005
Fluctuation on Family Size	2.71	2.66	2.62	2.58	2.55

Source: NIS.

F.1.3 Economic Active Population (Labor Forces)

According to another statisticsⁱ, around half of the total population has shared by the economic active population since 2001. Unemployment rates have been decreased year by year since 2001. On the other hand, labour forces themselves have been decreased too (see Table F.1.2). The reason of decrease of labour forces comes from labour emigration mainly to the other counties as Russia according to information from some officials of the nation.

Nevertheless the labour forces have been decreased since 2001 because of immigration to the other countries as mentioned above, employment population among the labour forces has gradually been increased. Therefore, the unemployment rate has been drastically decreased from around 20 % in 2001 to 10 % in 2005 as a whole. However, the unemployment rate of 10 % seems to be still high.

Using these data on economic active population together with the population as mentioned in *Chapter F.1.2*, a number of workable persons per HH can be estimated as follows.

Number of Workable Persons per Household

	(Persons/HH)				
	2001	2002	2003	2004	2005
Number of Workable Persons per Household in the Nation	2.35	2.35	2.38	2.34	2.33
Share Rate to HH Members in Total in the Nation	86.57%	88.38%	90.58%	90.62%	91.34%

Share rate of workable persons to the average family size as mentioned in *Chapter F.1.2* has reached even by around 90 %. It means that, in almost of all the HHs, they are “both-working households”.

F.1.4 Gross Domestic Products (GDP)

The following table shows a summary of the Gross Domestic Products (GDP) and GDP per Capita at current price level in Bulgaria.

Actual Annual Increasing Rates of GDP and GDP per Capita in the Nation of Bulgaria

Description	(At current price)				
	2001	2002	2003	2004	Annual Average Increasing Rate
GDP (1,000 Levs)	29,709	32,335	34,547	38,275	8.82%
GDP per Capita (Levs/capita)	3,754	4,109	4,416	4,919	9.44%

Source: NSI.

Annual average increasing rates of GDP and GDP per Capita are high as 8.72 % and 9.44 % respectively based on the current rate. However, the actual annual increasing rates taking into account of the consumer price index (CPI) are almost of half of the said rates as show below.

Actual Annual Increasing Rates of GDP and GDP per Capita in the Nation of Bulgaria

Description	2002	2003	2004	Annual Average Increasing Rate
GDP Annual increasing rate	8.84%	6.84%	10.79%	8.82%
CPI	3.81%	5.64%	3.98%	4.48%
Actual annual increasing rate	5.02%	1.20%	6.82%	4.35%
GDP/capita				
Annual increasing rate	9.46%	7.47%	11.39%	9.44%
CPI	3.81%	5.64%	3.98%	4.48%
Actual annual increasing rate	5.64%	1.83%	7.41%	4.96%

Table F.1.3 shows detail of GDP and GDP per Capita by the regions and the districts.

F.1.5 Financial Status of the Government

In Bulgaria, the Government reports its financial status in 2 ways as (1) GFSM 2001 System (“Government Financial Statistics Manual 2001” System) recommended by the International Monetary Fund, and (2) the National Accounting System. And the finance of the Government consists of 3 categories as (i) the finance of the Central Government, (ii) the finance of the Local Government and (iii) the finance of Social Security. The overall finance of the Government is called as “the Finance of the General Government” consisting of the said 3 categories. Accordingly, “the Finance of the General Government” by means of the National Accounting System is to be used to grasp the overall domestic financial status of the Government by items. However, to grasp the international balance of payment, “the Finance of the General Government” by means of the GFSM 2001 System is to be used. The following table shows a summary of annual financial status of the General Government by means of GFSM 2001.

Consolidated Financial Status of the General Government by Means of GFSM 2001

	(mill. Levs)							
	1998	1999	2000	2001	2002	2003	2004	2005
CASH FLOWS FROM OPERATING ACTIVITIES:								
1. Cash receipts from operating activities	8,452	9,156	10,311	11,468	12,370	13,817	15,662	17,607
2. Cash payments for operating activities	7,468	8,349	9,656	10,413	11,662	12,906	13,912	14,957
3. Net cash inflow from operating activities (1-2)	984	808	654	1,055	708	911	1,751	2,650
CASH FLOWS FROM INVESTMENTS IN NONFINANCIAL ASSETS (NFAs):								
4. Net cash outflow from investments in nonfinancial assets	703	772	822	994	961	909	1,094	1,317
Cash surplus / deficit (1-2-4)	282	36	-168	61	-253	1	657	1,334
Net Acquisition of Financial Assets Other Than Cash	-296	-252	-260	-557	-1,223	-312	-1,230	-1,337

Source: Ministry of Finance.

Though the Government has suffered losses in 2 years since 1998 as Levs 168 million in 2000 and Levs 253 million in 2002, the financial status of the Government has been sound in general. However, from the viewpoint of “net acquisition of financial assets other than cash”, the Government has registered the deficits since 1998 till to date from the viewpoint of the international balance of payment.

On the other hand, to grasp actual revenue sources and expenditure items, the financial report by means of the National System is to be clearer than that by means of GFSM system. The following table shows a summary of the financial status by means of the National system.

Consolidated Financial Status of the General Government by Means of National System

	(mill. Levs)							
	1998	1999	2000	2001	2002	2003	2004	2005
Total Revenue and Grants	8,907	9,676	11,064	11,837	12,523	14,070	15,855	17,991
Total Expenditures	8,620	9,639	11,234	12,017	12,733	14,069	15,199	16,657
Balance (Deficit (-)/Surplus (+))	287	38	-170	-180	-209	1	656	1,334

Source: Ministry of Finance.

As shown in above 2 tables, there are some differences in balance in figures. It may be caused by different of classification systems of items of revenues and expenditures between the GFSM 2001 System and the National system.

The Government revenue consists of (1) tax revenue, (2) non-tax revenue and (3) grants. Among the revenues, the tax revenue is the highest in share, almost 80 %, to the revenue in total as shown in the following table.

Share Rates of Tax Revenue to the Revenue in Total

	1998	1999	2000	2001	2002	2003	2004	2005
Share Rate of Tax Revenue to the Revenue in Total	79.44%	77.31%	78.70%	77.64%	76.63%	78.99%	80.59%	80.51%

Figure F.1.5 shows share rates of each revenue item to the total revenue as of 2005.

On the other hand, the Government expenditure consists of (1) current expenditure and (2) Capital Expenditures and State Reserve Gain. The following table shows their share rates to the expenditure in total.

Share Rates of Expenditure in Each Item to the Expenditures in Total

	1998	1999	2000	2001	2002	2003	2004	2005
Current Expenditures	89.28%	87.98%	89.66%	89.71%	90.38%	90.34%	89.58%	87.48%
Capital Expenditures and State Reserve Gain	10.72%	12.02%	10.34%	10.29%	9.62%	9.66%	10.42%	12.52%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Furthermore, the current expenditure consists of (1) Compensation of Employees, (2) Maintenance and Operating, (3) Subsidies, (4) Interests and (5) Social Expenditures and Scholarships. Among them, the Social Expenditures and Scholarships shows the highest share rate as ranging from 30 % to 40 % or over, Maintenance and Operating shows the second highest as 30 %, and Compensation of Employees shows the third highest as ranging from 15 % to 20 % since 1998.

From the viewpoint of distribution of expenditure as mentioned above, it has made clear that how the Government has given priority to the social welfare and education.

Figure F.1.6 shows the share rates of expenditures in each item to the expenditure in total in 2005.

F.1.6 International Trade

In international balance of trade in Bulgaria, an excess of imports over exports has been continued since 1995 up to the present as shown in the following summary table.

International Balance of Trade

	(mill. EUR)										
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Export in Total	3,837	3,744	4,256	3,747	3,734	5,253	5,714	6,063	6,668	7,985	9,454
Import in Total	4,112	3,935	4,307	4,416	5,140	7,085	8,128	8,411	9,611	11,620	14,682
Balance of Trade	-275	-190	-50	-669	-1,406	-1,832	-2,414	-2,348	-2,942	-3,635	-5,228

Source: Bulgarian National Bank.

The greatest trading sum of Bulgaria is, in both the exports and imports, the one with EU countries which have been members prior to May 1, 2004 as France and so on (see Table F.1.4 and Figure F.1.7). On the other hand, from the viewpoint of category of commodities, the raw materials show the highest trading sums in both the export and import (see Table F.1.5). However, second highest commodities are the consumer goods in exports and investment goods in imports.

Figure F.1.8 shows a trading structure by category of commodities as of 2005.

F.1.7 Balance of Payment

The balance of payment of Bulgaria has registered deficits since 2001 because that the excess of imports over exports has been continued as discussed in previous chapter (see Table F.1.6).

F.1.8 Industrial Perspective

In Bulgaria, almost of 80 % of industrial output are coming from private sector as shown in the following table.

Output of Industrial Enterprises by Kind of Ownership

	(mill. Levs)			
	2001	2002	2003	2004
Output				
Public Sector	4,770	4,883	4,611	4,656
Private Sector	16,590	17,981	20,131	25,210
Total	21,360	22,864	24,742	29,866
Increasing Rate	-	7.04%	8.21%	20.71%
Share Rates of Outputs				
Public Sector	22.33%	21.36%	18.64%	15.59%
Private Sector	77.67%	78.64%	81.36%	84.41%
Total	100.00%	100.00%	100.00%	100.00%

Source: Statistical Yearbook of Bulgaria 2005.

The output of enterprise in Bulgaria are constantly increased from Levs F.260 million in 2001 to Levs 29,866 million in 2004. Especially, from 2003 to 2004, the increase of outputs was greater than that until previous year as around 21 %.

In the whole industrial status, the category of manufacturing has shared at around 80 % to the total industrial outputs, but, in case of limited ownership of the private sector, it shares at around 95 % to the total outputs since 2001 for both the cases of ownership (see Table F.1.7). If that be the case, what kind of manufacturing activities are there in Bulgaria? The main industrial activities in Bulgaria are (1) the manufacture of Food, Beverage and Tobacco, and (2) the manufacture of Basic Metals and Fabricated Metal Products as both 18 % to the total outputs as of 2004 (see Table F.1.8 and Figure F.1.9).

F.1.9 Water Sector Status

The following table shows a summary of “Total Available Water Volume in the Water Supply System” in Bulgaria.

Total Available Water Volume in the Water Supply System in Bulgaria

Water Distribution	(1,000 m ³ /year)				
	2000	2001	2002	2003	2004
Water Abstraction in Total	1,177,971	1,075,444	1,057,107	1,048,309	997,331
Surface Water	768,025	695,603	691,822	706,657	676,905
Rivers	60,535	53,220	57,053	48,136	43,608
Dams	528,682	479,806	495,224	505,799	491,478
Shaft, Kettle, Mining	131,895	120,475	100,344	111,969	99,480
Drainage	46,913	42,102	39,201	40,753	42,339
Under-Ground Water	409,946	379,841	365,285	341,652	320,426
Springs	129,558	123,748	129,523	116,065	103,343
Drilling Wells	280,388	256,093	235,762	225,587	217,083
Water Sent to the Other Public Water Works (-)	162,619	75,728	136,840	102,437	90,522
Water Received from the Other Public Water Works	184,156	94,051	157,148	133,289	105,655
Total Available Water Volume in the Water Supply System in Bulgaria	1,199,508	1,093,767	1,077,415	1,079,161	1,012,464

Source: Environmental Bulletin 2004 , Ministry of Environment and Water.

Both the “Water Abstraction Volume” and the “Total Available Water Volume” in the water supply system in Bulgaria has been gradually decreased from 1,178 million m³ in 2000 to 997 million m³ in 2004 and from around 1,200 million m³ in 2000 to 1,012 million m³ in 2004, respectively.

Figure F.1.10 shows share rates of water abstraction volume by surface water and ground water in 2004 based on the above table. And, in the surface water, share rates by sources in 2004 are as shown in Figure F.1.11 based also on the above table. As indicated in Figures F.1.10 and F.1.11, almost 70 % of “Water Abstraction in Total” is from ground water, and around three fourths of remaining surface water is abstracted from dams in 2004. Among the water abstraction volume in total, actual supplied water volume is as shown in the following table.

Supplied Water Volume by Treatment (Purification) Status

	(1,000 m ³ /year)				
	2000	2001	2002	2003	2004
Water with Treatment	446,183	407,949	376,863	383,707	376,845
Drinking Water with Treated for Disinfection	255,904	238,136	217,815	218,158	228,207
Drinking Water with Treated for Precipitation and Disinfection	5,255	4,096	3,525	3,560	6,306
Complete Treated Water for Drinking	185,024	165,717	155,523	161,989	142,332
Water without Any Treatment	21,817	16,165	15,837	14,111	12,010
Supplied Water Volume in Total	468,000	424,114	392,700	397,818	388,855

Source: Environmental Bulletin 2004 , Ministry of Environment and Water.

Figure F.1.12 shows share rates of water supply volume by treatment (purification) status in 2004 based on the above table. In total supplied water volume, only 37 % of the volume is purified completely for drinking in 2004 in Bulgaria.

Supplied water volume has also decreased year by year from 468,000 m³ in 2000 to 388,855 m³ in 2004 corresponding to the water abstraction volume as shown below.

Supplied Water Volume by Water Users

	(1,000 m ³ /year)				
	2000	2001	2002	2003	2004
By Industrial Water Users	83,990	69,982	70,183	69,065	66,036
For Drinking	62,569	55,900	54,496	55,099	54,107
For Industries	21,421	14,082	15,687	13,966	11,929
By Agricultural Water Users	1,819	1,656	1,786	1,569	3,793
For Drinking	1,699	1,541	1,684	1,471	3,712
For Agriculture	120	115	102	98	81
By Domestic Water Users for Households, Tourism, and Other Uses	382,191	352,476	320,731	327,184	319,026
For Drinking	381,915	350,508	320,684	327,139	319,026
For Other Purposes	276	1,968	47	45	0
Supplied Water Volume by Water Users in Total	468,000	424,114	392,700	397,818	388,855

Source: Environmental Bulletin 2004, Ministry of Environment and Water.

Against total available water volume in the water supply system in Bulgaria, almost 60 % or more of water has lost since 2000 till 2004 as shown below.

Water Loss in Bulgaria

	(1,000 m ³ /year)				
	2000	2001	2002	2003	2004
External Leakage for Water Sent to the Other Public Water Works	80,965	64,016	67,764	65,587	90,470
Internal Leakage for Water Abstracted and Received for the Other Public Water Works	650,543	604,096	616,951	615,756	522,925
Evaporation	-	-	-	-	10,216
Total Water Loss	731,508	668,112	684,715	681,343	623,611
Loss Rate	60.98%	61.08%	63.55%	63.14%	61.59%

Source: Environmental Bulletin 2004, Ministry of Environment and Water.

(Note) Water Loss incl. Loss between Intake Point and Purification Point.

By the way, the water sector status has varied by the Region. Table F.1.9 shows a variation of the water sector status in each Region in 2004. Figure F.1.13 illustrates share rates of the total available water volume by regions in 2004. In the South West Region including the capital city Sofia, the total available water volume shows the highest share rate as 33 %. In the supplied water volume in total, the distribution pattern is almost the same nevertheless there exists a little bit changing (see Figure F.1.14). Furthermore, a loss rate from the “total available water volume” to the “supplied water volume” is around 62 % as an average rate in the nation of Bulgaria ranging from around 59 % in the South West Region to 67 % in the North East Region. Further detail, it is ranging from 23 % in the Blagoevgrad District of the South West Region to 80 % in the Dobrich District of the North East Region.

F.1.10 Salary and Wages, and Family Status and Family Economy

Income and Family Status

Summary of average annual income by sources per household (HH) and that per capita since 2000 till 2004 is shown in Table F.1.10. From this table, average family size of household can be estimated in addition to the average income level per HH and that per capita as 2.77 persons/HH (= 6,356/2,466) in 2000, 2.71 persons/HH (= 4,532/1,672) in 2001, 2.66 persons/HH (= 5,556/2,085) in 2002, 2.62 persons/HH (= 5,887/2,244) in 2003 and 2.58 persons/HH (= 6,356/2,466) in 2004. Namely, the average family size in Bulgaria has been gradually decreased year by year with indicating that the family size

has become small year by year showing a trend toward the nuclear family. The amount of ordinary income by the compensation for working shares the highest rate, and this is quite in the natural order of things (see Figure F.1.15). On the other hand, Figure F.1.16 shows share rates of the amount in each income by kind of working in ordinary income in 2004. The amount of wages and salaries shares the highest rate as around 40 %, and also this is quite in the natural order of things. But, it must be noted that the amount of pensions shares the second highest rate as around of 22 %. The data have expressed by the amount of benefits, so that it is not exactly accuracy, but it may be said that around 22 % of the families are aging families in Bulgaria, or the around 22 % of family members are aged persons. This trend has been kept since 2000 as shown below.

Aging Rates in Bulgaria

	2000	2001	2002	2003	2004
Aging Rate	21.41%	23.73%	20.05%	20.62%	22.15%

Source: Statistical Yearbook of Bulgaria 2005.

By the way, the average annual incomes per HH and per capita in 2004 are 6,356 Levs and 2,466 Levs respectively (see Table F.1.10). This income level has varied by the Region.

A variation of the income level in each Region in 2004 is shown in Table F.1.11. In the South West Region including the capital city Sofia, nevertheless the total income levels are lower as 6,440 Levs/HH per year or 2,599 Levs/Capita per year than those as 7,306 Levs/HH per year or 2,985 Levs/Capita per year in the North West Region, the amount of wages and salaries shows the top as 2,792 Levs/HH per year or 1,127 Levs/Capita per year in the nation in 2004.

Expenditure

The amount of income is greater than the amount of expenditure as shown below.

Cash Balance of Income and Expenditure of Household in Bulgaria

	(Levs/year)				
	2000	2001	2002	2003	2004
<u>Average per Household</u>					
Income	4,610	4,532	5,556	5,887	6,356
Expenditure	4,018	4,043	4,556	4,861	5,332
Cash Balance	592	489	1,000	1,026	1,024
<u>Average per Capita</u>					
Income	1,664	1,672	2,085	2,244	2,466
Expenditure	1,450	1,492	1,710	1,853	2,068
Cash Balance	214	180	375	391	398

Source: Statistical Yearbook of Bulgaria 2005.

The amount of income is greater than the amount of expenditure.

According to the data shown in Table F.1.12, the amount of saving amounts per HH and per capita since 2000 are 95 Levs, 108 Levs, 115 Levs, 125 Levs and 142 Levs in HHs and 34 Levs, 40 Levs, 43 Levs, 47 Levs and 55 Levs in each year. Therefore, the amounts of cash in hand including saving in deposit are as shown in the following table together with their share rates.

Share Rate of Cash Balance to the Total Income in Household

	2000	2001	2002	2003	2004
Per HH	687	597	1,115	1,151	1,166
Per Capita	248	220	418	438	453
Share Rate to the Total Income	14.90%	13.17%	20.07%	19.55%	18.34%

Source: Statistical Yearbook of Bulgaria 2005.

The share rate of the cash in hand including saving amount has been increased from around 15 % in 2000 to the total income to around 18 % in 2004 to also total income nevertheless it fluctuates year by year. The following table shows the share rate of the amount of “Food and Non-Alcoholic Beverage” to the ordinary income in total, so called as “the Engel coefficient”.

Share Rate of the Amount of Food and Non-Alcoholic Beverage to Ordinary Income in Total in Household

	2000	2001	2002	2003	2004
Engel coefficient	38.78%	40.10%	34.71%	33.20%	33.28%

Source: Statistical Yearbook of Bulgaria 2005.

The rates of around 40 % in 2000 and 2001 are rather high comparing with those in developed countries, but around 35 % in 2002 2003 and 2004 are almost the same with those in developed countries.

The average annual expenditures per HH and per capita in 2004 are 5,332 Levs and 2,068 Levs respectively in the nation as indicated in the following table. These amounts of expenditure have also varied by the Region. Differences among the amounts of expenditures by the Regions may indicate those of prices of goods and services in each Region.

Amount of Expenditure for Food and Non-Alcoholic Beverage by Region in 2004

Income Source	Region						Whole Nation of Bulgaria
	North West	North Central	North East	South East	South Central	South West	
Average per Household	5,421	5,289	5,094	5,376	5,077	5,682	5,332
Average per Capita	2,215	2,079	1,905	2,126	1,875	2,293	2,068

Source: Statistical Yearbook of Bulgaria 2005.

F.1.11 Prices

Exchange Rate

Officially, Bulgaria has applied the fixed rate of local currency, Levs, against EURO, Austrian Schilling, Belgian Franc, Deutsche Mark, Spanish Peseta, Finnish Markka, French Franc, Greek Drachma, Irish Pound, Italian Lira, Luxembourg Franc, Dutch Guilder, and Portuguese Escudo since January 1, 1999 except Greek Drachma. The rate of Greek Drachma is fixed on January 1, 2001. However, the actual exchange rates of Levs against them in the foreign exchange market are slightly changed day by day being

linked with value of US Dollar because that the above currencies are floating linking with US Dollars. The flowing table shows a summary of historical exchange rates of Levs against main currencies.

Exchange Rates of Levs against Major Currencies

	(Levs/unit)								
	Nov.30, 2006	2005	2004	2003	2002	2001	2000	1999	1998
Against USD 1.00*	1.49215	1.68187	1.76036	1.83640	2.12334	2.18472	2.07697	1.73262	1.57511
Against JPY 100**	1.28600	1.40800	1.38600	1.46300	1.56400	1.68900	1.81800	1.86607	1.44893
Against EURO 1.00**	1.96621	1.96175	1.95794	1.95531	1.95436	1.96214	1.95872	1.91491	1.95428

Source: * Bulgarian National Bank.

** Foreign Exchange Currency Converter serviced by OANDA.

(Note) The rate against US Dollars is the annual average, but that against the other currencies is that at the end of Year.

And, the Government of Bulgaria has devalued the currency of Levs from 1,000 Levs to 1.00 Levs from July, 1999. Therefore, figures in 1998 and from January to June, 1999 shown in the above table are converted ones for the devalued rate.

Consumer Price Index

The following table shows a summary of consumer price index in general in Bulgaria.

Consumer Price Index in General in Bulgaria

	(1995 = 100)				
	2001	2002	2003	2004	2005
January	3,657	3,913	3,981	4,236	4,377
February	3,670	3,977	3,986	4,251	4,415
March	3,671	4,008	4,001	4,248	4,429
April	3,665	4,003	4,013	4,259	4,477
May	3,667	3,920	3,988	4,261	4,456
June	3,664	3,854	3,902	4,186	4,397
July	3,657	3,858	3,937	4,236	4,401
August	3,668	3,832	3,966	4,217	4,427
September	3,715	3,863	4,004	4,257	4,489
October	3,779	3,901	4,031	4,264	4,542
November	3,787	3,907	4,106	4,291	4,587
December	3,801	3,956	4,179	4,345	4,625

Source: Ministry of Finance.

On the basis of the data shown in the above table, the Bulgarian National Bank estimates the following deflator in Bulgaria.

Deflator and Its Annual Changes Based on Consumer Price Index in Bulgaria

	(June 1997 = 100)					
	2001	2002	2003	2004	2005	Average Annual Increasing Rate
Deflator	126.8	131.4	140.1	141.9	141.8	
Changes against Previous Year	3.01%	3.66%	6.62%	1.26%	-0.02%	2.91%

Source: Ministry of Finance.

Therefore, several socio-economic indicators like GNP, GDP and so on expressed by the monetary terms are to be revised by using these deflators for making clear actual figures. In other words, these are the actual consumer price indexes. The annual average consumer price in Bulgaria may be increased at 2.91 % in general from 2001 to 2005 as shown in the above table.

F.2 Status of Domestic Water Usage

The JICA Study Team has made “a Survey on Water Usage for Domestic Use” (hereinafter referred to as “Survey”) for around 3 weeks from Oct.12 to Oct. 31, 2006 for making clear an actual status of water use in domestic households in the targeted areas of the West Aegean River Basin and the East Aegean River Basin. This chapter is for reporting it results.

F.2.1 Methodology

The Survey is made by means of “an Interview Survey” using questionnaire sheets by ordering with outside specialists for 300 sampling points taking account to be equally distributed in the whole targeted areas and river courses. Figure F.2.1 indicates the sampling points.

F.2.2 General Information

(1) Status of Domestic Household with Family Scale

Average floor area of HHs in the targeted areas is 98 m² with ranging from 32 m² to 576 m² in both the basins as shown in Figure F.2.2.

Almost of all their houses are their own houses in the targeted areas as shown in the following table.

Ownership of Houses Interviewed

Target Area	Own House	Rented House	Total Number of
West and East Aegean River Basins	296	2	298
Share Rate	99%	1%	100%

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

And, their family scale is 3.37 persons per HH in the whole targeted areas. The following table shows its detail by river basins.

Family Scale by River Basin

River Basin	(persons/HH) Average Family
West Aegean River Basin	3.47
Mesta River Basin	3.67
Struma River Basin	3.23
Pirinska Bistritza River Basin	4.00
Dospat River Basin	5.50
East Aegean River Basin	3.34
Byala River Basin	3.00
Arda River Basin	3.36
Toundzha River Basin	3.41
Maritsa River Basin	3.35
West and East Aegean River Basins	3.37

Source:

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

(2) Status of Water Supply

Water they are consuming is mainly coming from the public water systems with 80 % in average in the whole targeted areas consisting of 90 % in the West Aegean river Basin and 77 % in the East Aegean River Basin as shown in the following table (see also Figure F.2.3).

Status of Water Supply by Water Source

River Basin	Public Water Supply	Only Private Water Source	Combination	Others (No Answer)	Total Number of Samples
West Aegean River Basin	77	0	9	0	77
East Aegean River Basin	216	5	59	2	221
Both the Basins	293	5	68	2	298

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

(3) Occupation

Households interviewed are not limited to have certain profession. Some HHs has no any working person, but they are living on a pension only. According to the results of the Survey, around 13 % of HHs is living on the pension in the West Aegean River Basin, 6 % in the East Aegean River Basin, and 8 % in both the targeted areas as shown in Figure F.2.4

Among all the persons who are gaining incomes including pensioners, 19 % of persons are getting pension income in whole the targeted areas shown in Figure F.2.5. On the other hand, number of working HHs with pensioners shares at 13 % to the total working HHs in the West Aegean River Basin, 21 % in the East Aegean River Basin, and 19 % in both the basins as shown in Figure F.2.6.

Occupation is consisting of i) Public Servant, ii) Private Office, iii) Commercial, iv) Workers in Factories, v) Employees in Hotels, and vi) Agriculture in the question set in the Survey. As a result, number of working persons engaging in agricultural sector is only 3 % in the whole targeted areas as shown in Figure F.2.7. Numbers of workers per HH are 1.16 persons/HH in the West Aegean River Basin, 1.19 persons/HH in the East Aegean River Basin, and 1.18 persons/HH in both the basins as shown in the following table.

Number of Workers per Household

River Basin	Public Servant	Private Office	Com-mercial Business	Worker for Factory	Hotel	Agri-culture	Total Workers	Total Number of Samples	Number of Workers per HH
West Aegean River Basin	18	32	11	22	6	0	89	77	1.16
East Aegean River Basin	63	103	22	66	1	9	264	221	1.19
Both the Basins	81	135	33	88	7	9	353	298	1.18

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

(4) Income

In the questionnaire, it is set that income categories as i) less than 500 Lev/HH per month, ii) 500 – 750 Levs/HH per month, iii) 750 – 1,000 Levs/HH per month, iv) 1,000 – 1,250 Levs/HH per month, v) 1,250 – 1,500 Levs/HH per month, vi) 1,500 – 2,000 Lev/HH per month, vii) 2,000 – 3,000 Levs/HH per month, viii) more than 3,000 Levs/HH per month. The said income level is different by number of working persons in HH. Figure F.2.8 show a number of each income category by the number of working persons.

Based on the above data, overall average income per HH per month is calculated at 592.48 Levs in the West Aegean River Basin, 493.33 Levs in the East Aegean River Basin, and 520.14 Levs in both the basins as shown in the following table.

Status of Income per HH by Number of Working Person of HH

River Basin	(Lev/HH per month)						Income with Pensioner Only	Overall Average
	Income/HH with One Working Person		Income/HH with Two Working Person		Income/HH with Three Working Person			
	Without Pensioner	With Pensioner	Without Pensioner	With Pensioner	Without Pensioner	With Pensioner		
West Aegean River Basin	601.34	625.09	832.26	854.43	-	-	166.27	592.48
East Aegean River Basin	474.51	533.23	574.70	595.21	425.00	-	196.88	493.33
Both the Basins	508.64	555.36	636.00	656.25	425.00	-	182.24	520.14

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

Income level of HH with pensioner(s) only is 166.27 Lev/HH per month in the West Aegean River Basin, 196.88 Lev/HH per month in the East Aegean River Basin, and 182.24 Lev/HH per month in both the basins as shown in Table F.2.1.

(5) Expenditure

Expenditure for foods and drinks in the targeted areas are ranging from 60.00/HH per month to 1,000.00 Levs/HH per month with 283.60 Levs/HH per month in average in the West Aegean River Basin, 80.00 Levs to 700.00 Levs with 271.22 Levs in average in the East Aegean River Basin, and 60.00 Levs to 1,000 Levs with 274.39 Levs in both the basins see Figure F.2.9).

Expenditure for fuel are ranging from 10.00/HH per month to 250.00 Levs/HH per month with 6F.16 Levs/HH per month in average in the West Aegean River Basin, 7.00 Levs to 360.00 Levs with 62.83 Levs in average in the East Aegean River Basin, and 7.00 Levs to 360 Levs with 62.77 Levs in both the basins (see Figure F.2.10).

And, expenditure for water are ranging from 5.00/HH per month to 80.00 Levs/HH per month with 17.07 Levs/HH per month in average in the West Aegean River Basin, 3.00 Levs to 150.00 Levs with 17.56 Levs in average in the East Aegean River Basin, and 3.00 Levs to 150 Levs with 17.47 Levs in both the basins (see Figure F.2.11).

The following table shows a summary of monthly income and monthly expenditure by items per HH by region together with share rates of expenditure to the total expenditure.

Average Income and Expenditure of Domestic Household per Month

(Lev/HH per month)

River Basin	Income/HH in Overall Average	Expenditure				
		Food and Drinks	Fuel	Water	Others	Total
West Aegean River Basin	592.48	283.60 47.87%	62.36 10.53%	17.07 2.88%	229.45 38.73%	592.48 100.00%
East Aegean River Basin	493.33	271.22 54.98%	62.83 12.74%	17.56 3.56%	141.73 28.73%	493.33 100.00%
Both the Basins	520.14	274.39 52.75%	62.77 12.07%	17.47 3.36%	165.52 31.82%	520.14 100.00%

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

(6) Water Utilization

Question set in the Survey is consisting of (i) use for drinking, (ii) for cooking, (iii) for toilet flushing (sanitary purpose), (iv) cloth washing, (v) for bathing (or for showering), (vi) for gardening, (vii) for car washing, (viii) for swimming pool, and (ix) for others. The following table shows a summary of the answers.

Status of Water Utilization

(Number of Answers)

River Basin	Number of Samples in Total	Drink- ing	Cook- ing	Toilet Flushing (Sanitary Purpose)	Cloth Washing	Bathing (or Shower- ing)	Gardenin g	Car Washing	Swimm- ing Pool	Others
West Aegean River Basin	77	61	74	68	77	77	18	3	0	0
East Aegean River Basin	221	166	208	181	216	215	30	0	0	0
Both the Basins	298	227	282	249	293	292	48	3	0	0

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

They are purchasing "bottled mineral water". However, it is not included in the above table. As shown in Table F.2.7, the water use for car washing is only 3 HHs in the West Aegean River Basin, and there is no any HHs to use water for swimming pool.

Each water use of the above may be illustrated as shown in Figure F.2.12.

(7) Sewerage System

Generally, sewerage system is consisting of (i) public sewerage system, (ii) septic tank, and (iii) pit latrine. Therefore, the question set of Survey is also the same composition. The following table shows a summary of the answers (see also Figure F.2.13).

Status of Sewerage System

River Basin	Public Sewerage System	Septic Tank	Pit Latrine	No Answer	Total Number of Answers
West Aegean River Basin	64	0	13	0	77
East Aegean River Basin	161	12	47	3	220
West and East Aegean River Basins	225	12	60	3	297

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

A diffusion rate of public sewerage system is 83 % in the West Aegean River Basin, 74 % in the East Aegean River Basin, and 76 % in the whole targeted areas.

(8) Water Flushing of Toilet

Water flushing of toilet in the targeted areas has been diff used by 87 % in the West Aegean River Basin, 80 % in the East Aegean River Basin, and 82 % in both the basins as of 2006. The following table shows a summary of answers (see also Figure F.2.14).

Status of Water Flushing of Toilet

River Basin	With Flushing	Without Flushing	No Answer	Total Number of Answers
West Aegean River Basin	67	10	0	77
East Aegean River Basin	177	43	3	220
West and East Aegean River Basins	244	53	3	297

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

F.2.3 Residents Who Are Customers of Public Water Supply System

(1) Consumption of Water Supplied by Public Water Supply System

Consumed water volumes in average are 15.00 m³ /HH per month in the West Aegean River Basin, 16.01 m³ /HH per month in the East Aegean River Basin, and 15.73 m³ /HH per month in both basins. However, the volumes of water consumed are depending upon seasons as summer season and winter season as shown in the following table.

Water Consumption of Public Water Users

River Basin	Water Consumption (m ³ /HH per month)			Number of No Answers	Total Number of Answers
	Summer	Winter	Average		
	West Aegean River Basin	17.55	12.45	15.00	3
East Aegean River Basin	18.77	13.25	16.01	33	190
Both the Basins	18.43	13.02	15.73	36	264

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

In summer season, the said water volume consumed is ranging from 5.00 m³ /HH per month to 50.00 m³ /HH per month with 17.55 m³ /HH per month in the West Aegean River Basin, from 3.00 m³ /HH per month to 200.00 m³ /HH per month with 18.77 m³ /HH per month in the East Aegean River Basin, and from 3.00 m³ /HH per month to 200.00 m³ /HH per month with 18.43 m³ /HH per month in both the basins.

On the other hand in winter season, the said water volume consumed is ranging from 2.00 m³ /HH per month to 30.00 m³ /HH per month with 12.45 m³ /HH per month in the West Aegean River Basin, from 2.00 m³ /HH per month to 60.00 m³ /HH per month with 13.25 m³ /HH per month in the East Aegean River Basin, and from 2.00 m³ /HH per month to 60.00 m³ /HH per month with 13.02 m³ /HH per month in both the basins (see Figure F.2.15).

(2) Expenditure for Water Supplied by Public Water Supply System

Average unit water charge of Public Water Supply System is 0.91 Levs/m³ in the West Aegean River Basin, 1.03 Levs/m³ in the East Aegean River Basin, and 1.00 Levs/m³ in both the basins.

Based on these unit water charge as mentioned above and consumed water volume mentioned in previous sub-clause, expenditure for water supplied by the Public Water Supply Systems may be calculated as 13.59 Levs/HH per month in the West Aegean River Basin, 16.52 Levs/HH per month in the East Aegean River Basin, and 15.75 Levs/HH per month in both the basins. The following table shows a summary of the calculation.

Average Expenditure for Water Supplied by Public Water Supply System together with Its Unit Water Charge

River Basin	Water Charge (Lev/HH per month)			Unit Water Charge of Public Water Supply (Lev/m ³)	Number of No Answers	Total Number of Answers
	Summer	Winter	Average			
	West Aegean River Basin	15.99	11.19	13.59	0.91	0
East Aegean River Basin	19.13	13.92	16.52	1.03	8	215
Both the Basins	18.30	13.20	15.75	1.00	8	292

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

As mentioned in the previous sub-clause, consumed water volumes are depending upon the season. Therefore, the expenditure for water is also different by the season. Figure F.2.16 illustrates a range of the expenditure by season and by the basins.

However, their expenditure for water excluding bottled mineral water is as 17.07 Levs/HH per month in the West Aegean River Basin, 17.56 Levs/HH per month in the West Aegean River Basin, and 17.47 Levs/HH per month in both the basins. Remaining amounts of 3.48 Levs/HH per month in the West Aegean River Basin, 1.04 Levs/HH per month in the West Aegean River Basin, and 1.72 Levs/HH per month in both the basins are for the other water sources such wells as shallow wells and/or deep wells. Almost all of that water is used for gardening or household plot for kitchen garden for agricultural products. The following table shows its detail.

Average Expenditure for Water Supplied by Public Water Supply System and Other Sources Together with Their Share Rate

River Basin	Expenditure for Water in Total without Bottled Mineral Water (Lev/HH.month)	Water Charge by Public Supply System (Lev/HH.month)	Other Water Source	
			Amount (Lev/HH month)	Share Rate (%)
West Aegean River Basin	17.07	13.59	3.48	20.41%
East Aegean River Basin	17.56	16.52	1.04	5.93%
Both the Basins	17.47	15.75	1.72	9.85%

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

Usage of ground water is at share rates of around 20 % in the West Aegean River Basin, 6 % in the East Aegean River Basin, and 10 % in both the basins.

(3) Satisfaction Level for Water Supplied by Public Water Supply System

Feeling of people on water supplied by Public Water Supply System, generally, consists of (i) quantity, (ii) water pressure, and (iii) quality. So, the question is also set on these 3 items in the Survey.

As a result, almost of 90 % of the people has a feeling of “insufficient” and “water pressure” on the quantity, and almost of 50 % of people has the other feeling of “not acceptable” on quality for the water supplied by the Public Water Supply System. Figure F.2.17 shows the results graphically. Share rate of people who have the feeling of “good” on water supplied by the Public Water Supply System is only around 25 % in the whole targeted areas.

(4) Bottled Mineral Water

Unit Prices of bottled mineral water are 0.39 Levs/ℓ in average in the West Aegean River Basin, 0.37 Levs/ℓ in the East Aegean River Basin, and 0.37 Levs/ℓ in overall average in both the basins. It means that the price of the mineral water is around 370 times to the water supplied by the Public Water Supply System in both the basins (= 0.37 Levs/ℓ × 1,000 ÷ 1.00 Lev/m³). The bottled mineral water is quite expensive comparing with the

water supplied by the Public Water Supply System. Nevertheless, they are purchasing it with a rate of around 80 % of HHs interviewed.

The following table shows a summary of volume bottled mineral water purchased and the amount of expenditure for purchasing it by river basins together with its unit prices in each basin.

Purchasing Volume of Bottled Mineral Water and Expenditure for Purchasing It together with Its Unit Prices by Basins

River Basin	Purchasing Volume (ℓ/month)	Unit Price of Bottled Mineral Water		Expenditure for Purchasing Bottled Mineral Water (Lev/HH per month)	Number of Answers
		Per Bottle	Per Litre		
		(Lev/ 1.5 ℓ bottle)	(Lev/ℓ)		
West Aegean River Basin	29.25	0.58	0.39	11.27	77
West Aegean River Basin	25.80	0.55	0.37	9.49	218
Both the Basin	26.59	0.56	0.37	9.85	295

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

Accordingly, total amounts of expenditures are 28.35 Lev/HH per month in the West Aegean River Basin, 27.05 Lev/HH per month in the East Aegean River Basin, and 27.32 Lev/HH per month in both the basins as shown in the following table.

Expenditure for Water in Grand Total

River Basin	(Lev/HH per month)				
	Expenditure for Water in Total without Bottled Mineral Water			Expenditure for Purchasing Bottled Mineral Water	Grand Total
	Total	Water Charge by Public Supply System	Other Water Source		
West Aegean River Basin	17.07	13.59	3.48	11.27	28.35
East Aegean River Basin	17.56	16.52	1.04	9.49	27.05
Both the Basins	17.47	15.75	1.72	9.85	27.32

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

The amounts of expenditure for the bottled mineral water are almost of 83 % of the amount of expenditure for water supplied by the Public Water Supply System in the West Aegean River Basin, 57 % in the East Aegean River Basin, and 63 % in both the basins in comparison, and share rates of it to the total expenditure for all the water is around 40 % in the West Aegean River Basin, 35 % in the East Aegean River Basin, and 36 % in both the basins as shown in the flowing table.

Status of Purchasing Bottled Mineral Water

River Basin	Rate	
	Against Expenditure for Water Supplied by Public Water Supply System	Share Rate against Expenditure for Water in Grand Total
West Aegean River Basin	82.97%	39.77%
East Aegean River Basin	57.43%	35.08%
Both the Basins	62.56%	36.06%

Source:

A result of "Water Utility Survey" made by JICA Study Team, 2006.

According to information of some people, introduction of the bottled mineral into Bulgaria is not so much old (introduction has been started only in several years ago), so that it may be curious for almost of the people in Bulgaria. Therefore, this trend of consumption of bottled mineral water may be reflective of this social background.

However, according to the information as indicated in the figure entitled as "Feeling of People on Water Supplied by Public Water Supply system" in this sub-clause above, around 50 % of the people are dissatisfied with quality of water supplied by the Public Water Supply System.

Furthermore, they are dissatisfied about "taste", "smelling", "color", "cloudy water" of the water supplied by the Public Water Supply System as indicated in Figure F.2.19. Some of them gave a comment to interviewers as "because of health" for purchasing the bottled mineral water. The trend of consumption of bottled mineral water may be reflective of these feelings of people in the targeted areas.

Share rates of the amount of expenditures for the bottled mineral water against expenditures in grand total for water are depending upon the income classification as shown in Table F.2.1. Figure F.2.20 indicates relationships between the amount of expenditure for the bottled mineral water and the income class. Relation curves as indicated in Figure F.2.20 mean that the amounts of expenditures may become great as the income class become high. In this case, numbers of HHs in the higher income class than the class "1,000 – 1,250 Levs/HH per month" are quite little as only 2 samples in the class of "1,250 – 1,500 Levs/HH per month" and only 2 samples in the class of "<3,000 Levs/HH per month", so that, these data may not be reliable. Therefore, the said relation curve is made from the data of "Pensioner(s) only" to the data of "1,000 – 1,250 Levs/HH per month".

(5) Willingness of People to Pay (WTP)

Question of willingness to pay is set as "Willingness to pay the water charge in case that the above problems are removed". It means that answers on this question are "water charge the people will pay in addition to current water charge they are paying under the existing status". The flowing table shows a summary of their answers.

Summary of Answers on Willingness to Pay

River Basin	Reason to Purchasing of Bottled Mineral	
	Number of Answers	Amount of Average Additional Willingnes s to Pay (Lev/HH per month)
West Aegean River Basin	53	2.72
East Aegean River Basin	179	2.02
Both the Basins	232	2.18

Source:

A result of "Water Utility Survey"
made by JICA Study Team, 2006.

The answers of the said “additional WTP” differs depending upon income class as from 0.00 Lev/HH per month to 30.00 Levs/HH per month with 2.72 Levs/HH per month in average as indicated in the above table in the West Aegean River Basin, from 0.00 Lev/HH per month to 20.00 Levs/HH per month with 2.02 Levs/HH per month in average in the East Aegean River Basin, and from 0.00 Lev/HH per month to 30.00/HH per month with 2.18 Levs/HH per month in average in both the basin as indicated in Figure F.2.21.

F.2.4 Status of Private Water Source

Rates of answers whop have private water source to total number of samples are 11.69 % in the West Aegean River Basin (9 HHs among 77 samples), 30.32 % in the East Aegean River Basin (67 HHs among 221 samples)), and 25.50 % in both the basins (76 HHs among 298 samples). Among them, number of HHs who has private water source(s) only is 5 HHs in the East Aegean River Basin. According to information from some people interviewed, they use the water from the private water sources for irrigation for household plots (kitchen garden) except HHs who have private water source only.

Kind of private water sources consists of “Deep Well”, “Shallow Well”, “River, Canal, and Pond”, “Hydrant” (Public Tap), and others (they call it as “Domestic Water”). The flowing table shows a summary of answers.

Summary of Answers on Private Water Sources

River Basin	Reason to Purchasing of Bottled Mineral Water								
	Number of Answers who Have Private Water Source	Number of HHs who Have Private Water Sources	Of which: Number of HHs who Have Private Water Source Only*	Rate of Answers who Have Private Water Source to Total Samples	Deep Well	Shallow Well	River, Canal, and Pond	Hydrant (Public Tap)	Domestic Water (domestic water for irrigation)
West Aegean River Basin	9	9	0	11.69%	6	1	2	0	0
East Aegean River Basin	67	64	5	30.32%	30	31	4	1	2
Both the Basins	76	73	5	25.50%	36	32	6	1	2

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

(Note)*: Refer to Table 2.4.3.

Figure F.2.22 illustrates a status of private water sources by basin.

As mentioned above, almost of water from the private water source is not for drinking but for irrigation for kitchen garden. For this purpose, around 80 % of HHs are feeling as “sufficient”, but only around 30 % of HHs are feeling as “good” and around 30 % of HHs as “acceptable” in water quality as a whole as indicated in Figure F.2.23.

References

ⁱ Statistics being opened to the public on the official web site of the National Statistic Institute (NSI) as of October 2006.

Supporting Report F

Tables

Table F.1.1 Population Projection in Bulgaria by Region, District and Municipality Since 2001

Region/District/Municipality	Index	2001	2002	2003	2004	2005
<u>North West Region</u>		531,149	521,951	512,593	503,065	493,708
Vidin	VID	128,050	125,158	122,609	120,192	117,809
Vratsa	VRC	223,358	219,830	216,388	212,656	209,124
Montana	MON	179,741	176,963	173,596	170,217	166,775
<u>North Central Region</u>		1,194,327	1,180,235	1,165,806	1,153,950	1,140,453
Veliko Tarnovo	VTR	291,121	289,229	287,011	285,677	283,599
Gabrovo	GAB	142,850	140,991	139,115	137,461	135,780
Lovech	LOV	167,931	165,456	163,342	161,190	159,214
Pleven	PVN	325,531	320,327	315,230	310,449	305,025
Ruse	RSE	266,894	264,232	261,108	259,173	256,835
<u>North East Region</u>		1,304,344	1,294,249	1,285,803	1,278,112	1,270,018
Varna	VAR	461,174	460,001	458,661	458,392	457,922
Dobrich	DOB	213,325	210,635	208,469	206,893	205,541
Razgrad	RAZ	144,818	143,129	142,388	140,743	139,094
Silista	SLS	140,784	138,994	137,424	135,701	134,093
Targovishte	TGV	140,860	139,600	138,160	136,806	135,262
Shemen	SHU	203,383	201,890	200,701	199,577	198,106
<u>South East Region</u>		793,899	788,285	782,653	777,836	774,538
Burgas	BGS	422,458	421,049	419,925	418,925	418,750
Sliven	SLV	217,226	215,443	213,194	211,005	209,694
Yambol	JAM	154,215	151,793	149,534	147,906	146,094
<u>South Central Region</u>		1,969,595	1,956,913	1,944,382	1,933,271	1,921,178
Kardzhali	KRZ	163,341	162,332	161,002	159,878	158,541
Pazardzhik	PAZ	308,719	305,790	303,246	300,092	297,781
Plovdiv	PDV	714,779	712,702	710,958	709,861	707,570
Municipality Plovdiv	PDV22	340,122	340,475	340,320	341,464	341,873
Smolyan	SML	138,802	137,005	135,029	133,015	131,010
Stara Zagora	SZR	368,771	366,636	364,051	362,090	360,203
Haskovo	HKV	275,183	272,448	270,096	268,335	266,073
<u>South West Region</u>		2,097,781	2,104,208	2,110,036	2,114,815	2,118,855
Blagoevgrad	BLG	339,790	336,988	335,638	334,907	333,577
Municipality Blagoevgrad	BLG03	78,343	77,713	77,346	77,422	77,462
Kyustendil	KNL	160,702	158,746	156,376	154,468	152,714
Pernik	PER	148,251	146,431	144,104	142,251	140,981
Sofia Capital	SOF	1,178,579	1,194,164	1,208,930	1,221,157	1,231,622
Sofia	SFO	270,459	267,879	264,988	262,032	259,961
Whole the Nation of Bulgaria		7,891,095	7,845,841	7,801,273	7,761,049	7,718,750

(Note) Figures in each year are those at the end (Dec.31) of the year.

Source: "Statistical Yearbook", 2004, 2005, NSI, the Republic of Bulgaria.

Table F.1.2 Economic Active Population in Whole the Nation of Bulgaria by Regions

(Unit: 1,000)

Region/Items	2001	2002	2003	2004	2005
<u>North West Region</u>					
Labor Force in Total	214	205	188	185	176
Employment	154	150	157	157	152
Unemployment	61	54	31	27	24
Unemployment Rate	28.26%	26.55%	16.48%	14.74%	13.62%
<u>North Central Region</u>					
Labor Force in Total	489	484	470	466	465
Employment	393	398	406	412	415
Unemployment	97	86	64	54	50
Unemployment Rate	19.76%	17.71%	13.52%	11.67%	10.78%
<u>North East Region</u>					
Labor Force in Total	564	561	543	552	555
Employment	428	438	438	455	481
Unemployment	136	123	105	97	74
Unemployment Rate	24.10%	21.91%	19.39%	17.59%	13.27%
<u>South East Region</u>					
Labor Force in Total	326	329	326	326	320
Employment	246	257	273	282	289
Unemployment	80	71	53	44	31
Unemployment Rate	24.59%	21.73%	16.31%	13.49%	9.60%
<u>South Central Region</u>					
Labor Force in Total	822	807	793	807	804
Employment	667	670	705	722	724
Unemployment	154	137	88	85	80
Unemployment Rate	18.76%	16.96%	11.09%	10.51%	10.00%
<u>South West Region</u>					
Labor Force in Total	947	947	964	987	995
Employment	811	826	856	894	920
Unemployment	136	121	108	92	76
Unemployment Rate	14.37%	12.81%	11.23%	9.32%	7.60%
<u>Whole the Nation of Bulgaria</u>					
Labor Force in Total	3,363	3,332	3,283	3,322	3,314
Employment	2,699	2,740	2,834	2,922	2,980
Unemployment	664	593	449	400	335
Unemployment Rate	19.74%	17.78%	13.68%	12.03%	10.09%

(Note) Figures in each year are those at the end (Dec.31) of the Year.

Source: NSI.

Table F.1.3 Gross Domestic Products in the Nation by Regions and Districts

Region/District	Gross Domestic Products (GDP)				GDP per Capita			
	(1,000 Levs)				(Levs/capita)			
	2001	2002	2003	2004	2001	2002	2003	2004
<u>North West Region</u>	1,893	1,916	2,003	2,043	3,537	3,638	3,873	4,023
Vidin	362	379	389	408	2,799	2,999	3,140	3,363
Vratsa	1,051	1,015	1,083	1,063	4,673	4,582	4,964	4,954
Montana	480	521	532	572	2,652	2,918	3,035	3,326
<u>North Central Region</u>	3,883	4,224	4,208	4,511	3,232	3,560	3,587	3,890
Veliko Tarnovo	911	1,050	1,007	1,093	3,114	3,618	3,497	3,819
Gabrovo	533	594	577	652	3,705	4,193	4,118	4,716
Lovech	547	569	593	628	3,237	3,412	3,606	3,872
Pleven	1,016	1,047	1,033	1,058	3,099	3,247	3,252	3,382
Ruse	876	964	998	1,079	3,265	3,632	3,799	4,149
<u>North East Region</u>	4,283	4,499	4,848	5,307	3,273	3,464	3,758	4,140
Varna	1,874	1,982	2,135	2,449	4,057	4,302	4,648	5,341
Dobrich	626	646	727	780	2,917	3,048	3,470	3,758
Razgrad	437	449	494	504	3,007	3,118	3,463	3,559
Silista	414	415	421	443	2,924	2,970	3,044	3,247
Targovishte	373	411	410	446	2,636	2,933	2,949	3,242
Shemen	560	597	661	685	2,744	2,946	3,284	3,422
<u>South East Region</u>	2,527	2,674	2,897	3,269	3,174	3,380	3,689	4,190
Burgas	1,538	1,573	1,778	2,030	3,634	3,728	4,229	4,839
Sliven	575	634	653	739	2,640	2,933	3,046	3,482
Yambol	415	467	466	501	2,670	3,052	3,093	3,370
<u>South Central Region</u>	6,235	6,507	7,131	7,778	3,157	3,315	3,656	4,012
Kardzhali	412	427	528	569	2,521	2,624	3,267	3,547
Pazardzhik	716	808	899	986	2,311	2,634	2,953	3,268
Plovdiv	2,239	2,358	2,582	2,967	3,129	3,304	3,627	4,176
Smolyan	435	444	461	507	3,117	3,225	3,389	3,781
Stara Zagora	1,651	1,654	1,767	1,792	4,465	4,499	4,838	4,935
Haskovo	781	815	893	957	2,824	2,975	3,293	3,557
<u>South West Region</u>	10,889	12,515	13,459	15,367	5,193	5,951	6,388	7,274
Blagoevgrad	934	992	1,192	1,344	2,741	2,933	3,544	4,010
Kyustendil	558	575	665	734	3,452	3,597	4,221	4,720
Pernik	436	524	473	623	2,929	3,552	3,256	4,354
Sofia Capital	8,099	9,429	9,972	11,393	6,898	7,938	8,299	9,377
Sofia	862	995	1,158	1,272	3,174	3,692	4,345	4,828
Whole the Nation of Bulgaria	29,709	32,335	34,547	38,275	3,754	4,109	4,416	4,919

Source: NSI.

Table F.1.4 International Balance of Trade by Main Trade Region

	(mill. EUR)										
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Exports	3,837	3,744	4,256	3,747	3,734	5,253	5,714	6,063	6,668	7,985	9,454
EU countries - 15 ^{1/}	1,507	1,499	1,881	1,889	1,942	2,684	3,129	3,376	3,770	4,332	4,875
EU countries - 10 ^{2/}	109	100	147	207	141	172	195	218	240	322	470
Europe ^{3/}	615	601	600	381	321	277	309	296	231	294	324
Balkan countries ^{4/}	684	645	643	515	624	1,206	1,014	1,120	1,245	1,632	2,055
America	222	177	211	158	199	296	386	387	392	461	423
Asia	444	471	478	302	240	334	308	294	364	479	602
Other countries	256	251	296	296	267	286	373	371	426	465	705
Imports	4,112	3,935	4,307	4,416	5,140	7,085	8,128	8,411	9,611	11,620	14,682
EU countries - 15 ^{1/}	1,532	1,409	1,600	1,994	2,486	3,119	4,011	4,229	4,767	5,596	6,438
EU countries - 10 ^{2/}	137	130	176	199	267	378	436	450	552	688	846
Europe ^{3/}	1,505	1,469	1,508	1,155	1,267	2,031	2,001	1,621	1,723	2,119	3,036
Balkan countries ^{4/}	165	175	188	228	264	544	547	648	899	1,155	1,616
America	206	222	357	304	302	432	435	414	530	734	1,018
Asia	305	209	279	319	341	356	539	636	957	1,120	1,453
Other countries	263	321	198	219	213	225	159	413	182	207	275
Balance of Trade	-275	-190	-50	-669	-1,406	-1,832	-2,414	-2,348	-2,942	-3,635	-5,228

Source: Bulgarian National Bank.

(Note) 1/: Includes the EU member countries prior to May 1, 2004. 2/: Includes the new EU member countries accepted after May 1, 2004. 3/: Includes Russia, Ukraine, Switzerland, Gibraltar (GB), Moldova, Belarus, Norway, Lichtenstein, San Marino, Iceland and Monaco. 4/: Includes Turkey, Romania, Serbia and Montenegro, Macedonia, Albania, Croatia and Bosna and Herzegovina.

Table F.1.5 International Trade by Category of Commodities

	(mill. EUR)										
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Exports	3,837	3,744	4,256	3,747	3,734	5,253	5,714	6,063	6,668	7,985	9,454
Consumer goods	1,002	1,072	1,175	1,163	1,249	1,564	1,917	2,134	2,441	2,623	2,729
Raw materials	2,038	1,857	2,112	1,732	1,567	2,322	2,331	2,535	2,759	3,478	4,056
Investment goods	535	566	625	601	571	600	699	802	912	1,075	1,448
Mineral fuels, oils and electricity	263	249	345	252	346	767	767	591	557	809	1,222
Import	4,112	3,935	4,307	4,416	5,140	7,085	8,128	8,411	9,611	11,620	14,682
Consumer goods	366	270	291	628	693	864	1,140	1,253	1,476	1,895	2,259
Raw materials	1,566	1,538	1,851	1,792	1,886	2,557	3,130	3,266	3,849	4,602	5,284
Investment goods	775	734	731	943	1,407	1,729	2,038	2,110	2,466	3,085	4,047
Mineral fuels, oils and electricity	1,405	1,393	1,433	1,053	1,154	1,935	1,821	1,675	1,690	1,942	2,960
Other Imports *	0	0	0	0	0	0	0	107	129	96	133
Balance of Trade	-275	-190	-50	-669	-1,406	-1,832	-2,414	-2,348	-2,942	-3,635	-5,228

Source: Bulgarian National Bank.

* In accordance with changes in The Customs Tariff, since 1 January 2002.

Table F.1.6 Balance of Payment of Bulgaria

	(mill.EURO)				
	2001	2002	2003	2004	2005
Current Account	-855	-402	-972	-1,131	-2,531
Trade Balance	-1,778	-1,878	-2,426	-2,953	-4,369
Exports, f.o.b.	5,714	6,063	6,668	7,985	9,454
Exports, f.o.b. (year over year percentage change)	8.78	6.10	9.98	19.75	18.40
Imports, f.o.b.	7,493	7,941	9,094	10,938	13,823
Imports, f.o.b. (year over year percentage change)	14.69	5.98	14.52	20.28	26.37
Capital and Financial Account	755	1,843	2,325	2,911	2,874
Financial Account	755	1,843	2,325	2,911	2,875
Foreign Direct Investment	903	980	1,851	2,727	1,789
Foreign Direct Investment/Current Account Deficit (%)	105.64	243.47	190.32	241.09	70.70
Portfolio Investment - Assets	-25	227	-69	-1	-8
Portfolio Investment - Liabilities	119	-326	-122	-562	-749
Other investments - Assets	-117	332	229	-753	124
Other investments - Liabilities	-115	659	460	1,983	1,652
BNB Foreign exchange reserves/imports of GNFS (in months)	5	6	6	6	5

Source: Bulgarian National Bank.

(Note) BNB means the Bulgarian National Bank.

Table F.1.7 Output of Industrial Enterprises by Industrial Origin

	(mill. Levs)			
	2001	2002	2003	2004
Output				
Mining and Quarrying	1,017	996	1,037	1,329
of which "Private Sector"	569	598	611	923
Manufacturing	17,042	17,963	19,794	24,351
of which "Private Sector"	15,838	17,147	19,026	23,617
Electricity, Gas and Water supply	3,301	3,906	3,911	4,186
of which "Private Sector"	183	236	494	670
Total	21,360	22,865	24,742	29,866
of which "Private Sector"	16,590	17,981	20,131	25,210
Share Rates of Outputs				
Mining and Quarrying	4.76%	4.36%	4.19%	4.45%
of which "Private Sector"	3.43%	3.33%	3.04%	3.66%
Manufacturing	79.78%	78.56%	80.00%	81.53%
of which "Private Sector"	95.47%	95.36%	94.51%	93.68%
Electricity, Gas and Water supply	15.45%	17.08%	15.81%	14.02%
of which "Private Sector"	1.10%	1.31%	2.45%	2.66%
Total	100.00%	100.00%	100.00%	100.00%
of which "Private Sector"	100.00%	100.00%	100.00%	100.00%

Source: Statistical Yearbook of Bulgaria 2005.

Table F.1.8 Output of Industrial Enterprises by Industrial Sub-Origin

	(mill. Levs)			
	2001	2002	2003	2004
Mining and Quarrying of Energy Producing Materials	434	433	474	532
Mining and Quarrying, except Energy Producing Materials	583	563	563	798
Manufacture of Food Products, Beverages and Tobacco	3,567	3,789	4,122	4,671
Manufacture of Textiles and Textile Products	1,340	1,774	2,061	2,358
Manufacture of Leather and Leather Products	198	221	257	210
Manufacture of Wood and Wooden Products	296	351	408	536
Manufacture of Pulp, Paper and Paper Products, Publishing and Printing	679	844	958	1,059
Manufacture of Coke, Refined Petroleum Products	n.a.	n.a.	n.a.	n.a.
Manufacture of Chemicals, Chemical Products and Man-Made Fibres	1,643	1,500	1,502	1,557
Manufacture of Rubber and Plastic Products	391	476	598	718
Manufacture of Other Non-Metalic Mineral Products	768	866	956	1,242
Manufacture of Basic Metals and Fabricated Metal Products, except Machinery	2,350	2,282	2,794	4,627
Manufacture of Machinery and Equipment, N.E.C.	1,225	1,348	1,479	1,755
Manufacture of Electrical and Optical Equipment	872	989	1,081	1,110
Manufacture of Transport Equipment	297	300	334	420
Manufacture, N.E.C.	n.a.	n.a.	n.a.	n.a.
Electricity, Gas and Water Supply	3,301	3,906	3,911	4,186
Total	21,360	22,864	24,742	29,866

Source: Statistical Yearbook of Bulgaria 2005.

Table F.1.9 Water Sector Status by Regions and Districts in 2004

(1,000 m³/year as of 2004)

Region/District	Index	Water Abstracted					Total Available Water Volume	Supplied Water Volume in Total	Water Loss Rate Including the Loss from Intake Purification Point	Average Price of Drinking Water for Household (Levs/m ³)	
		Surface Water	Ground Water	Water Volume Sent to Other Public Water Works	Water Volume Received from Other Public Water Works	Water Volume from Other Public Water Works				Net Unit Price without VAT	Gross Unit Price with VAT
North West Region		44,802	9,408	20,366	20,233	54,077	20,510	62.07%	0.82	0.99	
Vidin	VID	5,657	1,825	0	174	7,656	4,116	46.24%	0.92	1.10	
Vrtsa	VRC	7,420	5,131	0	18,856	31,407	10,262	67.33%	0.82	0.99	
Montana	MON	31,725	2,452	20,366	1,203	15,014	6,132	59.16%	0.76	0.91	
North Central Region		110,133	36,758	18,782	18,923	147,032	57,096	61.17%	0.84	1.02	
Veliko Tarnovo	VTR	42,654	1,846	1,927	0	42,573	13,107	69.21%	0.89	1.07	
Gabrovo	GAB	26,815	3,231	632	2,521	31,935	6,910	78.36%	0.97	1.17	
Lovech	LOV	6,024	24,234	16,223	3,088	17,123	7,476	56.34%	0.77	0.92	
Pleven	PVN	12,469	2,448	0	13,179	28,096	15,216	45.84%	0.92	1.11	
Ruse	RSE	22,171	4,999	0	135	27,305	14,387	47.31%	0.70	0.84	
North East Region		47,421	72,833	314	42,137	162,077	53,528	66.97%	0.98	1.17	
Varna	VAR	7,932	21,914	0	42,120	71,966	25,039	65.21%	0.74	0.88	
Dobrich	DOB	3,769	38,105	0	0	41,874	8,417	79.90%	1.20	1.44	
Razgrad	RAZ	8,503	5,373	140	17	13,753	5,330	61.24%	1.33	1.60	
Silista	SLS	7,449	2,755	0	0	10,204	4,286	58.00%	1.25	1.50	
Targovishte	TGV	8,188	971	174	0	8,985	2,610	70.95%	1.18	1.42	
Shemen	SHU	11,580	3,715	0	0	15,295	7,846	48.70%	1.05	1.25	
South East Region		129,695	16,407	45,423	2,868	103,547	40,260	61.12%	0.79	0.95	
Burgas	BGS	100,378	2,700	42,258	2,380	63,200	26,965	57.33%	0.71	0.85	
Sliven	SLV	27,759	3,281	3,165	488	28,363	7,378	73.99%	0.92	1.10	
Yambol	JAM	1,558	10,426	0	0	11,984	5,917	50.63%	1.00	1.20	
South Central Region		41,479	163,998	468	5,041	210,050	79,807	62.01%	0.78	0.93	
Kardzhali	KRZ	9,166	561	0	0	9,727	5,394	44.55%	0.80	0.96	
Pazardzhik	PAZ	4,464	26,448	74	283	31,121	11,841	61.95%	0.55	0.65	
Plovdiv	PDV	13,628	79,127	0	1,261	94,016	33,284	64.60%	0.60	0.72	
Smolyan	SML	2,640	6,230	0	0	8,870	4,328	51.21%	0.78	0.93	
Stara Zagora	SZR	5,159	39,539	215	3,165	47,648	15,667	67.12%	1.08	1.29	
Haskovo	HKV	6,422	12,093	179	332	18,668	9,293	50.22%	1.17	1.41	
South West Region		303,376	21,022	5,169	16,453	335,682	137,654	58.99%	0.48	0.57	
Blagoevgrad	BLG	15,898	5,679	690	885	21,772	16,716	23.22%	0.41	0.49	
Kyustendil	KNL	12,467	1,118	78	1,724	15,231	5,688	62.66%	0.73	0.88	
Pernik	PER	25,330	7,767	504	504	33,097	11,859	64.17%	0.58	0.70	
Sofia Capital	SOF	242,553	23	3,897	8,067	246,746	92,218	62.63%	0.45	0.54	
Sofia	SFO	7,128	6,435	0	5,273	18,836	11,173	40.68%	0.54	0.65	
Whole the Nation of Bulgaria		676,906	320,426	90,522	105,655	1,012,465	388,855	61.59%	0.71	0.85	

Source: Environmental Bulletin 2004 , Ministry of Environment and Water.

Table F.1.10 Average Annual Income per Household and per Capita

	(Levs/year)				
	2000	2001	2002	2003	2004
<u>Average per Household</u>					
Ordinary Income	4,360	4,307	5,289	5,584	5,925
Wages and Salaries	1,695	1,711	1,978	2,234	2,382
Other Earnings	230	218	226	214	232
Entrepreneurship	194	179	226	234	233
Property Income	33	30	34	32	43
Unemployment Benefits	49	50	43	30	27
Pensions	934	1,022	1,061	1,152	1,312
Family Allowance	35	29	26	32	39
Other Social Benefits	51	56	86	70	93
Households Plot	727	644	1,043	1,017	958
Property Sale	20	19	25	37	28
Miscellaneous	392	349	541	532	578
Interest Income	153	128	159	140	216
Loans and Credits	83	88	99	151	206
Loans Repaid	14	9	9	12	9
Total	4,610	4,532	5,556	5,887	6,356
<u>Average per Capita</u>					
Ordinary Income	1,574	1,589	1,985	2,129	2,298
Wages and Salaries	612	631	742	852	924
Other Earnings	83	80	85	82	90
Entrepreneurship	70	66	85	89	90
Property Income	12	11	13	12	17
Unemployment Benefits	18	19	16	11	10
Pensions	337	377	398	439	509
Family Allowance	13	11	10	12	15
Other Social Benefits	19	21	32	27	36
Households Plot	262	238	392	388	372
Property Sale	7	7	9	14	11
Miscellaneous	141	128	203	203	224
Interest Income	55	47	60	52	84
Loans and Credits	30	32	37	58	80
Loans Repaid	5	4	3	5	4
Total	1,664	1,672	2,085	2,244	2,466

Source: Statistical Yearbook of Bulgaria 2005.

Table F.1.11 Average Annual Income Level by Region in 2004

Income Source	Region						(Levs/year)
	North	North	North	South	South	South	Whole Nation of Bulgaria
	West	Central	East	East	Central	West	
Average per Household							
Ordinary Income	6,747	5,905	5,848	5,640	5,831	5,960	5,925
o.w. Wages/Salaries	1,902	2,162	2,301	2,373	2,255	2,792	2,382
Interest Income	295	135	212	332	202	213	216
Loans and Credits	247	297	142	214	114	259	206
Loans Repaid	17	12	8	10	6	8	9
Total	7,306	6,349	6,210	6,196	6,153	6,440	6,356
Average per Capita							
Ordinary Income	2,757	2,321	2,186	2,230	2,154	2,405	2,298
o.w. Wages/Salaries	777	850	860	938	833	1,127	924
Interest Income	120	53	79	131	75	86	84
Loans and Credits	101	117	54	85	42	105	80
Loans Repaid	7	5	3	4	2	3	4
Total	2,985	2,496	2,322	2,450	2,273	2,599	2,466

Source: Statistical Yearbook of Bulgaria 2005.

Table F.1.12 Average Annual Expenditure per Household and per Capita

	(Levs/year)				
	2000	2001	2002	2003	2004
Average per Household					
Current Expenditure	3,832	3,850	4,326	4,585	5,021
Consumable Good and Services	3,254	3,315	3,744	3,970	4,285
Food and Non-Alcoholic Beverage	1,691	1,727	1,836	1,854	1,972
Alcoholic Beverage and tobacco	147	142	169	186	211
Clothing and Footwear	154	137	158	161	168
Housing, Water, Electricity, Gas and Other Fuels	469	465	588	644	694
Furnishing and Maintenance of House	109	110	129	150	161
Health	139	150	176	199	226
Transport	198	204	222	245	266
Communications	98	128	182	214	243
Recreation, Culture and Education	124	124	141	162	174
Miscellaneous Goods and Services	125	128	143	155	170
Taxes	142	120	128	142	148
Household Plot	113	119	130	119	121
Other Expenditure	323	296	324	354	467
Saving	95	108	115	125	142
Purchase of Currency and Securities	2	1	1	5	3
Debt Paid Out and Loan Granted	89	84	114	146	166
Total	4,018	4,043	4,556	4,861	5,332
Average per Capita					
Current Expenditure	1,383	1,420	1,624	1,748	1,948
Consumable Good and Services	1,174	1,223	1,405	1,514	1,662
Food and Non-Alcoholic Beverage	610	637	689	707	765
Alcoholic Beverage and tobacco	53	52	63	71	82
Clothing and Footwear	56	51	59	61	65
Housing, Water, Electricity, Gas and Other Fuels	169	171	221	246	269
Furnishing and Maintenance of House	39	41	48	57	63
Health	50	55	66	76	88
Transport	72	75	83	93	103
Communications	35	47	68	81	94
Recreation, Culture and Education	45	46	53	62	68
Miscellaneous Goods and Services	45	48	55	60	65
Taxes	51	44	48	54	58
Household Plot	41	44	49	45	47
Other Expenditure	117	109	122	135	181
Saving	34	40	43	47	55
Purchase of Currency and Securities	1	1	0	2	1
Debt Paid Out and Loan Granted	32	31	43	56	64
Total	1,450	1,492	1,710	1,853	2,068

Source: Statistical Yearbook of Bulgaria 2005.

Table F.2.1 Share Rate of Expenditure for Bottled Mineral Water to Expenditure for Water in Grand Total

River Basin/ Income Class	Expenditure for Water Supplied by Public Water Supply System	Expenditure for Bottled Mineral Water	Total Amount of Expenditure for Water	(Lev/HH per month)	
				Calculated Share Rate of Expenditure for Bottled Mineral Water against Total Amount of Expenditure for Water (%)	Modified Share Rate of Expenditure for Bottled Mineral Water against Total Amount of Expenditure for Water (%)
West Aegean River Basin					
Pensioner(s) Only	19.73	3.15	22.88	13.78%	10.25%
>500	15.19	4.93	20.12	24.48%	28.24%
500 - 750	20.71	9.75	30.46	32.02%	38.76%
750 - 1,000	13.67	14.56	28.23	51.59%	46.23%
1,000 - 1,250	10.00	11.57	21.57	53.63%	52.02%
1,250 - 1,500	0.00	0.00	0.00	0.00%	56.75%
1,500 - 2,000	15.00	3.86	18.86	20.45%	60.76%
2,000 - 3,000	0.00	0.00	0.00	0.00%	64.22%
<3,000	24.00	21.20	45.20	46.91%	67.28%
East Aegean River Basin					
Pensioner(s) Only	11.37	3.43	14.80	23.19%	21.18%
>500	15.21	6.24	21.44	29.09%	30.12%
500 - 750	20.45	9.27	29.71	31.19%	35.35%
750 - 1,000	18.53	11.49	30.02	38.28%	39.07%
1,000 - 1,250	21.67	18.39	40.05	45.91%	41.95%
1,250 - 1,500	0.00	0.00	0.00	0.00%	44.30%
1,500 - 2,000	60.00	14.71	74.71	19.69%	46.29%
2,000 - 3,000	0.00	0.00	0.00	0.00%	48.01%
<3,000	0.00	0.00	0.00	0.00%	49.53%
Both the Basins					
Pensioner(s) Only	14.90	3.28	18.18	18.03%	16.39%
>500	15.20	5.89	21.09	27.91%	28.61%
500 - 750	20.49	9.35	29.84	31.32%	35.76%
750 - 1,000	17.02	12.33	29.35	42.01%	40.83%
1,000 - 1,250	18.75	16.67	35.42	47.07%	44.76%
1,250 - 1,500	0.00	0.00	0.00	0.00%	47.98%
1,500 - 2,000	37.50	9.26	46.76	19.81%	50.69%
2,000 - 3,000	0.00	0.00	0.00	0.00%	53.05%
<3,000	24.00	20.38	44.38	45.92%	55.12%

Source: A result of "Water Utility Survey" made by JICA Study Team, 2006.

Supporting Report F

Figures

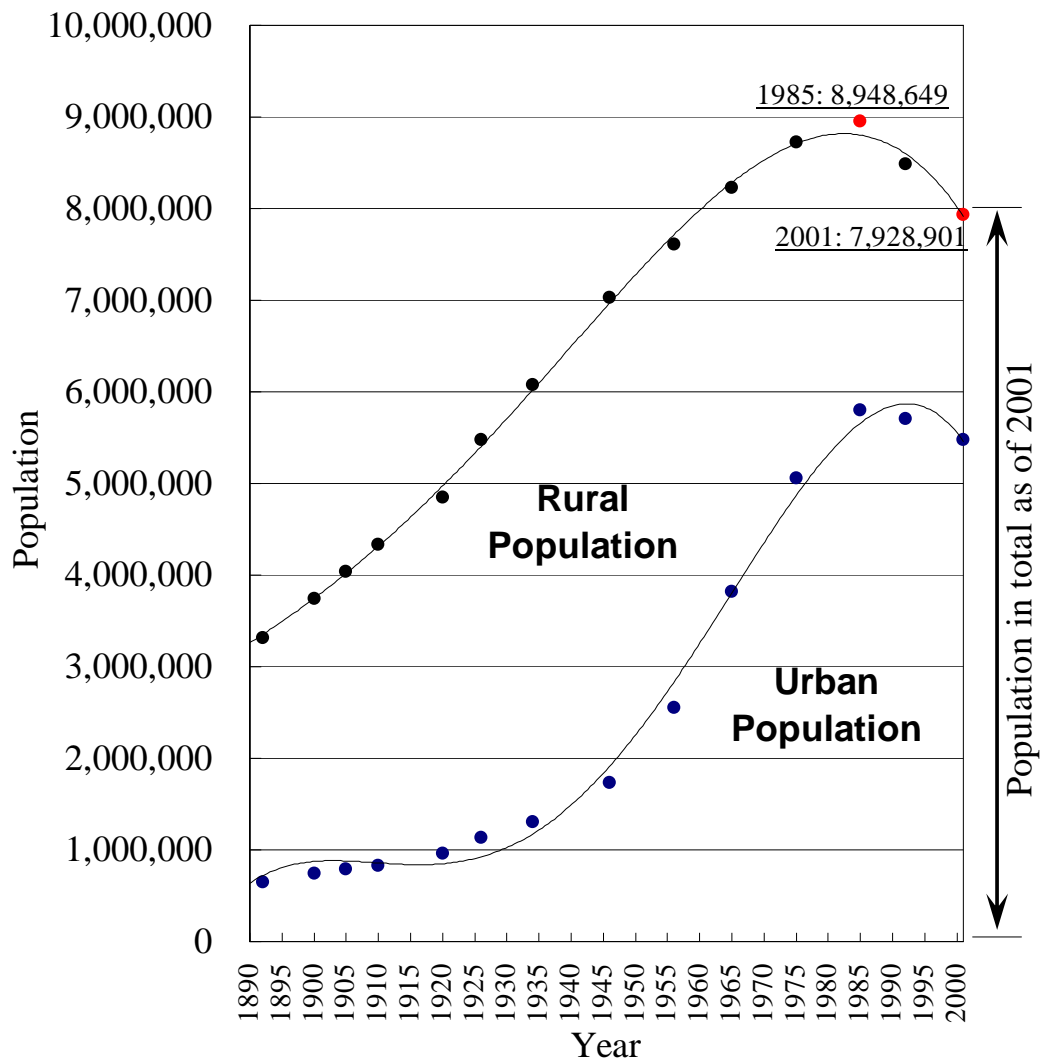


Figure F.1.1 Historical Population Trend in Bulgaria by Census Year

Year	Optimistic Case	Increase against previous year	Medium Case	Increase against previous year	Pessimistic Case	Increase against previous year
2005	1,231,622	0.8570%	1,231,622	0.8570%	1,231,622	0.8570%
2006	1,246,794	1.2319%	1,244,028	1.0073%	1,243,397	0.9560%
2007	1,260,079	1.0655%	1,256,428	0.9967%	1,255,166	0.9465%
2008	1,273,358	1.0538%	1,268,821	0.9864%	1,266,929	0.9372%
2009	1,286,630	1.0423%	1,281,208	0.9763%	1,278,686	0.9280%
2010	1,299,895	1.0310%	1,293,590	0.9664%	1,290,437	0.9190%
2011	1,313,153	1.0200%	1,305,965	0.9566%	1,302,183	0.9102%
2012	1,326,405	1.0092%	1,318,333	0.9471%	1,313,922	0.9015%
2013	1,339,651	0.9986%	1,330,696	0.9378%	1,325,656	0.8930%
2014	1,352,890	0.9882%	1,343,053	0.9286%	1,337,384	0.8847%
2015	1,366,122	0.9781%	1,355,403	0.9196%	1,349,106	0.8765%
Annual Average:	1.0419%		0.9623%		0.9153%	

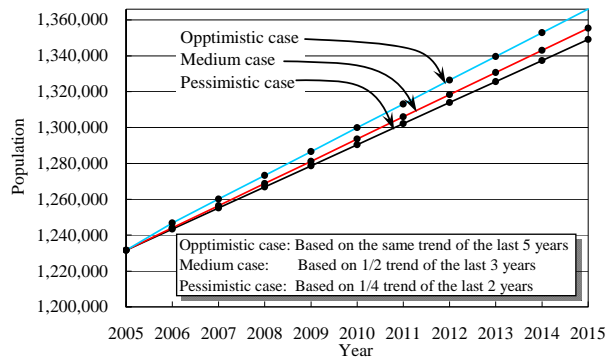


Figure F.1.2 Population Projection of the Municipality of Sofia, the Capital of the Nation

Year	Optimistic Case	Increase against previous year	Medium Case	Increase against previous year	Pessimistic Case	Increase against previous year
2005	77,462	0.0517%	77,462	0.0517%	77,462	0.0517%
2006	77,502	0.0510%	77,482	0.0258%	77,472	0.0129%
2007	77,541	0.0516%	77,502	0.0258%	77,482	0.0129%
2008	77,581	0.0515%	77,522	0.0257%	77,492	0.0129%
2009	77,621	0.0515%	77,542	0.0257%	77,502	0.0129%
2010	77,661	0.0514%	77,562	0.0257%	77,512	0.0128%
2011	77,701	0.0514%	77,582	0.0257%	77,522	0.0128%
2012	77,741	0.0513%	77,602	0.0257%	77,532	0.0128%
2013	77,781	0.0512%	77,621	0.0256%	77,542	0.0128%
2014	77,821	0.0512%	77,641	0.0256%	77,552	0.0128%
2015	77,860	0.0511%	77,661	0.0256%	77,562	0.0128%
Annual Average:	0.0513%		0.0257%		0.0128%	

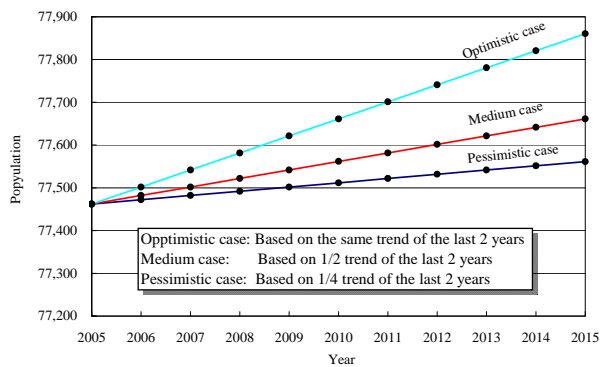


Figure F.1.3 Population Projection of the Municipality of Blagoevgrad

Year	Optimistic Case	Increase against previous year	Medium Case	Increase against previous year	Pessimistic Case	Increase against previous year
2005	341,873	0.1198%	341,873	0.1198%	341,873	0.1198%
2006	342,770	0.2624%	342,508	0.1857%	342,296	0.1238%
2007	343,546	0.2263%	343,142	0.1852%	342,719	0.1235%
2008	344,321	0.2256%	343,776	0.1848%	343,142	0.1233%
2009	345,096	0.2250%	344,410	0.1843%	343,564	0.1231%
2010	345,870	0.2244%	345,043	0.1839%	343,986	0.1229%
2011	346,644	0.2238%	345,676	0.1835%	344,408	0.1227%
2012	347,418	0.2232%	346,309	0.1831%	344,830	0.1225%
2013	348,191	0.2226%	346,942	0.1826%	345,252	0.1223%
2014	348,964	0.2220%	347,574	0.1822%	345,673	0.1221%
2015	349,736	0.2214%	348,206	0.1818%	346,095	0.1219%
Annual Average:	0.2277%		0.1837%		0.1228%	

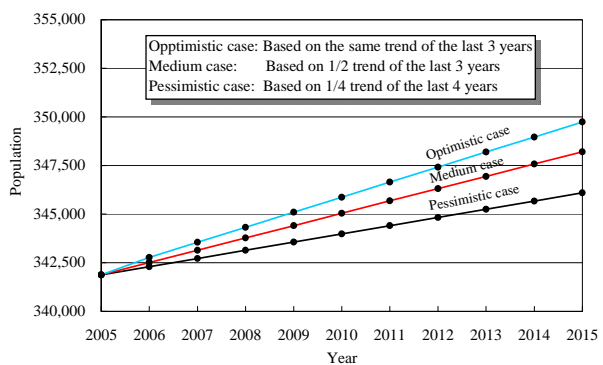


Figure F.1.4 Population Projection of the Municipality of Plovdiv

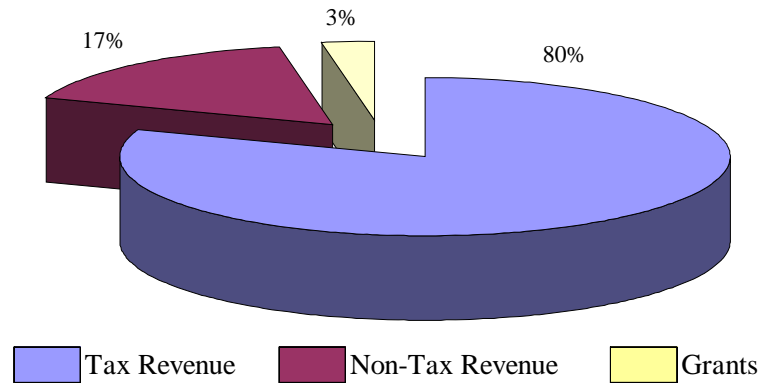


Figure F.1.5 Share Rates of Revenue in Each Item to the Total Revenue in 2005

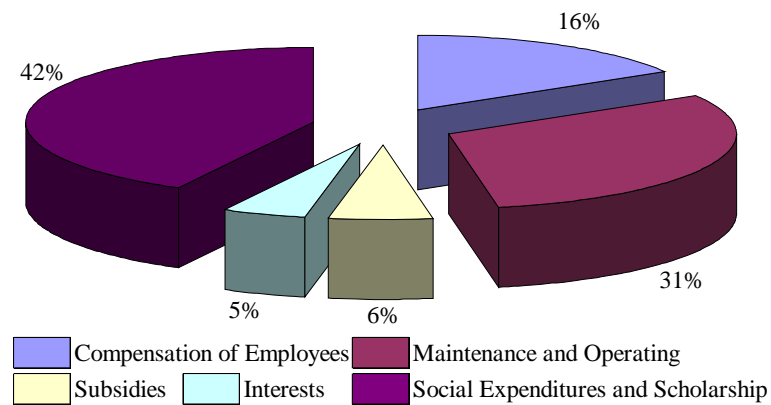


Figure F.1.6 Share Rates of Current Expenditure in Each Item to its Total in 2005

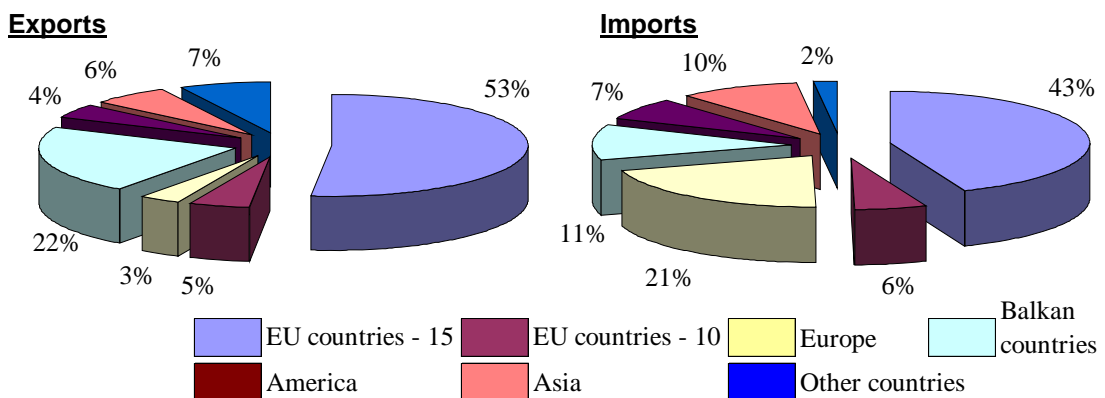


Figure F.1.7 Trading Share by Main Trading Region in 2005

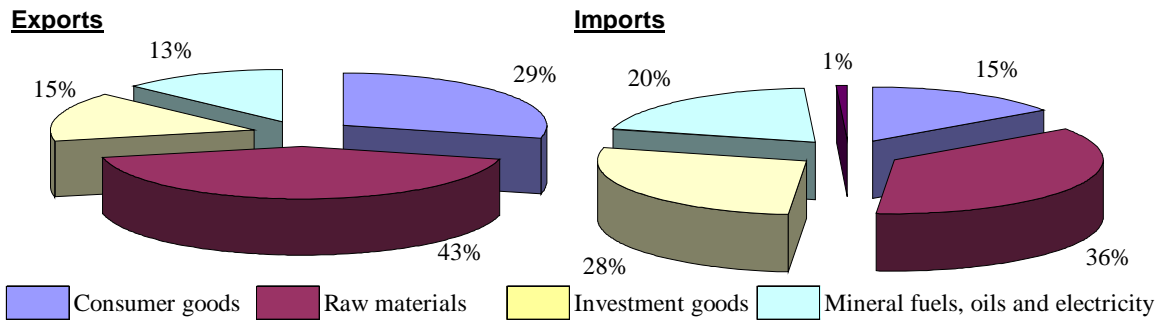


Figure F.1.8 Trading Structure by Category of Commodities in 2000

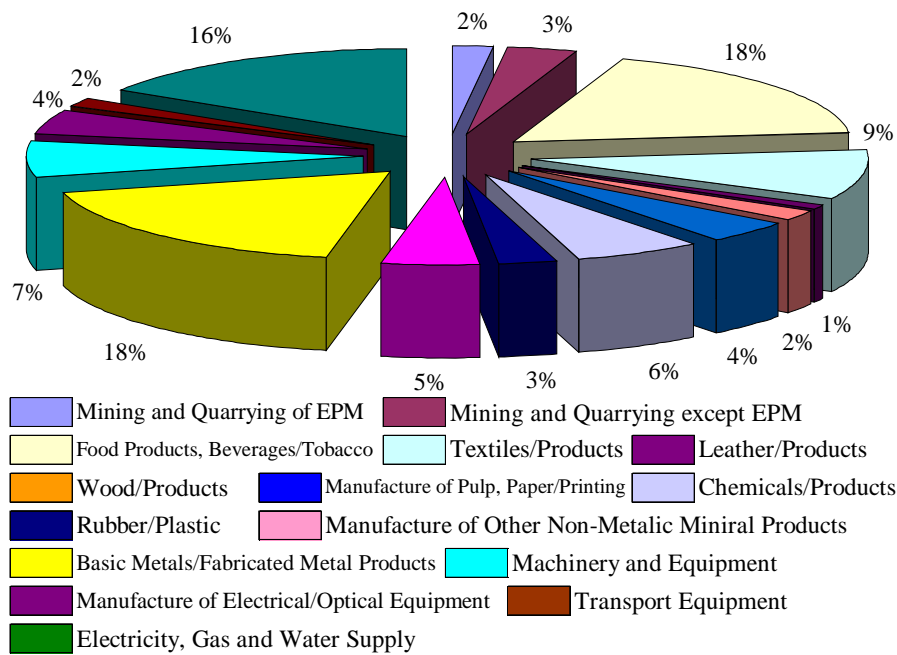


Figure F.1.9 Share Rates of Outputs of Enterprises by Industrial Sub-Origin in 2004

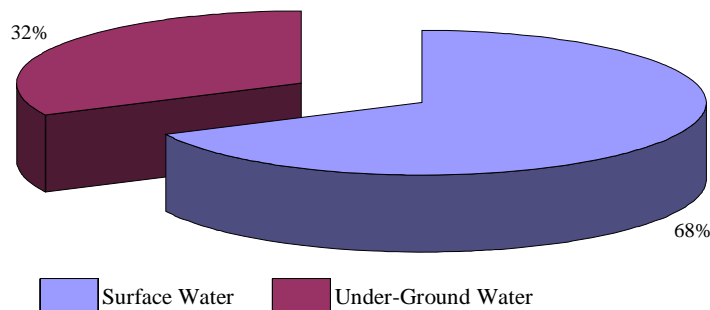


Figure F.1.10 Share Rates of Water Abstraction Volume by Surface Water and Ground Water in 2004

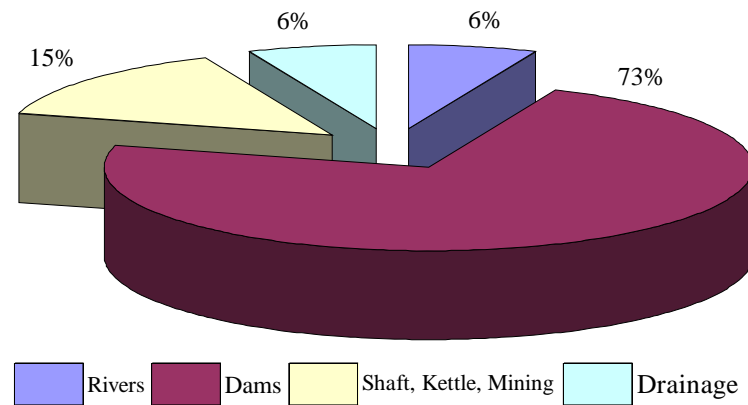


Figure F.1.11 Share Rates of Water Abstraction Volume by Source in Surface Water in 2004

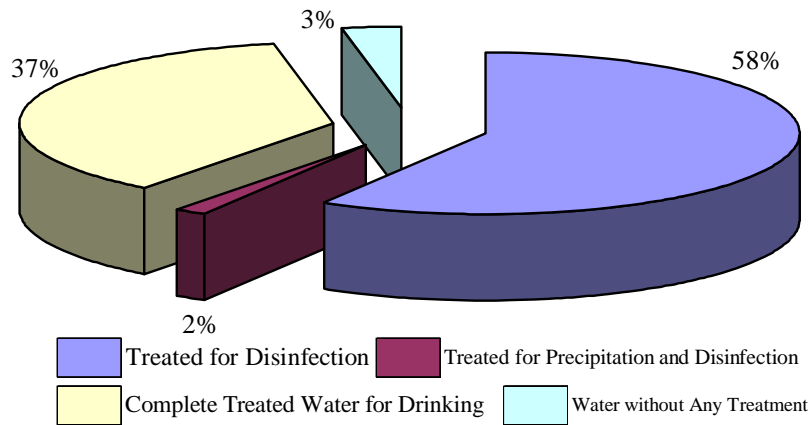


Figure F.1.12 Share Rates of Supplied Water Volume by Treatment (Purification) Level in 2004

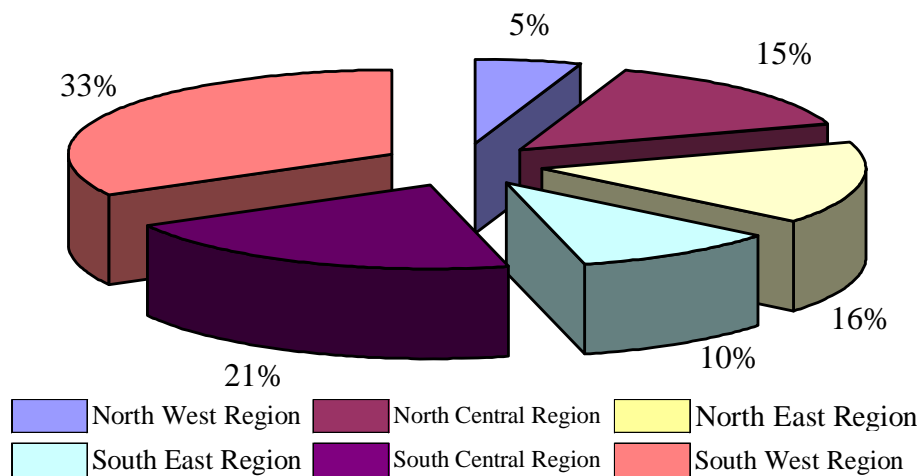


Figure F.1.13 Share Rates of Total Available Water Volume by Regions in 2004

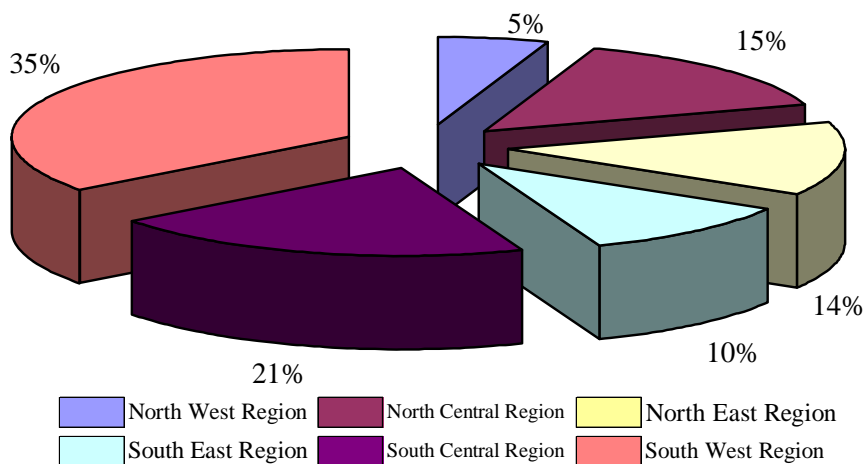


Figure F.1.14 Share Rates of Supplied Water Volume in Total by Region in 2004

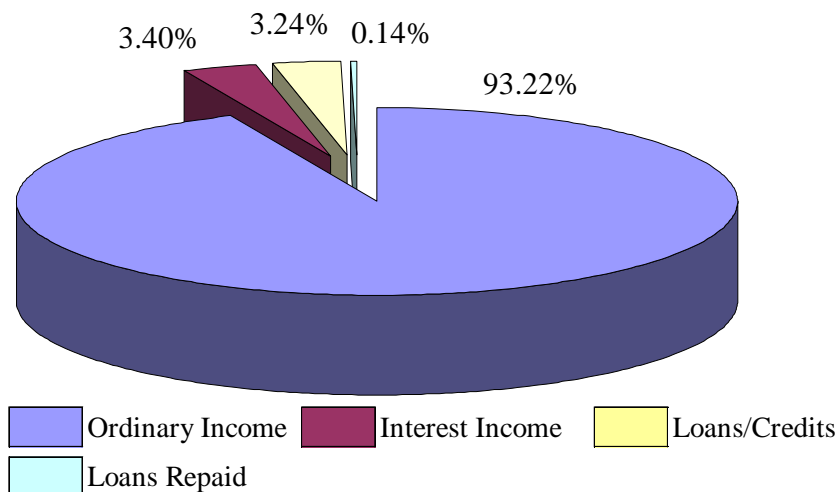


Figure F.1.15 Structure of Income by Sources to the Total Income per Household in 2004

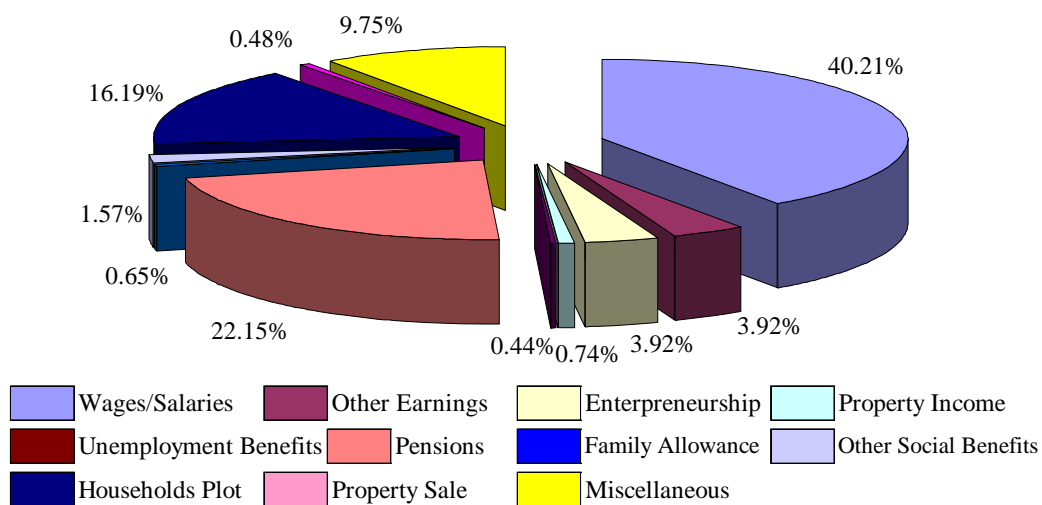


Figure F.1.16 Structure of Income by Kind of Working in Ordinary Income per Household in 2004

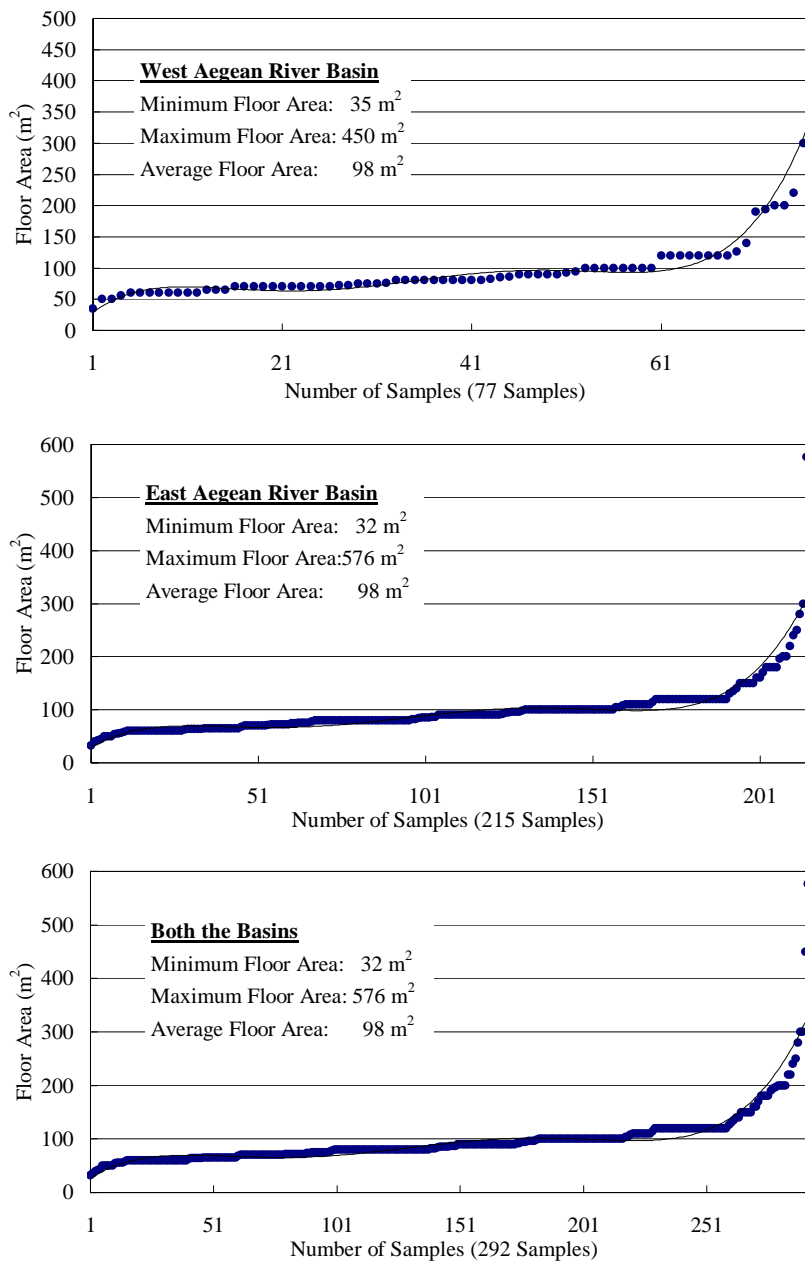


Figure F.2.2 Average Floor Area of HHs in Both the River Basins

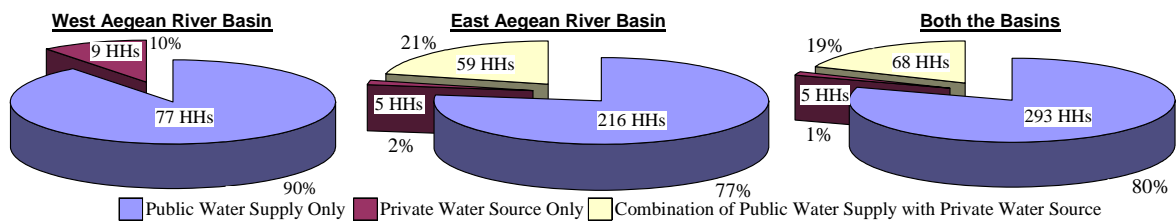


Figure F.2.3 Status of Water Supply by Water Source

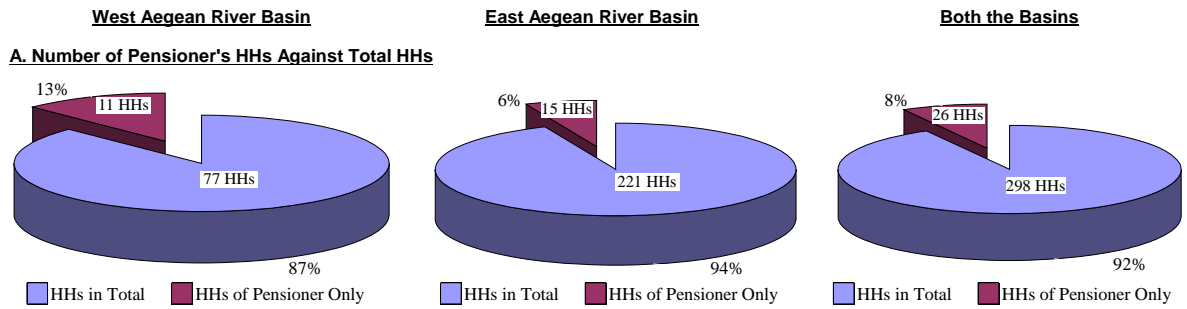


Figure F.2.4 Status of Occupation (A)

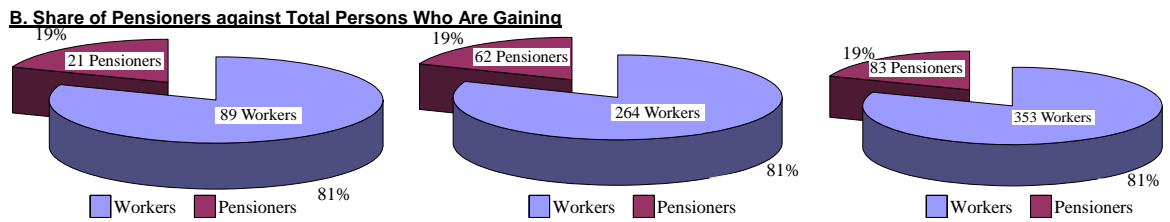


Figure F.2.5 Status of Occupation (B)

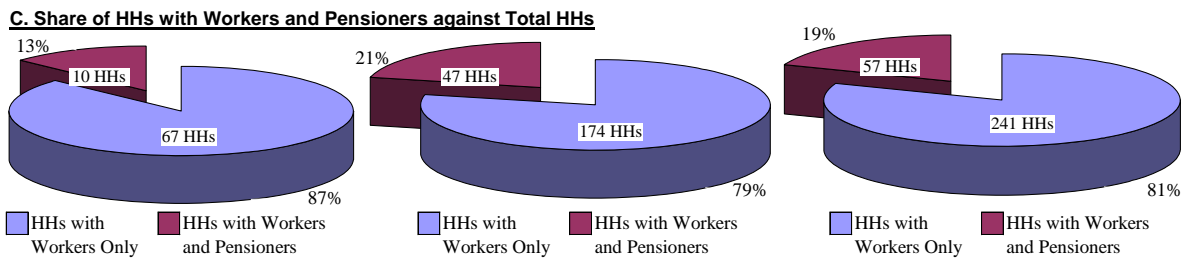


Figure F.2.6 Status of Occupation (C)

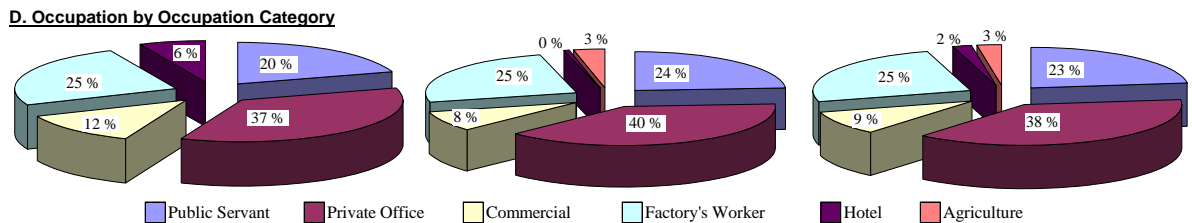


Figure F.2.7 Status of Occupation (D)

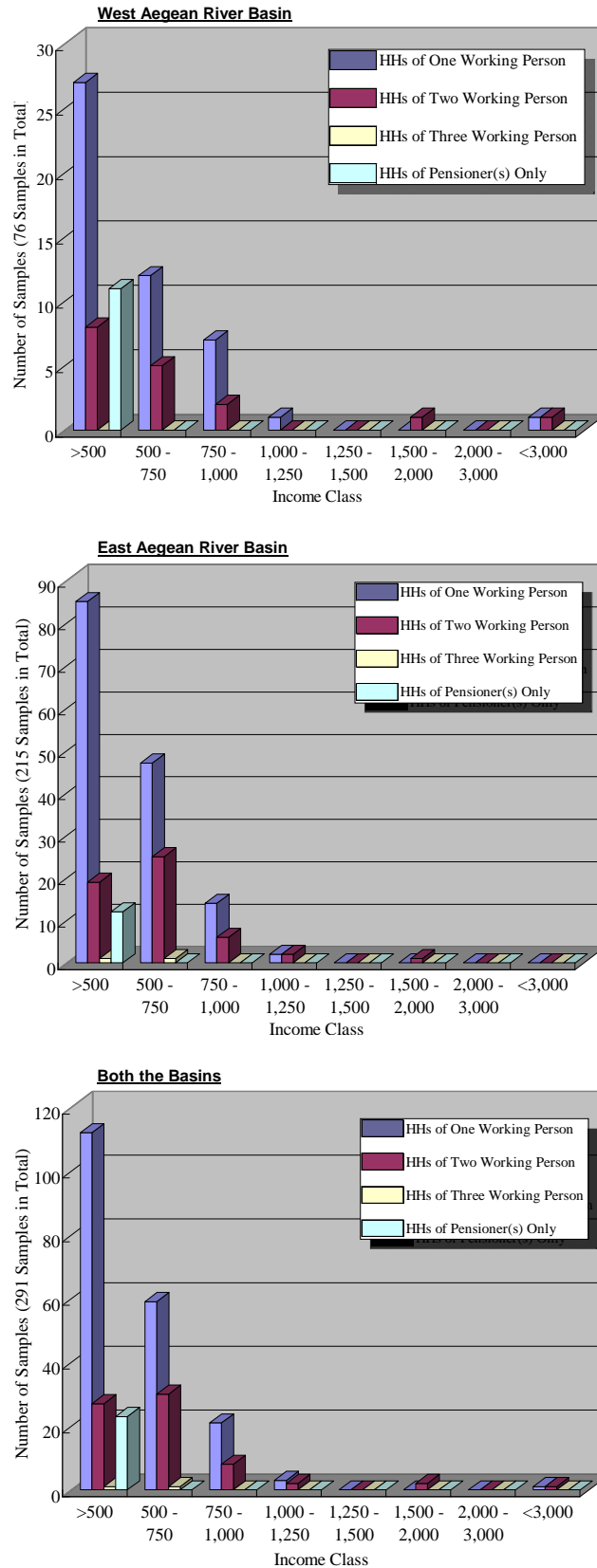


Figure F.2.8 Number of Working Persons by Income Category

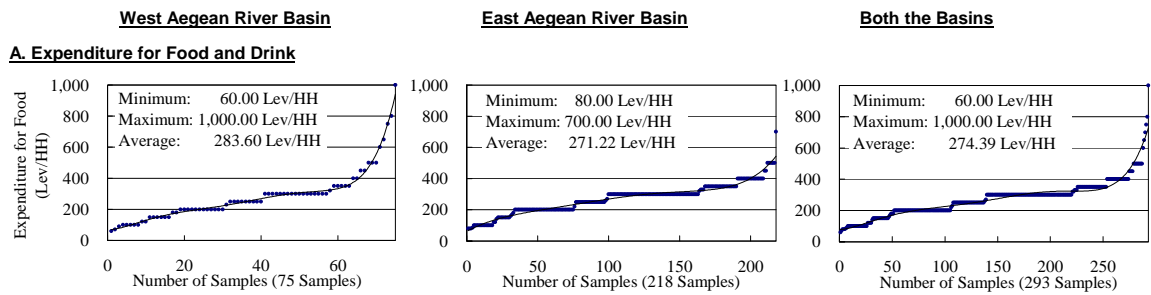


Figure F.2.9 Status of Monthly Expenditure per HH by Region (A)

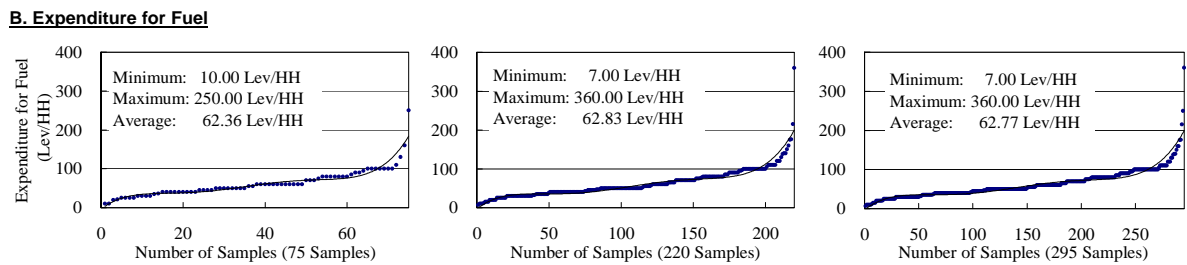


Figure F.2.10 Status of Monthly Expenditure per HH by Region (B)

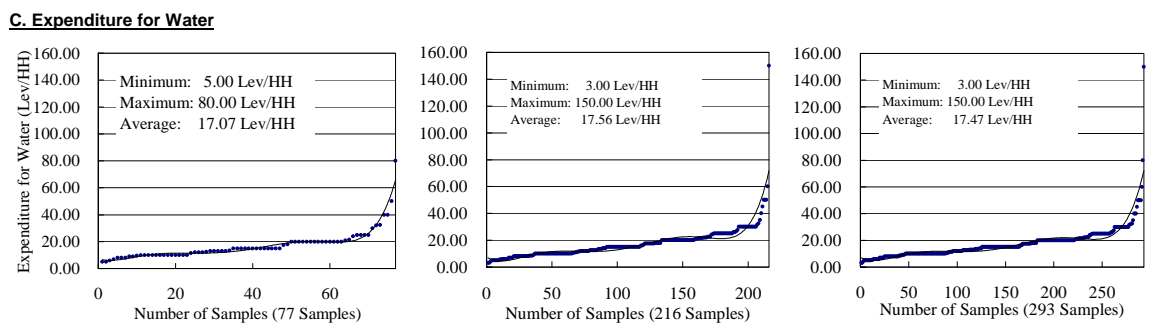


Figure F.2.11 Status of Monthly Expenditure per HH by Region (C)

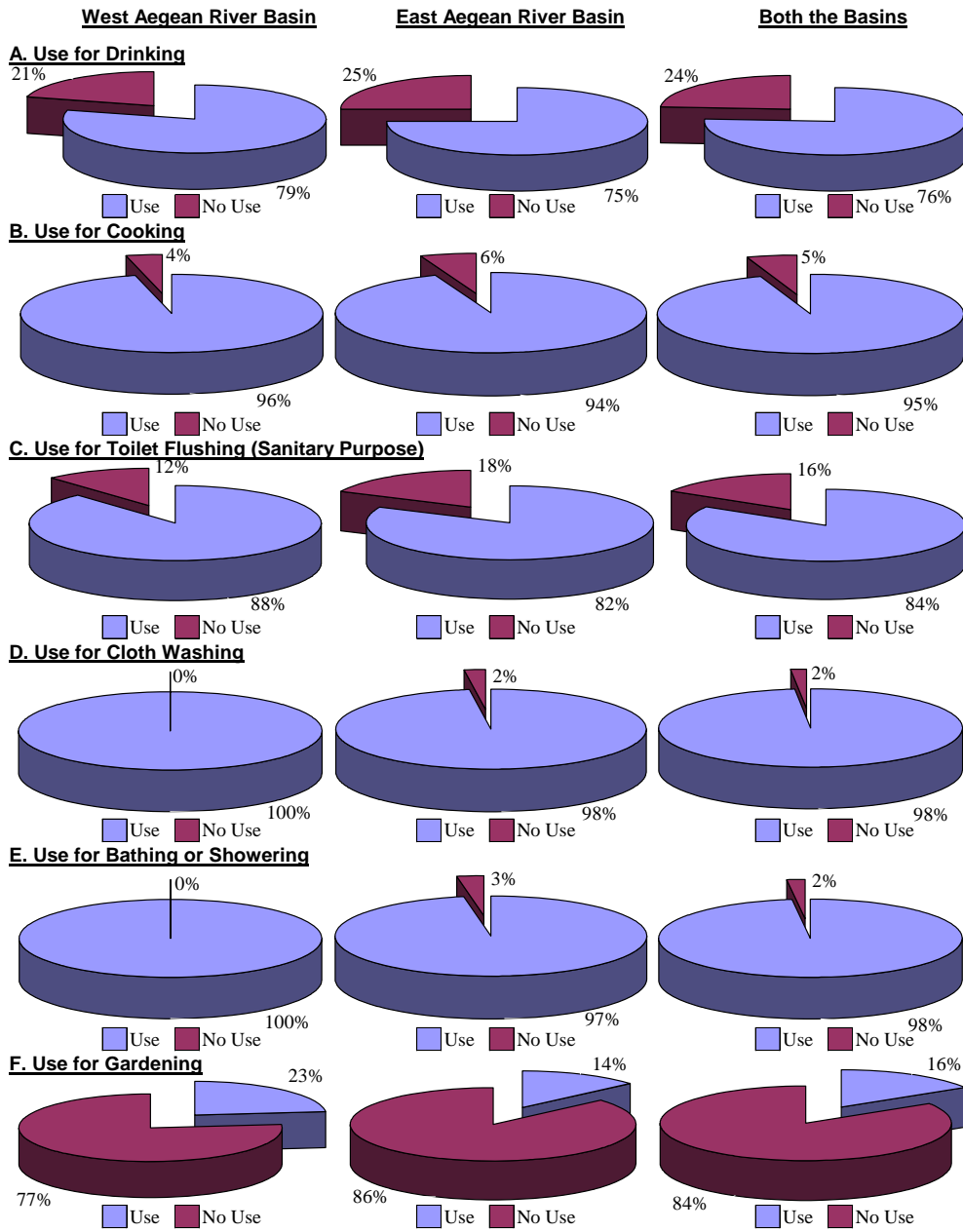


Figure F.2.12 Share Rate of Each Water Use

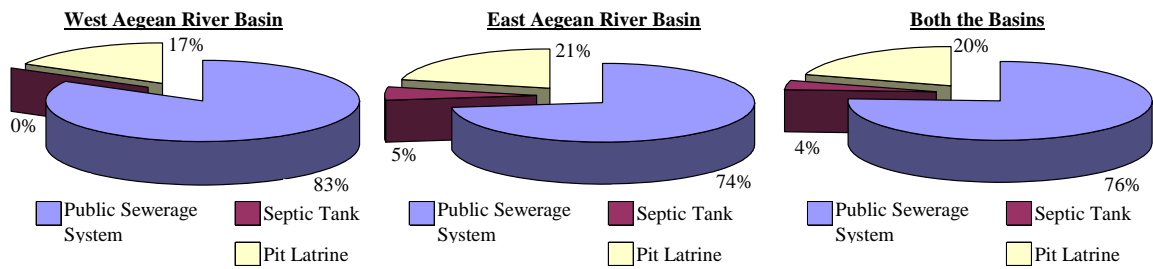


Figure F.2.13 Diffusion Rate of Public Sewerage System

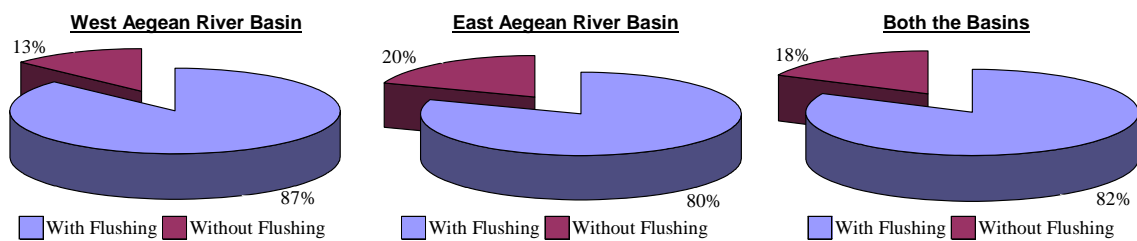


Figure F.2.14 Diffusion Rate of Water Flushing of Toilet

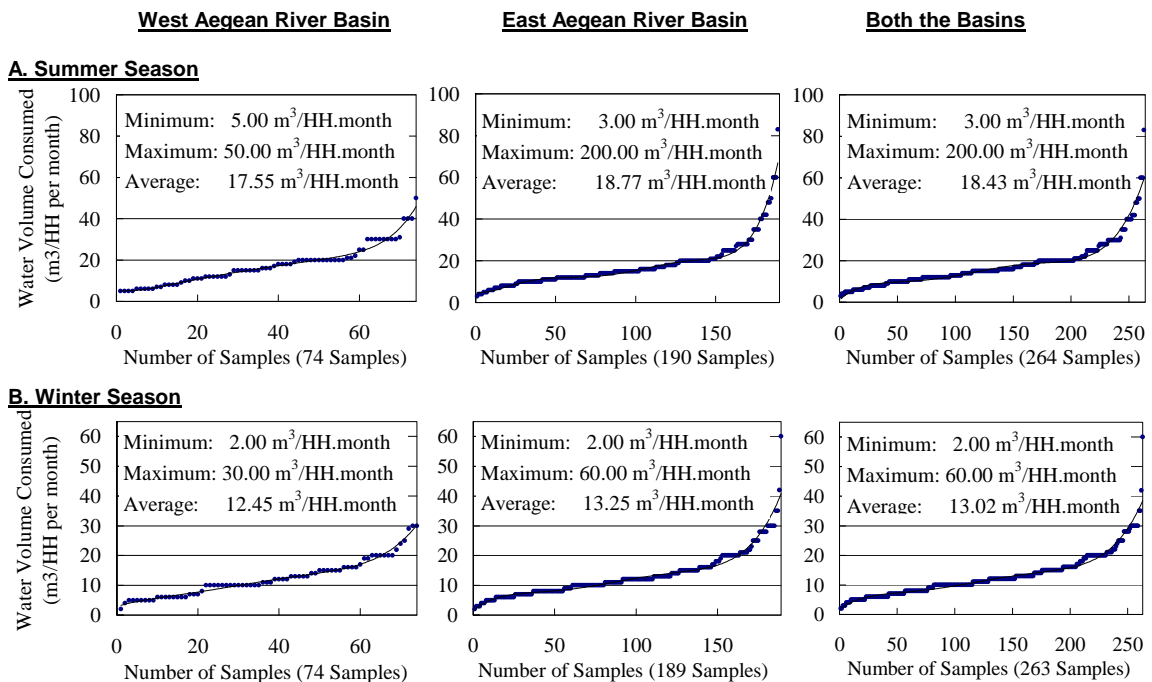


Figure F.2.15 Diffusion Rate of Water Flushing of Toilet

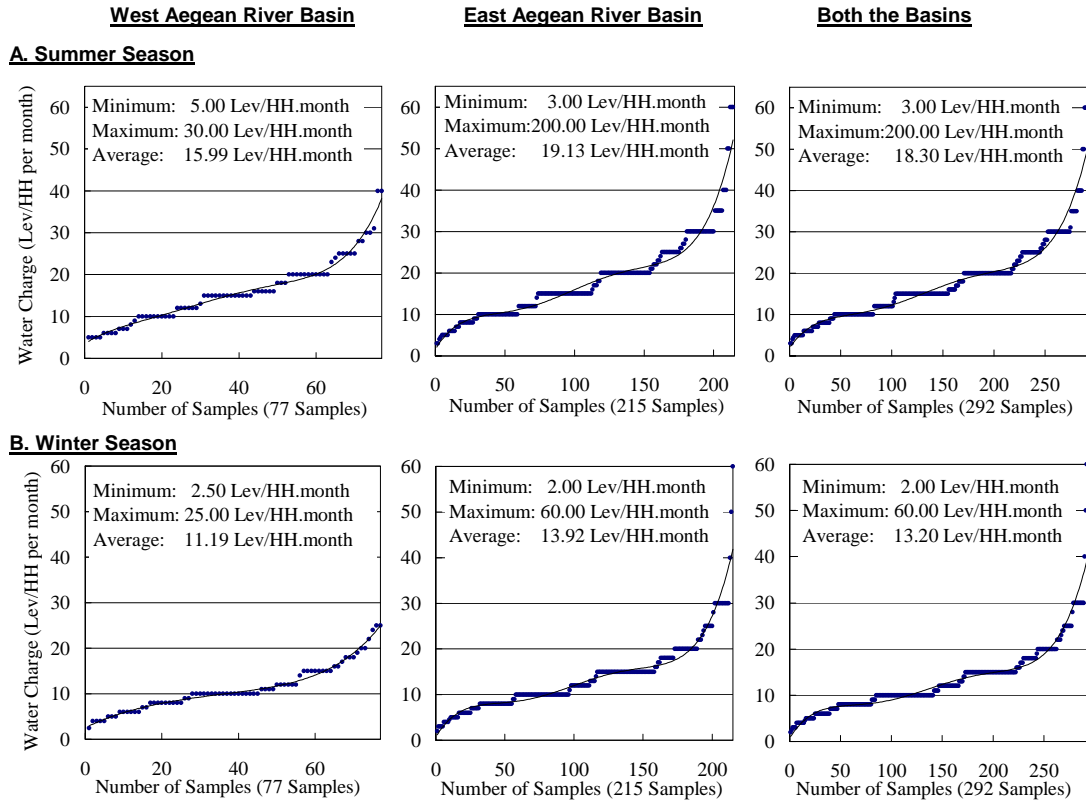


Figure F.2.16 Average Expenditures for Water Supplied by Public Water Supply System Together with Their Range by Basins and Seasons

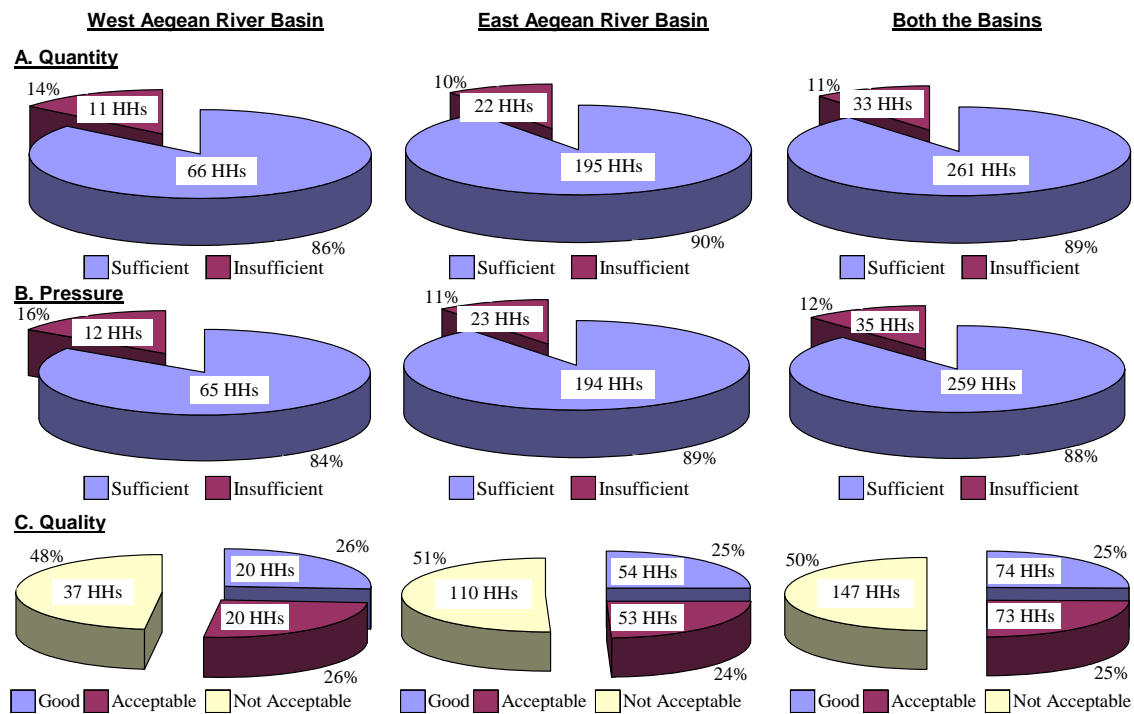


Figure F.2.17 Feeling of People on Water Supplied by Public Water Supply System

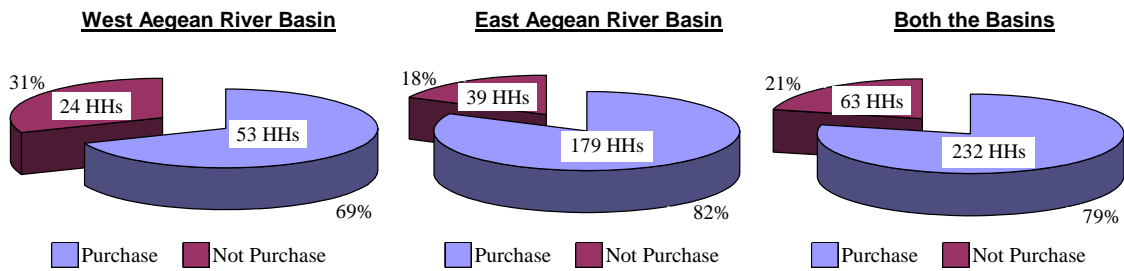


Figure F.2.18 Purchasing Rate of Bottled Mineral Water

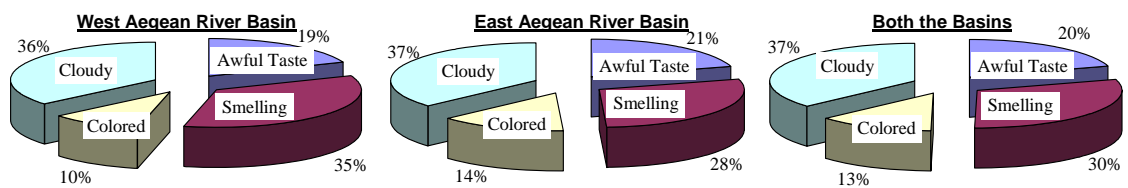


Figure F.2.19 Feeling of People about Water Supplied by Public Water Supply System

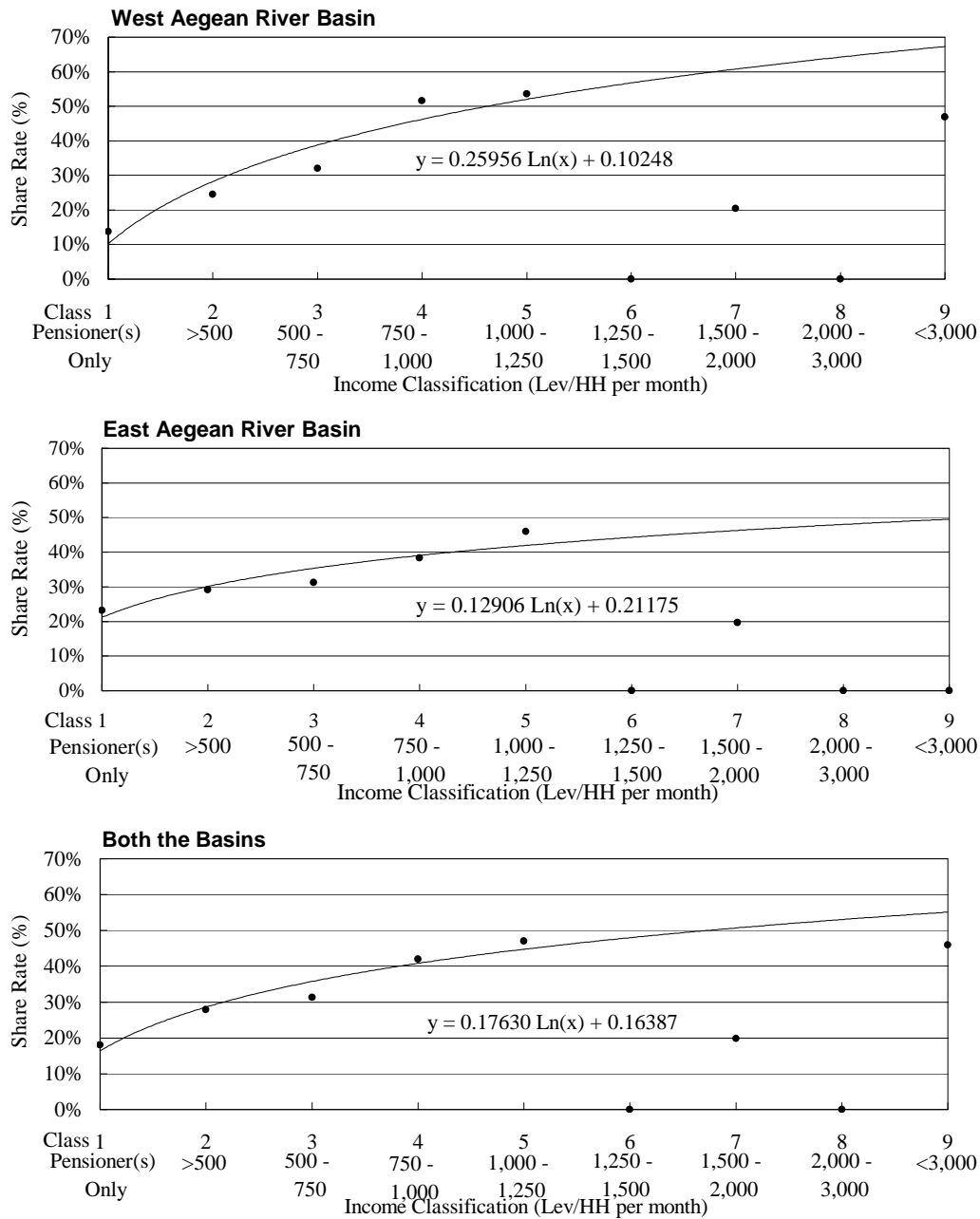


Figure F.2.20 Relationship between Expenditure for Bottled Mineral Water and Income Class

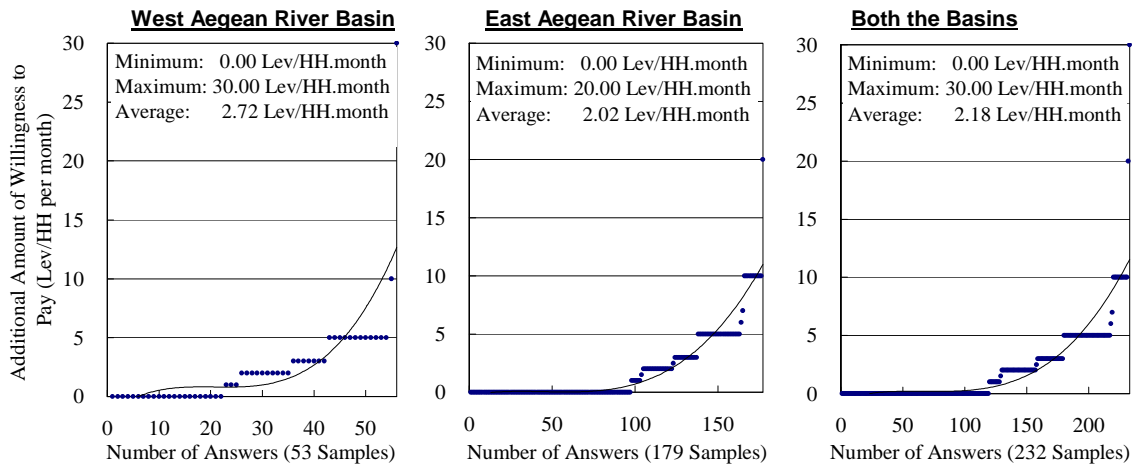


Figure F.2.21 Additional Willingness of People to Pay for Water

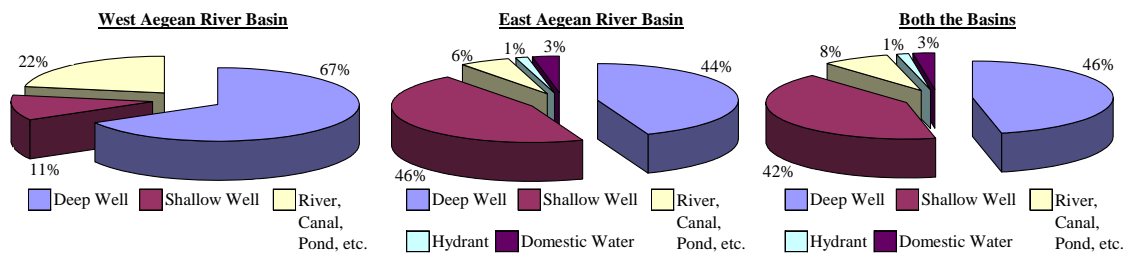


Figure F.2.22 Status of Private Water Source by Basin

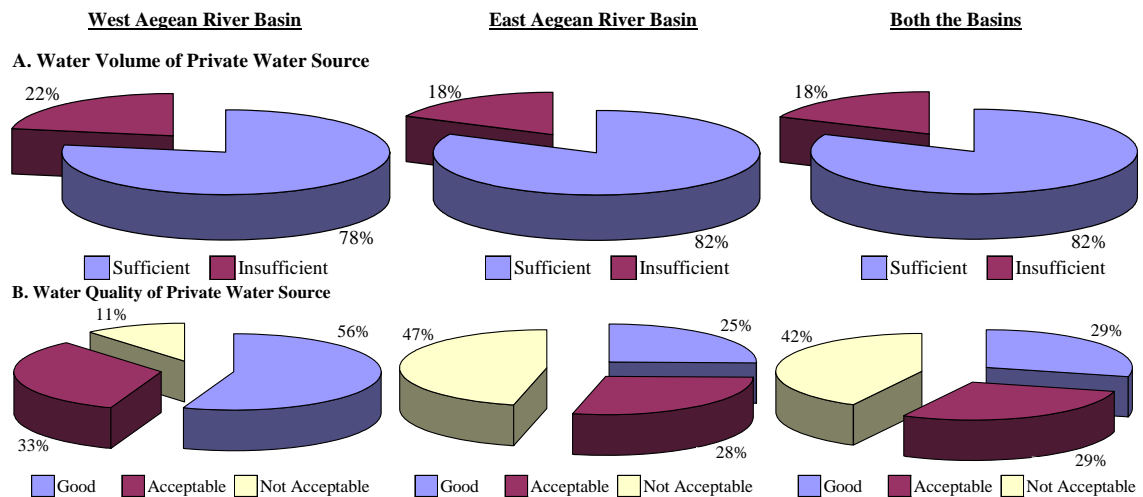


Figure F.2.23 Water Quantity and Quality of Private Water Source

