

SURVEY ON PROSPECTIVE AREAS OF JAPANESE ASSISTANCE IN REPUBLIC OF MOLDOVA

FINAL REPORT

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October 2009

JAPAN INTERNATIONAL COOPERATION AGENCY

UNICO International Corporation
Mitsubishi UFJ Research and Consulting Co., Ltd.



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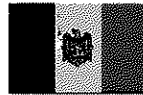
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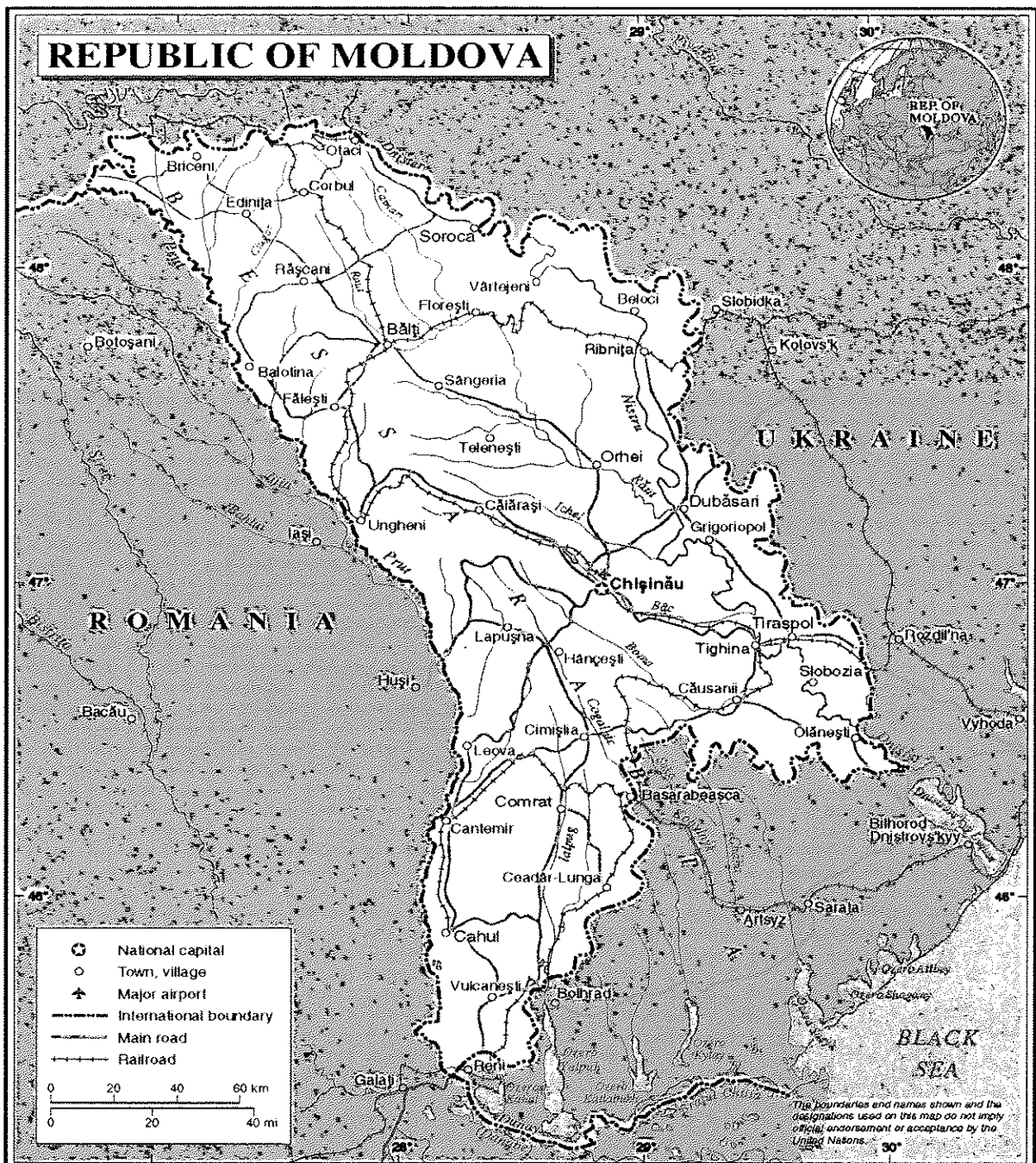


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Republic of Moldova



Dimensions	: 33,840Km ² - (About One-Eleventh of Japan)
Population	: 379Millions (2007 WB)
Main Industry	: Agriculture, Food Processing, Light Manufacturing Ind.
GDP	: 44 Hundred Million US\$ (2007 WB)
Per Capita GDP	: 1,260 US\$ (2007 WB)
Economic Growth Rate	: 3% (2007 WB)
Inflation Rate	: 16% (2007WB)
Amount of Trade (2008 MoEC)	
Export	: 15.9 Hundred Million US\$
Import	: 49.0 Hundred Million US\$
Major Trade Commodities (2007)	
Export	: Agricultural Products, Textiles, Vegetable Prossed Foods
Import	: Mineral Resource, Machine, Chemical Products



Abbreviations

2KR	Second Kennedy Round / Grand Aid for the Increase of food Production / Grant Assistance for Underprivileged Farmers
ADA	Austrian Development Agency
AITA	International Association of Road Haulers of Moldova
ANRE	National Energy Regulatory Agency
Apele Moldovei	The State Water Resources Management Concern
ARIA	ARIA Center of Productivity and Competitiveness
ASM	Academy of Science of Moldova
CAA	State Civil Aviation Administration of Moldova
CCIRM	Chamber of Commerce and Industry of Moldova
CEMSTC	Chisinau EMS Training Center
CEC	Commission of the European Communities
CFM	State Enterprise of the Railway of Moldova of MTRM
CIS	Commonwealth of Independent States
Comtrade	UN Commodity Trade Statistics Database. (UN Comtrade)
C/P	Counterpart
CPS	Country Partnership Strategy
CWSC	Chisinau Water Services Company
DAC	Development Assistance Committee
D/D	Detailed Design
DFID	UK Department for International Development
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
DSR	Debt Service Ratio
EACA	Europe and Central Asia
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EC	European Committee
EGPRSP	Economic Growth and Poverty Reductions Strategy
EIB	European Investment Bank
ENPI	European Neighborhood and Partnership Instrument

EU	European Union
EUR	European Euro (In this report, all the EUR value are with additional statements of US\$ by the conversion rate: 1 EUR = 1.43US\$)
FEZ	Free Economic Zone
F/S	Feasibility Study
GDP	Gross Domestic Products
GFATM	The Global Fund to fight AIDS, Tuberculosis and Malaria
GIFP	Giurginlesti International freeport
GEF	Global Environmental Facility
GOST	Codes by State Committee of Russian Federation for Standardization and Metrology
GUAM	Cooperation between Georgia, Ukraine, Azerbaijan, and Moldova
HSSAP	Health Service and Social Assistance Project
ICT	Information and Communication(s) Technology
IDA	International Development Association
IEA	International Energy Agency
IFAD	International Fund for Agricultural Development
IIP	Indices of Industrial Production
IMF	International Monetary Fund
KfW	Kreditanstalt fur Wiederaufbau (Reconstruction Credit Institute)
MAFI	Ministry of Agriculture and Food Industry
MCC	Millennium Challenge Cooperation of USA
MCTD	Ministry of Construction and Territorial Development
MDA	Moldova
	Moldovan Lei
MDL	Moldovan Currency Unit. In this Report, all the MDL are with additional statement of US\$ by the conversion rate: 1MDL = 0.09US\$
MEIPU	Implementation Unit of national Water Supply ⁷ and Sanitation Project/ Energy Project Implementation Unit of WB
MENR	Ministry of Environment and Natural Resources
MIEPO	Moldovan Investment and Export Promotion Organization
MII	Ministry of Industry and Infrastructure ¹
MLPA	Ministry of Local Public Administration
MM	Million

¹ MII was a former central ministry whose functions were reorganizaed into those of MoEC and MCTD.

MoEC	Ministry of Economy and Commerce
MOF	Ministry of Finance
MoH	Ministry of Health
MoID	Ministry of Information Development
MR	Ministry of Reintegration
MSIF	Moldovan Social Investment Fund
MTEF	Medium-term Expenditure Framework
NBS	National Bureau of Statistics
NBTC	National Blood Transfusion Center
NCPM	National Center for Preventive Medicine
NDS	National Development Strategy
NHIC	National Health Insurance Company
NIS	New Independent States
NISM	National Institute of Standardization and Metrology
NPV	Net Present Value
PPP	purchasing power parity
PPP	Public Private Partnership
RHC	Republic Clinical Hospital
RISD	Rural Investment Service Development
PIU	Project Implementation Unit
SDC	Swiss Agency for Development and Cooperation
SIDA	Swedish International Development Cooperation Agency
SMEs	Small & Medium Enterprises
SRA	State Road Administration of MCTD
TA	Transport Agency
TACIS	Technical Assistance to the Commonwealth of Independent States
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	The United Nations Children's Fund
UNHCR	Office of the United Nations High Commissioner for Refugees
UNTA	United Nations Regular Program for Technical Assistance
USAID	United States Agency for International Development
US\$	United State Dollar
WB	World Bank

WEO

World Economic Outlook

WHO

World Health Organization

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Summary

Note: The code described in the brackets indicates the title code in the text.

1 Political State [1.1.1]

Following the parliamentary elections on April 2009 the Communist Party won 49.48%; however, the parliament failed to elect a new president. For this reason, new general elections were held again on July 29, 2009. The opposition parties gained 51% by combining secured a greater percentage of the vote than Communist Party with 45%, and the opposition parties are now in discussion over forming a coalition. As mentioned above, since the both-side powers compete each other, the political state and the parliament operation are unstable in Moldova.

2. Transnistrian Problem [1.1.2]

Transnistria is located on the eastern bank of River Dniester, and has a area at width of 12% of the whole Moldova. An independent "Transdnestrian Moldovan Republic" (TMR) was proclaimed in 1990. Between March 2 and July 26, 1992, the conflict escalated into a military engagement. The Russian military remains in the breakaway region east of the Dniester to this day, despite Russia having signed international agreements to withdraw, and against the will of Moldovan government. Reunification of Transnistria is of a national strategy. About 15% of the GPD is produced in Transnistria and 70% of the total electricity is produced in Transnistria. The issue affects largely on the transport sector such as road and train in view of the location.

3. National Development Strategy [Chapter 2]

The Moldova's EGPRSP was approved by the Parliament in December 2004, and composed of the three pillars: sustainable economic growth, human development, and social protection and inclusion.

The spirit and vision of the Strategy aspire towards Moldova's alignment with European standards and, consequently, to the accomplishment of the European Union integration goal. All priority development areas set forth in the Strategy aim at adjusting relevant national policies to European ones.

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Health Sector	4.2.1.1: Human-resource Management, 4.2.1.2: Efficient Health-care Services, 4.2.2: Health-care Service Access
Common Infrastructure	5.4.1: Financial Capacities / Resources, 5.5.1: Environment Quality

The Moldovan Government and IMF published in April, 2008 the action plans to implement the National Development Strategy. All the 161 action plans in the NDS are classified as follows:

Electricity	84-85: Power Plant, 87: Power Transmission, 88: Energy Resources	[5.1.6.1]
Agriculture	129-130: Agricultural Land, 131: Irrigation, 132-134: Agricultural Mechanization, Agricultural Market, SME, 135-138: Husbandry, 139-140: Wine, 141-143: Laboratories / Education for Agriculture	[5.2.6.1]
Private	45-47: Legislation, 48-57: Metrology & Standard, 63-74: SMEs, Foreign Direct Investment, 127-128: Industrial Zone, FEZ, 152-161: Statistics	[5.3.6.1]
Transport	81: Railroad, 82-83: Road	[5.4.6.1]

Waterworks	150: Wastewater Management	[5.5.6.1]
Health	99-107: Health Cares Such as Primary and Secondary Ones, 108-109: HIV/AIDS, etc., 110: Mental Health Services, 111-157: Health Insurance and Survey	[5.6.6.1]

Until now it seems that the action plans has not had a large delay in the progress.

According to Moldova's Medium Term Expenditure Framework (MTEF) (2009-11), which was latest expenditure plan, (i) macroeconomic context, (ii) tax policy and budget revenues, (iii) public expenditure framework, (iv) management of the state debt and budgetary balance and (v) overall financial framework were covered¹. Among others, the government is now planning to obtain new external debt from a standpoint of preventing budgetary burden after global economic crisis, it is important in the MTEF that external debt should be up to 30% as maximum.

4. Macroeconomic Situations and Debt Sustainability [Chapter 3]

After market oriented economic reform and transforming recession, Moldova's macroeconomic performance has been underlying growth in general. However, at the same time, the country has facing decline of population, vulnerable economic structure, impacts of drought, deficit of current balance, sluggish growth of export (in some reasons caused by Russian import ban of Moldovan wine), relatively high interest rates, continuous deficits of primary balance and others. These negative factors have been compensated by attraction of foreign direct investment, remittance of emigrant workers and assistances from foreign countries. In these situations, global economic crisis from mid-2008 has had serious consequences to the Moldova's economy. Especially, rapid decline of real GDP growth, declines of exports and imports, decrease in remittance, falling of revenue and other related aspects have been emerged. As a result, apprehensiveness toward negative impacts toward sustainable economic growth has come to realization.

As a characteristics of Moldova's external debt structure, it can be observed that share of short-term debt has been rising, outstanding of non-guaranteed private debt has been increasing, ratio of total debt stock to gross national income has been relatively higher, ratios of reserves to total debt stocks as well as imports of goods and services have been relatively lower and share of debt from multilateral creditors has been relatively higher.

According to latest IMF's DSA (Feb. 2008), it can be said that Moldova's debt sustainability has not been a cause for concern with comparison of thresholds of debt sustainability framework although this analysis does not include global economic crisis from mid-2008. At the same time, no problem also has been seen in the DSA of this study. In addition, it can be said that debt sustainability can be judged in the assumption of impact of push up calculated in this study.

5. Cooperation Strategies and Activities by the Other Donors[4.3, Chapter 5]

The following table show the cooperation strategies and activities by the other donors.

¹ In usual year, 2010 - 2012 version of MTEF should be published at the field study of this study. However, because of lengthening of election for president as well as cabinet members, the version has not approved in the process. Therefore, 2009 - 2011 version are the latest version at this moment.

Donor	Cooperation Strategies and Fields by the Other Donors	Sectors Related to the Cooperation						
		Agri- Culture	Electric	Private	Trans- port	Water- works	Health	Finance
FAO	Agriculture / Irrigation, Sustainable Strategy, Agricultural Financing, Agricultural Insurance	o						
IMF	Financing, Macro Economy							o
UNDP	Administration Capacity, Private-sector Development			o			o	
UNICEF	Health and Sanitation (Poverty Reduction, Mother and Child Care)						o	
WB	Sustainable Economic Growth, Social and Environmental Risk Deduction, Public-sector Governance Improvement	o	o	o	o	o	o	o
WHO	Health and Sanitation						o	
European Aid Organizations								
EBRD	Private Sectors, Financial Institutions, Infrastructure Supporting	o	o	o	o	o		o
EC-EU	Macro Economy, Public Fund, Administration Reform	o				o	o	
(Bilateral) Other-country Donors								
ADA	Waterworks, Private-sector Development and Employment			o		o		
DFID	Governance and Poverty Reduction	o		o				o
KfW	Market Economy and Sustainable Economy Growth, Financing Restructure	o		o				o
MCC	Road, Irrigation	o			o			
SDC	Public Health, Water, Sanitation, Economy, and Employment			o		o	o	
SIDA	Competition Development in the Rural Area, Strengthening of Competitiveness, Strengthening of Energy Sector	o	o					
USAID	Energy Sector, Health-care Needs, Legal Program and Business Development	o		o			o	o

6. Issues Recognized in the Analysis on the Targeted Sectors

6.1 Electric Sector [5.1]

- (1) The electric sector depends largely on the gas supplied by Russia as a fuel to generate electricity. Considering heating in the coldest, it is necessary to equip public institutions with a heating not depending on such gas especially in the rural area.
- (2) For conducting power-generation of projects, the tariff setting and the asset / debt structure should be clarified
- (3) Transmitting- and distributing-electricity projects are tackled now by various donors, and have no big issue on setting the tariff, so that such projects may not have a priority for JICA to conduct.

6.2 Agriculture and Irrigation Sectors [5.2]

- (1) Moldova is an agricultural country so that Moldova should develop agricultural products, food-processing industries and winery manufacturers.
- (2) Moldova requires irrigation development; however the irrigation area is lack to occur water shortage and to require the irrigation machinery / equipment.
- (3) Moldovan agriculture should grow out to high-valued agriculture to treat vegetables, fruits and stockbreeding through constructing and establishing the logistic systems for collection, shipping and transportation.

6.3 Private Sector [5.3]

- (1) In the manufacturing industries, investments have not been made so much to capital goods such as production machinery so that the machinery has remained old, which has worse energy efficiencies and material consumption so that productivity and competitiveness become inferior.
- (2) It is necessary to the company internationalization to develop the infrastructure; however, the rehabilitation has been delayed in the electric and road sectors.
- (3) Because the bank-interest rate is high, the private-sector development has an issue to improve the access to the financing.

6.4 Transport Sector [5.4]

- (1) The road and rail infrastructures have not been invested for long years so that they are becoming worse to require the rehabilitation.
- (2) The gauge of the train is of the Russian standard; therefore, the rail can not be connected to the EU countries.
- (3) Chisinau Airport is now under development by supports by EBRD/EIB. Giurgiulesti Port started recently the operation and the development is expected together with the FEZ.

6.5 Waterworks Sector [5.5]

- (1) In the north region and the south one, water-supply and sewerage systems have not developed so that residents who can not access to the systems accounts for about 49% out of the total residents in Moldova.
- (2) For conducting wastewater treatment projects, it should be clarified which technologies should be adopted in the projects.
- (3) In water-supply projects, the sufficient attention should be paid on setting the tariff and selecting the communities who would make operation and maintenance of the projects.

6.6 Health Sector [5.6]

- (1) Primary health care has been functioned well comparing with the countries earning similar revenue; therefore, the secondary or tertiary health care institutions should be targeted for finding of a project.
- (2) Institutions of mother and child care, emergency care, blood transfusion, and sanitation have so old facilities for work. It is desirable to conduct a project for the institutions after confirming the needs for them.
- (3) The basic package of health insurance has gained success; however, it should make the capacity building of the insurance agency because they have not experiences so much.

6.7 Financial Sector [5.7]

- (1) In Moldova, National Bank of Moldova plays a competent role to control private banks. At present, there are fifteen private banks in the country. As a characteristic of Moldovan financial institutions, ratio of foreign capital to banking capital is more than 70%.
- (2) The banks in Moldova have been increasing ratio of total non-performing loans to total loans by the impacts of global economic crisis from mid-2008. As a result, accumulation of allowance to non-performing loans made net income to average assets (return on assets) and net income to average shareholding capital (return on capital) much lower than those in the previous years.
- (3) The World Bank is now formulating project of "Competitive Enhancement Project" as a counterpart of Ministry of Economy and Trade (MET). The bank asked the possibilities of joint cooperation with the Japanese government.

7. Projects Requested from the Moldovan Side

The following table summarizes the projects requested by the Moldovan side for Japanese cooperation:

Sectors	Objectives	Project Outlines	Reference
Yen Loan			
Agriculture	2KR*	To promote SMEs, in cold chain for higher value agriculture, organic agriculture, cattle breeding. US\$100MM (** MAFI is targeted for Technical Cooperation)	5.2.6.3
Agriculture	ASM	To utilize grapes residuals for foods, cosmetics, and medicines. US\$4.4MM	5.2.6.3
Private	MoF***	To implement two-step loans aiming at development of SMEs, exporting companies and Agriculture.	5.3.6.3
Transport	SRA	To complete the East-west corridor IX hereby to rehabilitate the important route to Moscow and Kiev and crossing Romania. US\$27.2MM	5.4.6.2
Transport	CFM	To electrify the railway between Chisinau and Ungheni and to construct double-rails at EU standard rail gauge. . US\$70MM	5.4.6.2
Water-works	Apa Canal Strasheni	To construct a water-supply network in Strasen City. US\$10MM and more	5.5.6.2
Health	RCH	To establish the medical care system partly of Moldova, through modernization of RCH. Co-financing for US\$50MM.	5.6.6.2
Grant Aid Cooperation			
Common	MSIF*	To provide rural public facilities with heating using the renewable energy. US\$9.5MM (Targeting at 250 villages) **	5.1.6.3
Agri-culture	MAFI*	To use renewable energy for heating in winter at primary schools, hospitals, communities. US\$5MM (100 villages are targeted)	5.2.6.3
Irrigation	2KR*	To pump-up water from Dniestr River for use of the irrigation with use of solar energy. US\$5.8MM	5.2.6.3
Water-works	Aqua Nord*	Based on the Study on Water Supply Systems for the Northern Region in Moldova (Former Study), to construct facilities and pipeline hereby to provide the cities stably with safe water. US\$10MM.	5.5.6.2
Water-works	MENR	To strengthen the MENR's function to manage the wastes, hereby to strengthen the waste-management in Moldova	5.5.6.2
Health	Mother and Child Hospital	Through providing the hospital with the equipment, to construct and establish the health care system for mothers and children.	5.6.6.2
Health	NBTC	Through rehabilitation of NBTC, to develop a blood-related methodology and to establish the system and organization in Moldova **	5.6.6.2
Health	CEMSTC	To provide the laboratory facilities and ambulance cars to CEMSTC, hereby to improve the level of the emergency care to the EU level. **	5.6.6.2
Sanitary	NCPM	To rehabilitate the NCPM laboratory facilities, hereby to establish the public health in Moldova. **	5.6.6.2
Technical Cooperation			
Common	MCTD	To make capacity building of the staffs in charge of the project implementation in MCTD	5.1.6.3
Agri-culture	MAFI	To make equipment training for packing house operation, technical assistance for small-scale breeders, and training overseas of MAFI staffs	5.1.6.3
Private	ARIA	To dispatch Japanese experts in the fields of management, strategy, financing, and marketing.	5.3.6.2
Private	NBS	To make capacity building of NBS to make correct industrial-production indices and to accomplish the EU standards.	5.3.6.2
Health	NHIC	To make capacity building of NHIC, hereby to establish the health insurance system in Moldova.	5.6.6.2

Note: * Local administration would operate and maintain the project after the project-construction finished.

** Including the capacity building of the objective ministries or agencies through the technology cooperation

*** Assigned banks would manage revolving fund of the project.

8. The Effects on the Targeted Sectors by Global Economic Crisis

- (1) Most of the ministries should reduce the expenditures by 20%.

- (2) Ministries make efforts to return the debts; however, may cease implementation of new projects².

9. Moldovan Capability to Cope with International Cooperation [Chapter 5]

- (1) MCTD and MLPA of a young ministry are short in man power and are requesting for the cooperation for their capacity building.
- (2) Assigning of MSIF, 2KR and the existing PIU in a WB project as the C/P may be a condition to succeed the project
- (3) In a waterworks or electric project, operation and maintenance of the project may be conducted by a local administration. It is important to select the project and to set the criteria for the selection.

² Judging from the study results, the ministries may cease implementation of new projects increasing the payments, and focus on the implementation of technical assistance or grant projects which do not require additional contributions under the ODA stipulation.

Chapter 1 Political and Economical Circumstances

1.1 Political Circumstances Such as National Politics, Governance and External Policy

1.1.1 Political State¹

After the independence at 1991, the first president of Andrei Sangheli took the pro-Romanian policy. Because Moldova met the independence activities of Transnistria and the economic collapse, Petru Lucinschi became the country's second president in December 1996. The 1998 financial crisis in Russia produced an economic crisis in the country. New governments were formed by Ion Sturza and Dumitru Braghiș. In July 2000, the Parliament adopted an amendment to the Constitution that transformed Moldova from a presidential to a parliamentary republic.

In February 2001, Vladimir Voronin was elected as the country's third president. The country became the first post-Soviet state where a non-reformed Communist Party returned to power. Relationship between Moldova and Russia deteriorated in 2003 over a Russian proposal for the solution of the Transnistrian conflict, which Moldovan authorities refused to accept because it stipulated a 20-year Russian military presence in Moldova. The federalization plan for Moldova would have also turned Transnistria and Gagauzia into a blocking minority over all major policy matters of Moldova.

In March 2005, Vladimir Voronin was re-elected as country's president, supported by a part of the opposition, and in 2008, Vasile Tarlev was replaced by Zinaida Greceanîi as head of the government.

Following the parliamentary elections on April 5, 2009 the Communist Party won 49.48% of the votes. The opposition leaders have protested against the outcome calling it fraudulent and demanded another election. President Vladimir Voronin, has called the rioting a coup d'état attempt and have accused Romania of organizing it. The opposition accused the government of organizing the riots by introducing agent provocateur among the protesters. Romanian ambassador in Moldova was declared persona non grata by the Moldovan government.

President Vladimir Voronin was selected as the chair person of the national parliament. Because the president requires 61 votes at least of the parliament, the president election was hard going; consequently the parliament failed to elect a new president. For this reason, the parliament was dissolved and new general elections were held on July 29, 2009. Voronin's party, the Party of Communists of the Republic of Moldova, gained around 45% of the vote, whilst the other four parties which won seats each gained from around 7% to 16%. However, combined, the opposition parties to the Communists secured a greater percentage of the vote, and are now in discussion over forming a coalition².

¹ Editing of translated materials made from the Japanese Embassy located in Ukraine : <http://www.ua.emb-japan.go.jp/J/AboutRM/gaikan/3politics.html>

² Joint communications on July 30, 2009

1.1.2 Transnistria³

(1) Fundamental Information on Transnistrian Issue

Transnistria is located on the left bank of the Dniester River and has an area of 416,000 km² which accounts for 12% of the whole area of Moldova. Transnistria has a population of about 527,000 including a large proportion of predominantly Russophone ethnic Russians and Ukrainians. Transnistria has its own parliament, military and currency called Dniester Rouble.

(2) Background and Development of Transnistrian Issue

Transnistria, which includes a large proportion of predominantly Russophone ethnic Russians and Ukrainians, and where the headquarters and many units of the Soviet 14th Guards Army were stationed, an independent "Transdnestrian Moldovan Republic" (TMR) was proclaimed in 1990, with its capital in Tiraspol. The motives behind this move were fear of the rise of nationalism in Moldova and the country's expected reunification with Romania upon secession from the USSR. In the winter of 1991-1992 clashes occurred between Transnistrian forces, supported by elements of the 14th Army, and the Moldovan police. Between March 2 and July 26, 1992, the conflict escalated into a military engagement.

At the beginning years, this issue was recognized as the results from confrontation between the Moldovan government of pro Romania and the "Transnistrian Moldovan Republic (TMR) for Russia. However, residents have been freely crossing the Dniester River on the direction on each other from the both sides, and most of the Moldovans speak Moldovan language together with Russian one. At present the issue seems rooted in the different standing-point between the both governments on the national system and in securing the interests by the top-ranking people of the "TMR", rather than called independent, national, or linguistic movement.

The Russian military remains in the breakaway region east of the Dniester to this day, despite Russia having signed international agreements to withdraw, and against the will of Moldovan government. The postwar status quo remains to this day: Chişinău offers extensive autonomy, while Tiraspol demands independence. De jure, Transnistria is internationally recognized as part of Moldova, but de facto, the authorities in Chisinau do not exercise any control over that territory.

(3) Transnistrian Issue in the Cooperation to Moldova

Moldova has two vital strategies⁴: (a) to reintegrate Transnistria, and; (b) to join the EU countries. The National Development Strategy (NDS) holds up the "Settlement of the Transnistrian Conflict and Reintegration of the Country" as the number 2 of the National Medium-term Priorities.⁵

Transnistria has principal industries such as metal works and cognac manufacturing and accounts for about 15% of the whole GDP of Moldova⁶. Moldova has an electricity of a useful capability of 1,356MW, out of which 70% (948MW) is generated in Transnistria⁷

³ Editing of translated materials made from the Japanese Embassy located in Ukraine: <http://www.ua.emb-japan.go.jp/J/AboutRM/gaikan/3politics.html>

⁴ Interview to Government Office (June 24, 2009)

⁵ Poverty Reduction Strategy Paper – National Development Strategy Report for 2009 – 2011 (IMF)

⁶ Editing of translated materials made from the Japanese Embassy located in Ukraine: <http://www.ua.emb-japan.go.jp/J/AboutRM/gaikan/3politics.html>

⁷ p10, "Regulation of the Energy Market in the Republic of Moldova, 2008 by ANRE

Depending on the electric supply by Cuciurgan power plant in Transnistria, the electricity imports to Moldova varies largely.⁸

Transnistria is located between Ukraine and Moldova, the issue affects largely the transport sectors including road and railway. CFM (the Railway of Moldova) declares its objective to resume the route between Chisinau and Odessa.⁹

The Moldovan side emphasized the necessity on watching the boarder between Transnistria and Ukraine since Transnistria is of a hotbed of smuggling; then the EUBAM was founded with supports by EU in November 2005. Ukraine and Moldova enforced the regulation in which The documentation issued by the Moldovan tax authorities should be presented to the Ukraine tax office at the entering into Ukraine from Transnistria. It is said that this regulation has come out well until now while Russia and Transnistria have criticized it as an economic sanction.¹⁰

1.1.3 Local Public Administration

Moldova is divided into thirty-two districts (raioane, singular raion); three municipalities (Chisinau, Balti, Bender); and two autonomous regions (Gaugauzia and Transnistria). The cities of Comrat and Tiraspol, the administrative seats of the two autonomous territories also have municipality status. In propelling the NDS, Moldova classified the regions as shown in Figure 1.1-1 composed of the following: (a) the north, (b) the central, (c) the south, (d) Chisinau, (e) Gagauzia autonomous region and; (f) Transnistria autonomous region. The current model of regional development, endorsed by the Law No. 438-XVI on regional development, which was adopted in 2006, provides for the setting up of bigger, regions, with responsibilities for strategic planning, which would complete the existent territorial-administrative structure.

The Regional Development Council is a functional consultative structure at the level of each development region, set up for the coordination and promotion of regional development policy at the local level¹¹.

⁸ p15, "Regulation of the Energy Market in the Republic of Moldova", 2008, by ANRE

⁹ CFM : <http://www.railway.md/en/>

¹⁰ Editing of translated materials made from the Japanese Embassy located in Ukraine : <http://www.ua.emb-japan.go.jp/J/AboutRM/gaikan/3politics.html>

¹¹ p89 – p91, National Development Strategy for 2008-2011

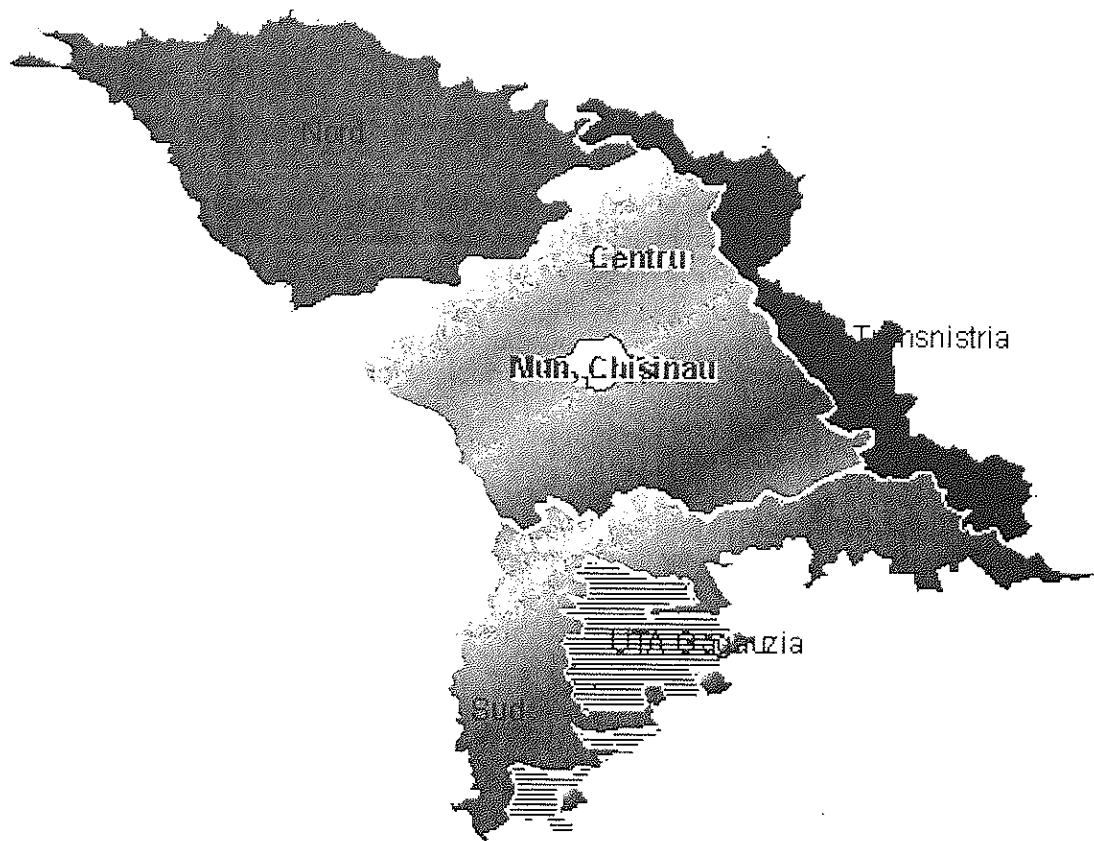


Figure 1.1-1 Classification of the Regions in Moldova

1.1.4 Governance

The country's central legislative body is the unicameral Moldovan Parliament (Parliament), which has 101 seats, and whose members are elected by popular vote on party lists every four years. The head of state is the President of Moldova, who is elected by the Parliament, requiring the support of three fifths of the deputies (at least 61 votes). The president appoints a prime minister who functions as the head of government, and who in turn assembles a cabinet, both subject to parliamentary approval (The weakness of the governance is described in the paragraph 1.1.1.)

The Constitution also establishes an independent Constitutional Court, which is invested with the power of judicial review over all acts of the parliament, over presidential decrees, and over international treaties, signed by the country.¹²

1.1.5 Foreign Policy¹³

Moldova gives priority for a long-term period to the EU integration, for which Moldova develops the national infrastructure supported by the EU countries aiming at accomplishing of the EU standards. In realizing the EU integration, Moldova will be located at the boarder

¹² Parliament of the Republic of Moldova. The Constitution of the Republic of Moldova 2000. Retrieved 11-14, 2007

¹³ Editing of translated materials made from the Japanese Embassy located in Ukraine : <http://www.ua.emb-japan.go.jp/J/AboutRM/gaikan/3politics.html>

between the EU and the CIS countries so that the EU countries are gradually deepening interests in the Transnistria issue hereby to establish the EUBAM (refer to the paragraph 1.1.2).

The Transnistria issue exists between Moldova and Russia (refer to the paragraph 1.1.2). Russia banned wines from Moldova in 2006 in addition to raising largely the price rate of natural gas exported to Moldova which caused damage much to Moldova.

Russia lifted an embargo on the import of Moldovan wines after 2006, and Moldova concluded with Russia the bilateral agreement regarding the Russian joining the WTO, and Moldova took Russia into consideration through showing the attitude reluctant to participation to the GUAM which Russia is on the watch for. The relation between Russia has been improved while the relation between Romania has worsened in the background where the president election was conducted with disturbances at April 2009.

Moldova has a largest ethnic group and a language same mostly as those of Romanian; therefore Moldova and Romania have a very deep relation. In 2007 Romania removed various kinds of measures such as preferential treatments in the trades and non-visa voyage bound for Romania, which raised discontent in Moldova. Statements and activities by the Romanian side indicating that Moldova was of a part of Romania introduced repulsion in the Moldovan side; consequently Romanian ambassador in Moldova was declared persona non grata by the Moldovan government in 2007. The Moldovan side criticized Romania for their involvement in the riot that broke out just after the election in April 2009.

1.2 Economy¹⁴

1.2.1 Outlines

In 1992, Moldova introduced a market economy, liberalizing prices, which resulted in huge inflation. From 1992 to 2001, Moldova suffered its worst economic crisis, leaving most of the population below the poverty line. In 1993, a national currency, the Moldovan Lei, was introduced to replace the Soviet ruble. The end of the planned economy also meant that industrial enterprises would have to buy supplies and sell their goods by themselves, and most of the management was unprepared for such a change. Moldova's industry, especially machine building, became all but defunct, and unemployment skyrocketed. The economic fortunes of Moldova began to change in 2001; since then the country has seen a steady annual growth of between 5% and 10%. The early 2000s also saw a considerable growth of emigration of Moldovans looking for work in Italy, Portugal, Spain, Greece, Cyprus, Turkey, and other countries, in addition to work in CIS countries. Remittances from Moldovans abroad account for almost 36.2% of Moldova's GDP, the second-highest percentage in the world.

The Chapter 3 describes in detail the macro economy including GDP and trades.

1.2.2 Principal Industries

Principal industries in Moldova are of agriculture and food processing industries to produce wine, tobacco, and fruit juice, etc. which accounted for 50% and more in total of the GDP, however, the rate reduced to less than 9% in 2008. (The agriculture sector is explained in detail in the 5.2.1.1.(1).) Ninety percents (90%) of the wine produced in Moldova are exported and 75% of the sparkling wine are exported. In addition, light industries played a central role by the textile industry and the construction-material industry are named as the principal ones.

¹⁴ Editing of translated materials made from the Japanese Embassy located in Ukraine : <http://www.ua.emb-japan.go.jp/J/AboutRM/gaikan/3politics.html>

Table 1.2-1 Industrial Production and Agricultural Production

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Annual Growth Rate of Industrial Production (%)	2.3	14.2	10.6	13.6	6.9	6.3	-6.9	-2.7	0.7
Industrial Production (MM MDL)	8,168	10,348	11,871	16,152	17,533	21,100	22,243	26,187	29,654
Annual Growth Rate of Agricultural Production (%)	-2.6	4.0	3.0	-14.1	20.4	1.0	1.7	-23.1	31.9
Agricultural Production (MM MDL)	8,268	9,141	9,408	10,300	12,601	13,257	14,600	12,550	16,400

Source: Data by Japanese Embassy located in Ukraine and NBS

The following table and figure illustrates the changes of share rates of the principal industries out of GDP:

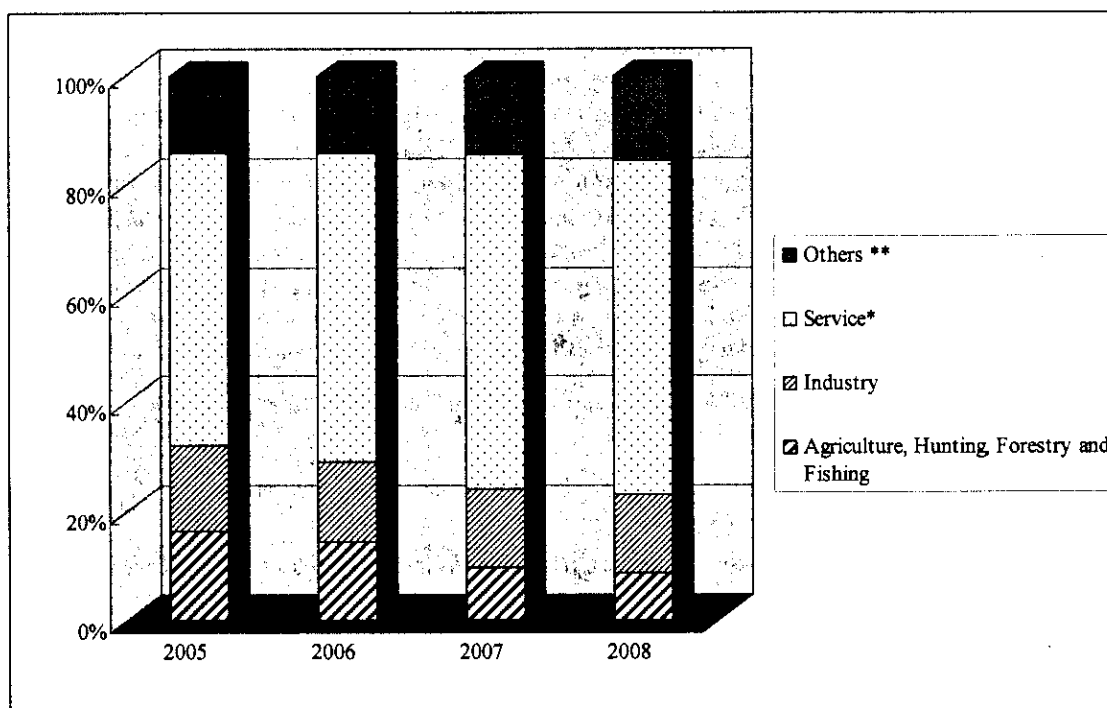
Table 1.2-2 Main Industry's GDP Share Changes

	2005	2006	2007	2008
Agriculture, Hunting, Forestry and Fishing	16.4	14.5	10	8.9
Industry	15.8	14.7	14.3	14.5
Service*	53.8	56.7	61.2	61.3
Others **	14	14.1	14.5	15.3

*Including Construction, Wholesale / Retail Trade, Transport / Communication, etc.

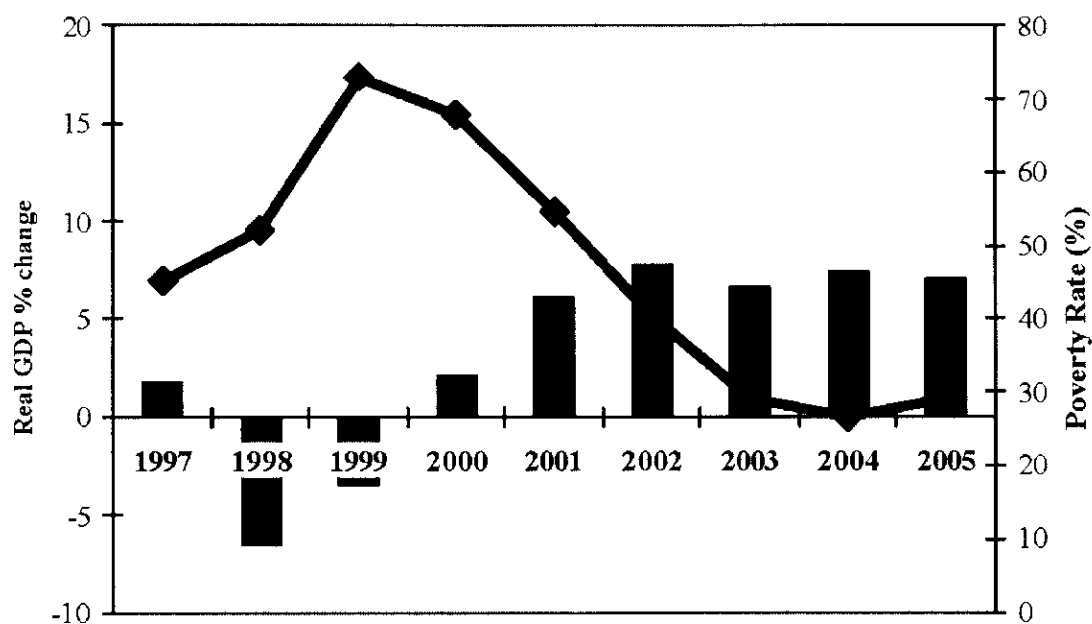
**Including Financial Intermediation Services, Net Taxes, etc

Source: "Moldova in Figures 2009", NBS



1.3 Social Circumstances Including the Poverty State¹⁵

Since late 2002, GDP has continued to grow vigorously, but there has been little progress in reducing poverty. In short, GDP growth is no longer reducing poverty. Analysis of the household budget survey finds the source of this phenomenon in the rural region. The poverty rate among rural households stabilized in late 2002 and then began a moderate upward trend.



Source: NBS

Note: The GDP at 2005 indicates the one totaling the first quarter to the third one.

Figure 1.3-1 GDP Growth and the Poverty Rate: 1997-2005

The available evidence suggests that a fall in household incomes from farms reversed the decline in rural poverty. The main reason for the fall in farm incomes is to be found in the evolution of relative prices. Moldovan farmers' real incomes fell as the prices they receive for their products was flat (or fell¹⁶) while the prices of their inputs, such as wage labor and diesel fuel, rose. The most significant evidence concerns agricultural output prices.

¹⁵ p1, MOLDOVA: Poverty Update June 12, 2006, by WB:
<http://siteresources.worldbank.org/INTMOLDOVA/Resources/MDPovertyUpdateEng.pdf>

¹⁶ MOLDOVA: Poverty Update June 12, 2006, by WB:
<http://siteresources.worldbank.org/INTMOLDOVA/Resources/MDPovertyUpdateEng.pdf>

Chapter 2 National Development Strategy

2.1 Economic Growth and Poverty Reduction Strategy Paper (EGPRSP)

The Moldovan Government drew up the EGPRSP as the medium-term strategy for the period of 2004 to 2006, aiming at the poverty reduction as well as the accomplishment of the Millennium Development Goal. The Moldova's EGPRSP was presented to the Boards of IDA and the IMF in November 2004. The EGPRSP was adopted by the Government in May 2004, and approved by the Parliament in December 2004. It built on the three pillars of the previous Interim Poverty Reduction Strategy Papers: sustainable economic growth, human development, and social protection and inclusion^{1, 2}.

2.2 Outlines of the Latest National Development Strategy and Prioritized Areas Thereof

The spirit and vision of the Strategy aspire towards Moldova's alignment with European standards and, consequently, to the accomplishment of the European integration goal. All priority development areas set forth in the Strategy aim at adjusting relevant national policies to European ones.

Table 2.2-1 National Medium-term Priorities for 2008 - 2011

National Medium-term Priorities	
1.	Strengthening Democracy Based on the Rule of Law and Respect for Human Rights Principles
2.	Settlement of the Transnistrian Conflict and Reintegration of the Country
3.	Enhancing the Competitiveness of the National Economy
4.	Developing Human Resources, Providing for Employment Opportunities and Promoting Social Inclusion
5.	Regional Development

Source: National Development Strategy for 2008-2011, No.295-XVI, December, 2007

By the sectors targeted in the Study, Table 2.2 illustrates the strategy priorities as well as programs and measures thereof.

Table 2.2-2 NDS Priorities and Programs and Measures Thereof

Title Codes in NDS (Source) and Key Words		NDS Priorities, Programs and Measures
3.1.	Private Sector	Improved business environment to intensify investment activity in economy
3.1.1.	Regulatory Framework	Continuation and speeding up of the business regulatory framework reform
3.1.2.	Quality Infrastructure	Improving the quality infrastructure
3.1.3.	Exporting	Extension of goods and services export, in particular on EU markets

¹ The definition of "social inclusion" is to protect people who suffer from social exclusions and frictions hereby to be isolated, to include them into social relations through provision of public supports, occupation training, employment, etc. and to support them each other as members consisting regional society.

² "Joint Staff Advisory Note on the Annual Evaluation Report on the Economic Growth and Poverty Reduction Strategy Paper", IMF, April 2006

Title Codes in NDS (Source) and Key Words		NDS Priorities, Programs and Measures
3.1.4.	Investments	Investments attraction, in particular direct foreign investments
3.1.5.	Competition Principles	Observance of fair competition principles
3.1.6.	Market Development	Reform and stimulation of financial market development
3.2.	Private Sector	SME promotion to offer new opportunities and ensure a better adaptability of the economic system to the current exigencies of the market economy
3.2.1.	Financial Resources	Facilitating SME access to financial resources
3.2.2.	Business Support	Developing business support infrastructure and fostering entrepreneurial culture
3.2.3.	Facing Competition	Building the capacity of SMEs to face competition on the internal and European market
3.2.4.	Public-private Dialogue	Strengthening the public-private dialogue
3.3.	Private Sector	Improved efficiency of enterprises to consolidate competitiveness endogenous factors from the core of national economy
3.2.5.	Qualifications and Labor Conditions	Improving employees qualifications and labor conditions
3.2.6.	Managerial Practices	Improving managerial practices
3.2.7.	State-asset Management	Improving management of state assets
3.4.	Private Sector	Research and innovation development
3.2.8.	Technologic Innovation and Modernization	Capacity building in technologic innovation and modernization
3.5.	Physical Infrastructure	Physical infrastructure development
3.5.1.	Transport Sector	Transport
3.2.8.1.	Automotive System	Developing and maintaining a modern automotive system, which is safe and connected to the pan-European circuit
3.2.8.2.	Railroad Transport	Modernization of the railroad transport system
3.2.8.3.	Giurgiulesti Port	Putting in use benefits provided by construction of Giurgiulesti port
3.2.8.4.	Chisinau Airport	Increasing safety and quality of services offered to passengers at Chisinau Airport
3.2.8.5.	Airport Cargo	Increasing airport capacity for the cargo segment by modernization and transformation of one/some existent airports into a logistical center
3.5.2.	Electricity Sector	Energy system
3.2.8.1.	Interconnection Line	Construction of new electric interconnection lines of high voltage with neighboring countries to ensure energetic safety of the state and increasing electric energy transiting capacity
3.2.8.2.	Cost-benefit Analysis	Conducting a cost-benefit analysis for increasing own electric power production capacities
3.2.8.3.	Power Transport / Distribution	Reconstruction and modernization of electric power transport and distribution, to ensure reduction of losses, non-interrupted provision of EDN-s and final consumers with electric energy
3.2.8.4.	Gas Transiting	Increasing and fully using the existent natural gas transiting capacity
3.2.8.5.	Electricity System	Integration of the national electricity system into the European one
3.2.8.6.	Renewable Energy	Development /full use of own renewable energy resources
3.2.8.7.	Energy Conservation	Attraction of investments for implementation of energy conservation technologies
3.2.8.8.	Thermal Power	Modernization of thermal power transport and distribution infrastructure
4.2.1.	Health Sector	Improving the quality of health services by streamlining the infrastructure and making efficient use of resources, improving the management of health facilities and investing the saved resources in cost-efficient technologies, equipment and development of professional skills

Title Codes in NDS (Source) and Key Words		NDS Priorities, Programs and Measures
4.2.1.1.	Human-resource Management	Improving the management of human resources with a view to rational utilization of existent personnel, and adequate, diversified and advanced training of employees in the health services system
4.2.1.2.	Efficient Health-care Services	Making health care services more efficient by making those meet the new needs and adapt to new requirements, and by streamlining the expenditures in the public health care facilities at no expense to the quality and access to them
4.2.2.	Health-care Service Access	Improving the access to health care services through efficient use of financial resources and by expanding coverage with mandatory health insurance
4.2.1.2.	Financing Health Services	Enhancing fairness in financing health services and protecting population against financial risk, and ensuring transparency in earmarking and using financial resources
4.2.1.3.	Rural Health Insurance	Expanding coverage with mandatory health insurance in rural areas
5.3.	Agriculture Sector	Rural development and growth of agriculture productivity
5.3.1.	Competitiveness	Improving the performance of agriculture and the competitiveness of farming and food products
5.3.2.	SME Climate	Developing a climate favorable for strengthening SMEs and business skills in rural areas
5.4.	Common in Sectors	Developing and upgrading regional infrastructure and promoting public-private partnerships
5.4.1.	Financial Capacities / Resources	Concentrating financial capacities and resources for the implementation of projects in the social area, transport, public services and environment protection
5.5.	Common in Sectors	Preventing environmental pollution and promoting the efficient use of natural resources aimed at improving the quality of life
5.5.1.	Environment Quality	Efficient harnessing of natural resources, maintaining the quality of environment as a factor that ensures the keeping up of health and better quality of life

Source: p65-p103, National Development Strategy for 2008-2011, No.295-XVI, December, 2007

2.3 National Development Strategy (NDS) Action Plans Based on EGPRSP

The Moldovan Government and IMF published in April, 2008 the action plans to implement the National Development Strategy. All the 161 action plans in the NDS are classified as follows:

Table 2.3-1 Classification of Action Plans for the Implementation of the NDS

Classification	Classified Titles in NDS	NDS No. (Note 1)
Prerequisite 1	Ensuring Macroeconomic Stability	1~7
Prerequisite 2	Consolidating the Capacity of Local and Central Public	8~12
Priority 1	Strengthening Democracy Based on the Rule of Law and Respect for Human Rights	13~41
Priority 2	Settlement of the Transnistrian Conflict and Reintegration of the Country	42~44
Priority 3	Enhancing the National Economy Competitiveness	45~88
Priority 4	Human Resources Development, Enhancing Employment and Promoting Social Inclusion	89~123
Priority 5	Regional Development	124~151
Monitoring and Evaluation		152~161

Note 1: Action-plan Numbers restricted in the NDS

Source: "Poverty Reduction Strategy Paper—National Development Strategy Report for 2008-2011", IMF

As for the Action Plans, the outlines and the progress are explained in the chapter 5. The Study Team has learned the progress states of the Action Plans as briefly summarized as follows:

1. The Action Plans may be delayed in the schedule under the influence of the Global Economic Crisis.
2. The authorized ministries which established recently such as MCTD and MLPA³ may be lack in manpower to implement the Action Plans on schedule.

2.4 Medium Term Expenditure Framework (MTEF)

Based on above-mentioned action plan, Moldovan government established Medium Term Expenditure Framework and posted 2009-2011 year edition publicly on the website of the Ministry of Finance (MOF). According to the interviewing, MTEF is a budget plan for three years and the first year's one is fixed and the following second and third year's ones are on the scheduled ones. In usual, the IMF has meeting with government of Moldova for three to four weeks from July to September every year in terms of MTEF. The results are brought back and the contents are to be completed. Subsequently, the IMF presents to the government about some directions of next year's budget and requests authorizations in the parliaments as a procedure. From this standpoint, the present budgets (2009~2011 year edition) published on the website is to be last year's one. In fact, prolonged elections for parliament as well as president are negatively affected. In addition, it is presupposed that impact of global economic crisis are not included on the present one.

In the MTEF (2009-2011 edition), "Concept on Policy Priorities in the Context of Developing the Medium Term Expenditure Framework (2009-11)" were assumed approved by the Prime Minister's Decision (No. 1410-154). Based on the decision, "Forecasts of the Medium Term Expenditure Framework (2009-11)" was established and approved by the decree. This forecast was drawn by the budgets of the central government and the regional governments. At the same time, the most updated macroeconomic data was introduced. Therefore, as mentioned above, the MTEF (2009-2011 edition) is a draft of 2009's National Public Budget (NPB) and bases for discussions to establish budgets for 2010 and 2011.

In addition, in the MTEF (2009 – 2011 edition), as a Sector Strategic Expenditure Plans (SSEPs), such six sectors as (i) justice, (ii) transport, (iii) environmental protection, (iv) science, (v) sports and (vi) Penitentiary system were newly included.

Furthermore, the MTEF (2009-2011 edition) covered (i) macroeconomic context, (ii) tax policy and budget revenue, (iii) public expenditure framework, (iv) management of the state debt and budgetary balance and (v) overall financial framework. Based on the situations that Moldova experienced global economic crisis and that macroeconomic environments are largely changed, it is striking that upper limitations were expressly decided. That is, from a standpoint of investment and budget support, new external debt is to be used and, from preventing budgetary burden, it is decided that external debt is up to 30 percent of GDP.

2.5 Other National Development Plans

Considerable ministries planed their medium-term strategy hereby to draw up their action plans. The outlines and progress states of such action plans are described in the Chapter 5.

³ As for their functions, refer to 5.1.2.1.

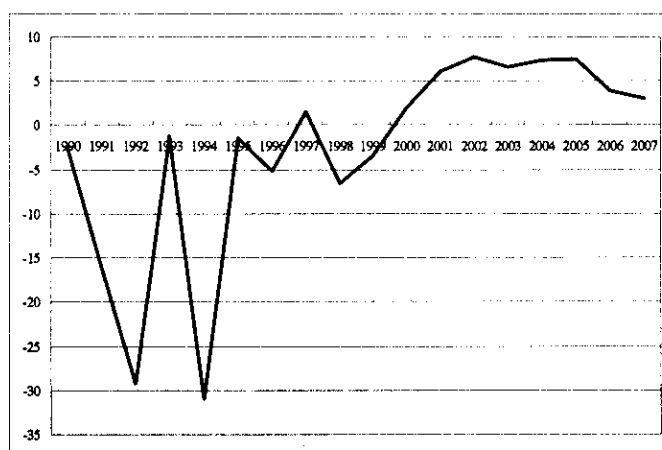
Chapter 3 Macro Economy and Debt Sustainability

3.1 Macroeconomic Indicators

After market-oriented economic reform, Moldovan economy passed so-called recession in transition and has been in the basis of positive growth after 2000. However, GDP per capita in 2007 has not recovered from the level at market-oriented economic reform in the PPP international Dollar and positioned the poorest in the European countries.

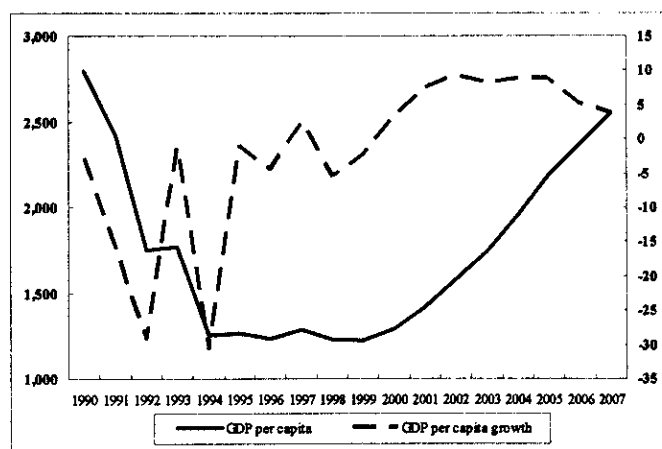
In this chapter, a characteristics and a process of macroeconomic performance of Moldovan economy is to be clarified.

Figure 3.1-1 Real GDP Growth (%)



Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-2 GDP Per Capita and Growth (%)

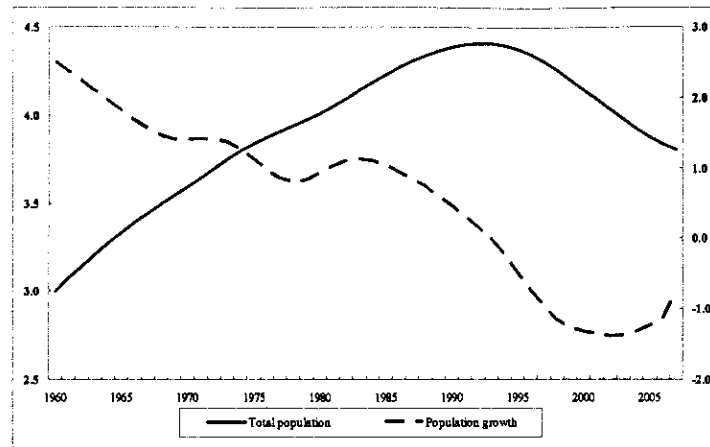


Source: The World Bank. 2009. World Development Indicators.

3.1.1. Decrease in Population

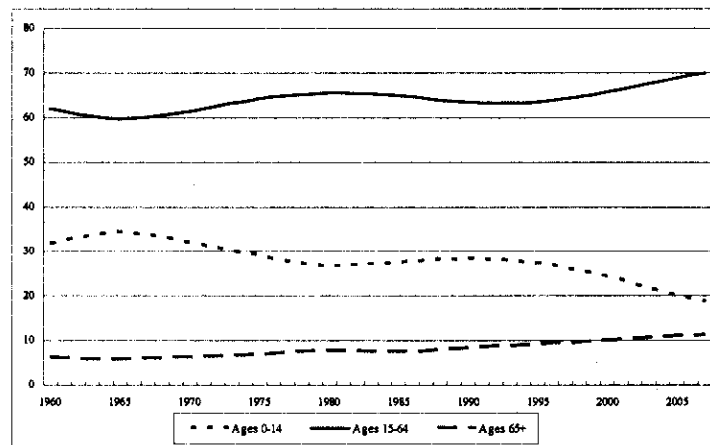
Population in Moldova was peaked of 4.4 million in 1992 and has been declined. At present, the population is presently 3.8 million. Continuous decline of population growth was started at the beginning of 1980s. The population growth has continuously negative in 1993. This decline is because of increase in economic emigrant as described hereinafter and decrease in birth ratio. As shown in the following figure, population aged 0 to 14 has been declining from mid-1990.

Figure 3.1-3 Population (Million) and Population Growth (%)



Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-4 Population by Age Group (Percentage in Total Population) (%)



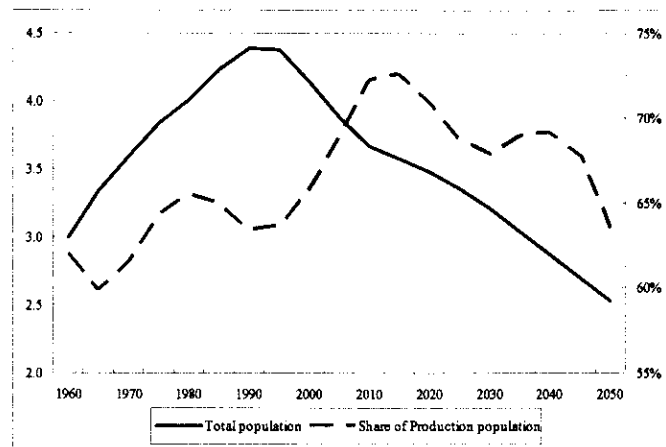
Source: The World Bank. 2009. World Development Indicators.

The declining of Moldovan population is forecasted to be declined continuously. According to the forecast by the World Bank, in the second half of 2030, it is forecasted that its population will be less than three million people. In this situations, production population will be peaked in mid-2010 and will be declined subsequently.

In addition, as mentioned above, net immigration is less than minus 250 thousands in 2000 and 2005, respectively, even though there are some limitations of data¹. Accordingly, remittance from emigrant workers became more than 35% of GDP. Therefore, as mentioned below, remittance is largely contributing to Moldovan international balance of payments.

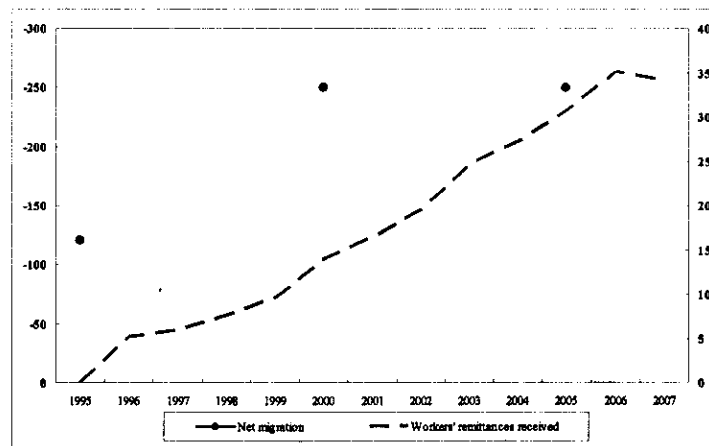
¹ Net immigration is that the total number of immigrants less the annual number of emigrants during the period.

Figure 3.1-5 Total Population (Million) and Share of Production Population in Total (%)



Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-6 Net Immigrant and Share of Remittance in GDP (%)

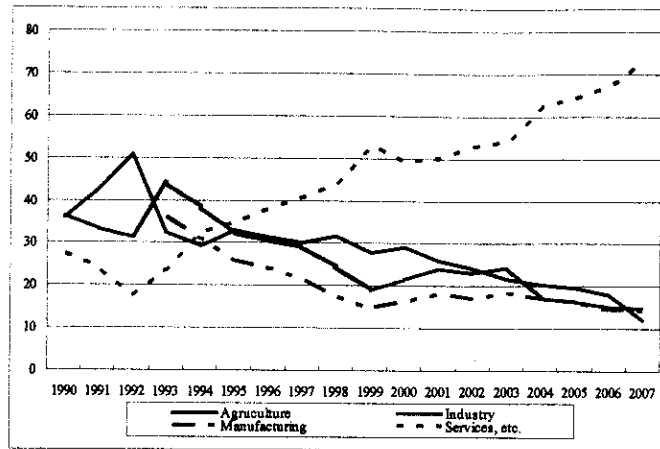


Source: The World Bank. 2009. World Development Indicators.

3.1.2. Instable Economic Structure and Impact of Drought

Historically, Moldova is positioned as an agricultural country. At the beginning of 1990s, facing recession in transition, sectors in industry and services were simultaneously declined and approximately more than 60% of GDP was produced from the agricultural sector. However, share in production from agriculture has been declined and became less than 20% in 2005. The share has been declining continuously until now. Especially in 2006 and 2007, facing serious drought, production from agricultural sector has declined dramatically and real GDP growth rates were relatively lowered.

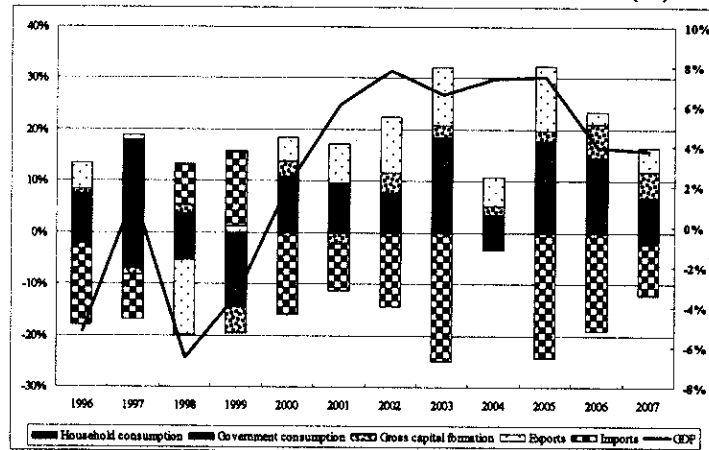
Figure 3.1-7 Shares of Value Addition by Sectors to GDP



Source: The World Bank. 2009. World Development Indicators.

According to level of contribution in GDP, household consumptions have had an impact upon changes in real GDP growths. As increases of household consumption have been highly dependent upon imports. Therefore, imports have shown reverse impacts to the trends of household consumptions.

Figure 3.1-8 Level of Contribution in GDP
(Contribution of GDP (%) in Left Axis and Real GDP Growth (%) in Right Axis)

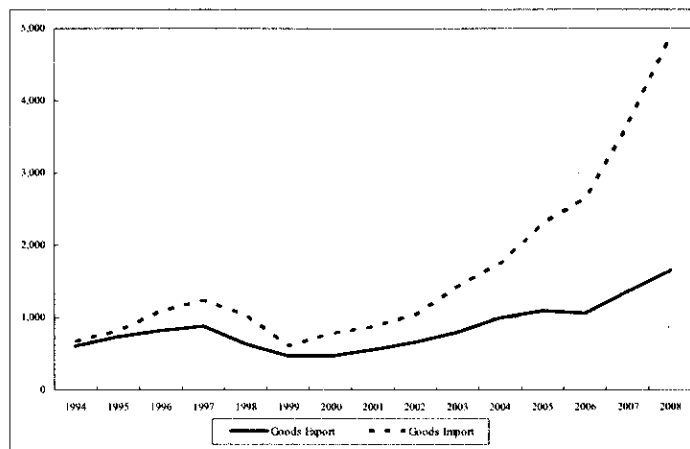


Source: . The World Bank. 2009. World Development Indicators

3.1.3. Significant Deficit of Current Account

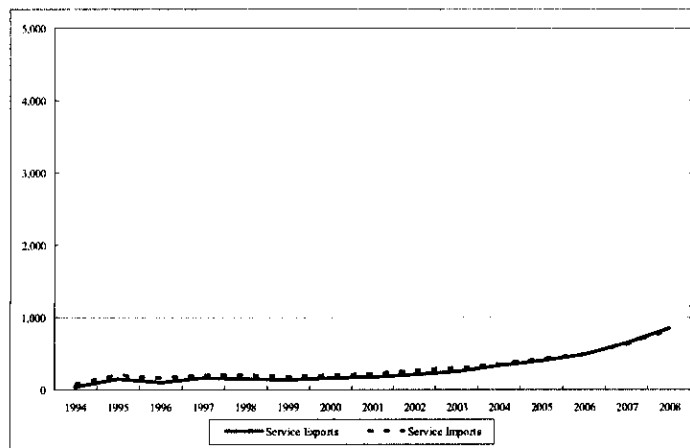
In Moldova, historically and continuously, goods imports have been larger than good exports. Especially after 2005, growth rates of imports have been larger than those in exports. During the same period of time, service exports and service imports have been on the same levels. Therefore, deficit in trade became more than 30 billion US Dollars.

Figure 3.1-9 Goods Trade (MMUS\$)



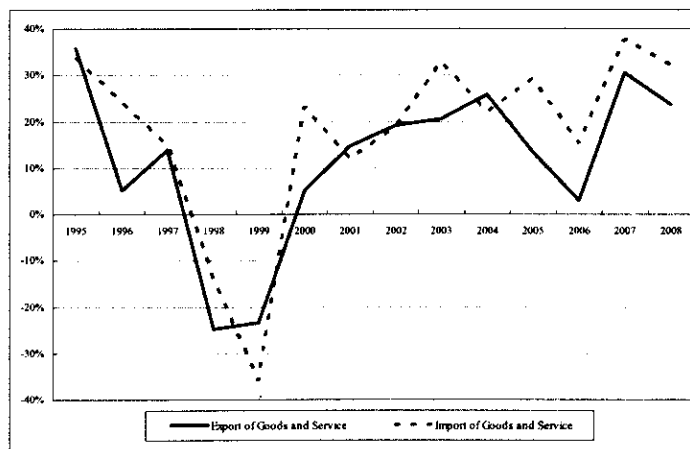
Source: IMF, 2009 (May). International Financial Statistics.

Figure 3.1-10 Services Trade (MMUS\$)



Source: IMF, 2009 (May). International Financial Statistics.

Figure 3.1-11 Growth of Exports and Imports in Goods and Services (%)

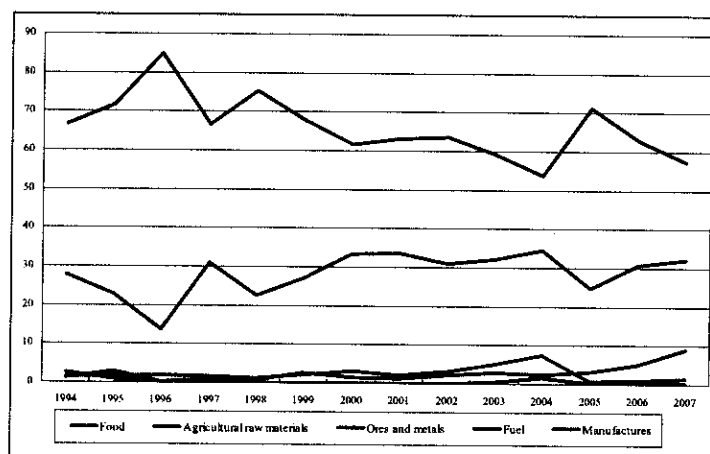


	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Exports in Goods and Services	35.7%	5.1%	13.8%	-24.8%	-23.3%	5.1%	14.7%	19.1%	20.4%	25.7%	13.4%	2.9%	30.4%	23.7%
Import in Goods and Services	33.8%	24.2%	14.8%	-14.2%	-35.8%	23.1%	12.0%	18.9%	33.1%	22.0%	29.2%	15.2%	37.6%	32.2%

Source: IMF. 2009 (May). International Financial Statistics.

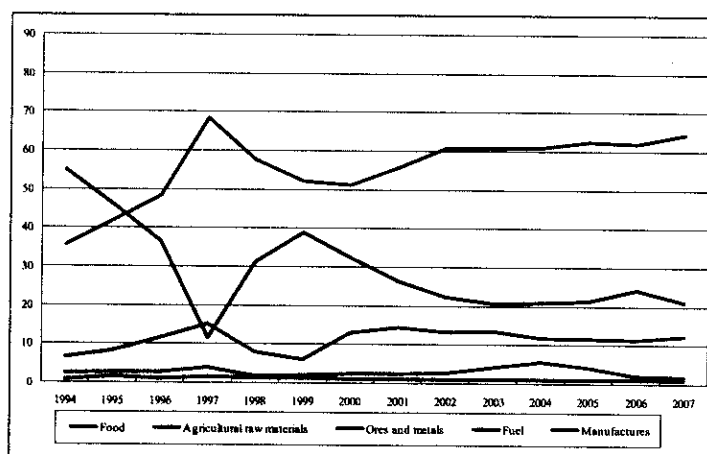
Major parts of Moldova's goods exports have been shared in food and manufactures. In addition, in the case of goods imports, food and manufacture have been major ones. At the same time, more than 10% has been shared in food after 2000. On the other hand, in the services trade, transport has been surplus in trade account. In addition, trade in computer, communication and other have been surplus. However, travel have been deficit from 1998.

Figure3.1-12 Goods Exports to Total Merchandise Exports (%)



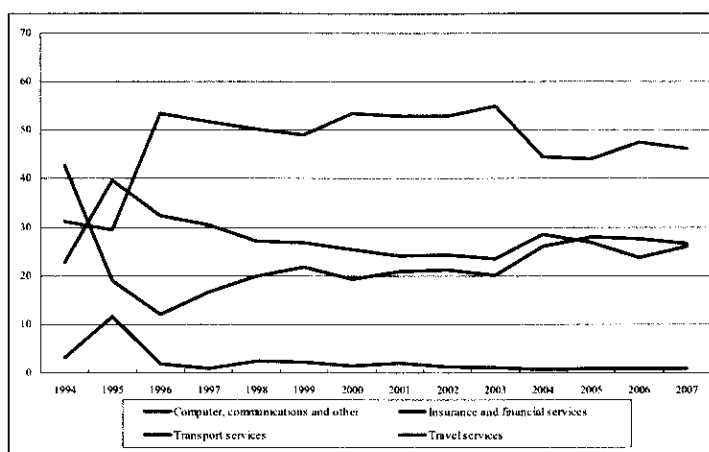
Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-13 Goods Imports to Total Merchandised Imports (%)



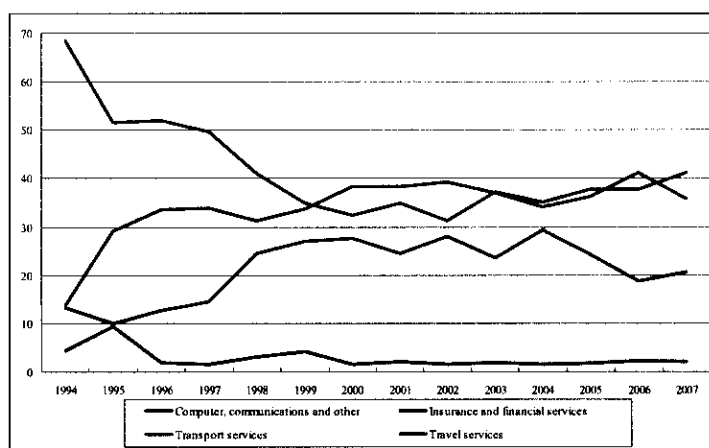
Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-14 Services Exports to Total Services Exports (%)



Source: The World Bank. 2009. World Development Indicators.

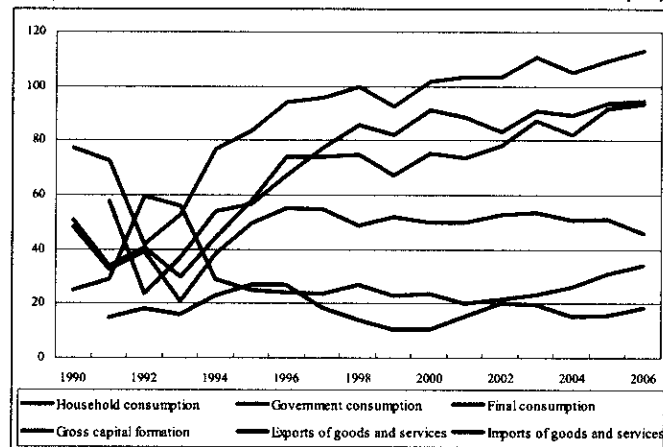
Figure 3.1-15 Services Imports to Total Services Imports (%)



Source: The World Bank. 2009. World Development Indicators.

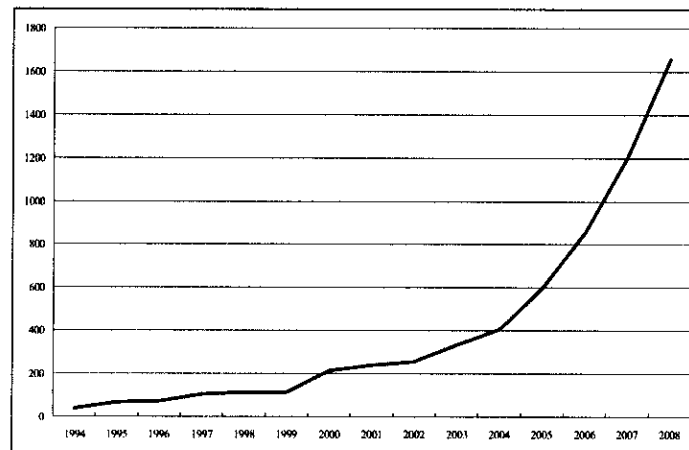
According to Moldova's sectoral value addition to GDP, there is more than 90% in imports of goods and services. This is caused by active consumption. At the same time, it is also because Russia increased exported prices of natural gas to Moldova. As shown in the international balance of payments, trade deficits have been compensated by the worker's remittances. As shown in the Table 3.1-2 International Balance of Payments, current transfer (credit) in 2008 amounted to 1.66 billion US Dollars, which was more than amount in export. The major recipient countries for Moldovan people as the emigrants have been Russia, Spain and Italy. It is generally said that Russia is a country for Moldovan people for easiness of communication and there have been many Moldovan workers in construction. On the other hands, there have been many workers in Spain and Italy in the agricultural sector. In addition, as a characteristics for Moldovan foreign workers, it is said that family members have been jointly coming to recipient countries.

Figure 3.1-16 Sectoral Value Addition to GDP (%)



Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-17 Current Transfers (Credit) (MMUS\$)



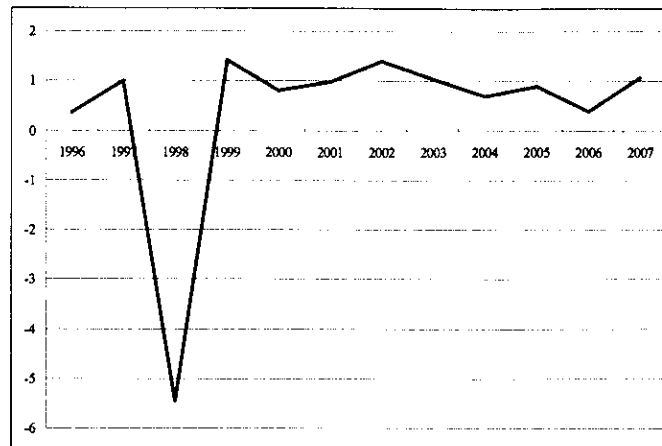
Source: IMF. 2009 (April). International Financial Statistics.

According to the elasticity of exports and imports to GDP in Moldova, exports have been more and less of 1.00 from 1999. However, in the case of imports, especially after 2002, the figures have been more than 1.00 except 2004. In addition, consumer propensities in household have been stable. On the contrary, government's consumer propensities have been fluctuated. In 2006, facing drought and serious economic slowdown, the propensity became more than 2.00. Furthermore, elasticities of current transfer (credit) to GDP have been more than 1.00 after 2003 and more than 2.00 after 2005.

In addition, large fluctuations of these data in 1998 were largely dependent upon economic and currency crisis of Russia. For example, Moldova's export declined rapidly from 509 MMUS\$ in 1997, which was 58.1% of total export, to 339 MMUS\$ in 1998. In addition, Moldova's import also decreased from 333 MMUS\$ in 1997, which was 28.6% of total import, to 228 MMUS\$ in 1998. On the contrary, elasticities have largely shifted to positive because real GDP growth showed decline, while there was relatively no change in current transfer.

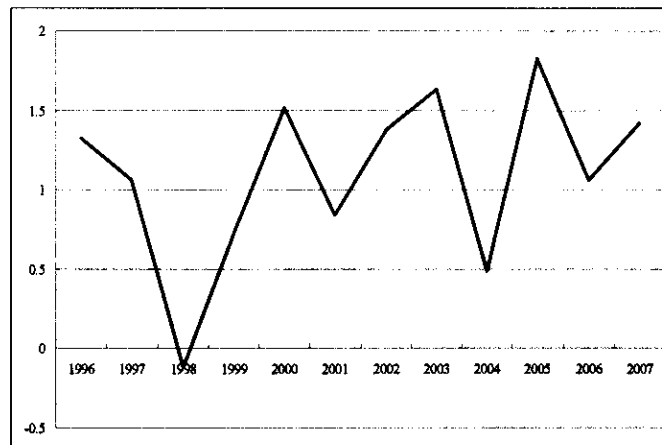
As mentioned above, it is important that Moldova's macroeconomic performances have been highly effected by the external factors.

Figure 3.1-18 Elasticity of Exports to GDP



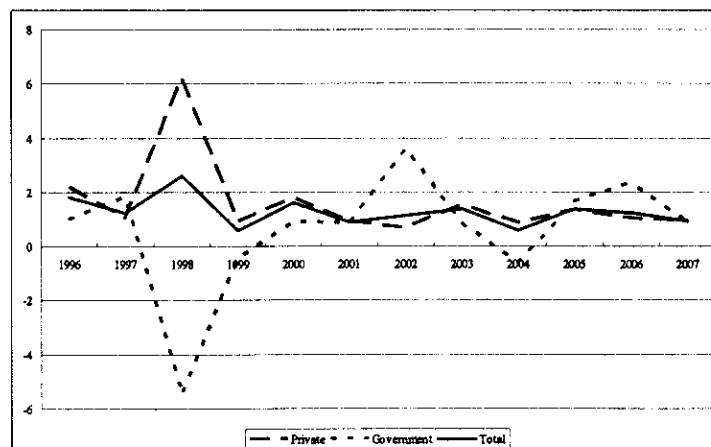
Source: IMF. 2009 (May). International Financial Statistics.

Figure 3.1-19 Elasticity of Import to GDP



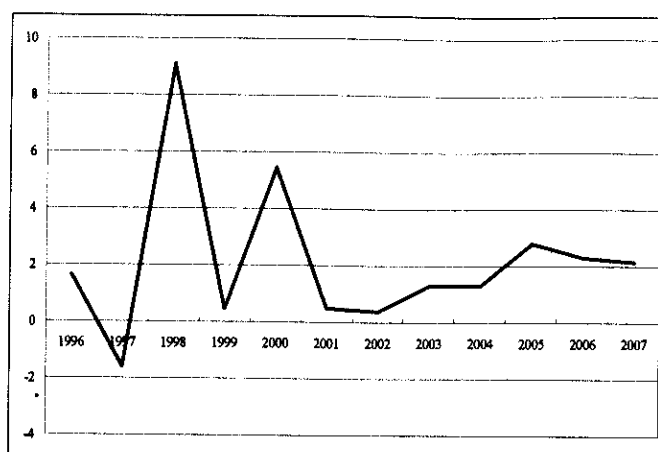
Source: IMF. 2009 (May). International Financial Statistics.

Figure 3.1-20 Consumer Propensities to GDP



Source: IMF. 2009 (May). International Financial Statistics.

Figure 3.1-21 Elasticity of Current Transfer (Credit) to GDP



Source: IMF. 2009 (May). International Financial Statistics.

3.1.4 Russia's Prohibition of Imports of Moldova's Wine

The reasons of decline of Moldova's imports in 2006 was because Russia prohibited imports of Moldovan wine in 2006. This caused rapid decline of Moldova's exports to Russia. However, export of Moldovan wine was restarted in 2008.

Table 3.1-2 Moldova's Export Partners (MMUS\$ and %)

	2004			2005			2006			2007		
1	RUS	353.3	35.9%	RUS	347.5	32.9%	RUS	293.9	23.6%	RUS	445.2	25.3%
2	ITA	136.4	13.8%	ITA	133.5	12.7%	ITA	142.4	11.5%	ROM	228.6	13.0%
3	ROM	98.9	10.0%	ROM	111.7	10.6%	ROM	125.0	10.1%	ITA	176.0	10.0%
4	GER	71.3	7.2%	UKR	99.9	9.5%	UKR	123.5	9.9%	UKR	153.2	8.7%
5	UKR	64.8	6.6%	BLR	71.2	6.7%	GER	106.5	8.6%	GER	149.2	8.5%
6	BLR	58.7	6.0%	GER	47.4	4.5%	BLR	73.7	5.9%	POL	110.0	6.2%
7	USA	44.9	4.6%	USA	38.2	3.6%	USA	35.6	2.9%	BLR	74.5	4.2%
8	KAZ	15.4	1.6%	POL	25.3	2.4%	POL	31.7	2.5%	TUR	48.3	2.7%
9	HUN	14.5	1.5%	TUR	24.7	2.3%	TUR	28.5	2.3%	FRA	30.2	1.7%
10	TUR	12.3	1.2%	KAZ	17.3	1.6%	FRA	26.3	2.1%	USA	28.0	1.6%
11	BEL	11.8	1.2%	FRA	16.5	1.6%	SVK	24.9	2.0%	AUT	27.4	1.6%
12	FRA	11.4	1.2%	HUN	14.7	1.4%	KAZ	21.4	1.7%	KAZ	26.5	1.5%
	Sub-total	893.6	90.7%	Sub-total	947.8	89.9%	Sub-total	1,033.3	83.1%	Sub-total	1,497.0	85.0%
	Total	985.2	100.0%	Total	1,054.8	100.0%	Total	1,242.9	100.0%	Total	1,761.8	100.0%

Source: IMF. 2009 (May). Direction of Trade Statistics.

According to exports by commodity, exports of wine (Code of HS 2002: 220421) in 2006 was less than half of that in previous year and that in 2007 became less than 60% than that in 2006. In the other hand, it is import to say that Moldova's exports have been diversified from such traditional commodities as nuts and juices to construction materials, electric appliances and daily commodities. As mentioned in the 3.1.5, this is thought to be led by the foreign capital invested to the country.

Table 3.1-2 International Balance of Payments (MMUS\$)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Current Account, n.i.e.	-82.0	-87.8	-194.8	-274.9	-334.7	-78.6	-108.4	-37.0	-25.3	-130.3	-47.1	-247.7	-384.5	-747.7	-1,071.3
Goods: Exports (o.b.)	618.5	739.0	822.9	889.6	643.6	474.3	476.8	564.6	659.7	805.1	994.1	1,104.6	1,058.7	1,368.4	1,646.7
Goods: Imports (o.b.)	-672.4	-809.2	-1,082.5	-1,237.6	-1,031.7	-611.5	-770.3	-879.7	-1,037.5	-1,428.1	-1,748.2	-2,296.1	-2,644.4	-3,676.4	-4,870.0
Trade Balance	-53.9	-70.2	-259.7	-348.0	-388.1	-137.2	-293.6	-315.1	-377.8	-623.0	-754.2	-1,191.5	-1,585.7	-2,308.0	-3,223.4
Services: Credit	32.8	144.5	106.0	167.7	152.0	135.7	164.6	170.9	216.7	250.0	332.1	398.9	488.6	649.7	849.8
Services: Debit	-79.0	-196.3	-166.4	-196.4	-198.6	-177.9	-201.6	-208.8	-257.0	-294.3	-353.1	-419.7	-484.4	-630.0	-824.0
Balance on Goods & Services	-100.0	-122.0	-320.0	-376.4	-434.6	-179.4	-330.5	-352.9	-418.1	-667.3	-775.1	-1,212.2	-1,581.5	-2,288.3	-3,197.6
Income: Credit	10.8	14.2	98.3	132.7	136.8	120.5	139.1	173.9	229.4	340.8	490.0	539.3	605.8	710.0	904.7
Income: Debit	-26.1	-32.4	-44.2	-85.3	-102.3	-95.8	-117.5	-78.1	-72.8	-110.0	-133.0	-128.4	-203.8	-285.7	-310.9
Balance on Gds, Serv. & Inc.	-115.4	-140.2	-264.9	-329.0	-400.1	-154.7	-309.0	-257.1	-261.6	-436.5	-418.1	-801.4	-1,179.4	-1,874.0	-2,603.7
Current Transfers, n.i.e.: Credit	36.9	66.6	72.9	104.1	110.9	111.5	213.6	236.0	255.6	334.0	406.8	506.8	854.9	1,206.6	1,659.2
Current Transfers: Debit	-3.6	-14.1	-2.8	-50.0	-45.5	-35.4	-13.1	-15.9	-19.3	-27.8	-35.8	-43.2	-60.0	-80.3	-126.8
Capital Account, n.i.e.	-1.0	-0.4	-0.1	-0.2	-0.4	1.1	-14.3	-20.7	-19.3	-19.0	-18.3	-16.9	-22.8	-8.0	-14.7
Capital Account, n.i.e.: Credit	0.0	0.0	0.1	0.1	2.1	1.5	2.8	1.1	1.2	4.6	7.2	5.2	6.1	7.0	9.5
Capital Account: Debit	-1.0	-0.4	-0.1	-0.3	-2.5	-0.4	-17.1	-21.8	-20.4	-23.6	-25.5	-22.1	-28.9	-14.9	-24.2
Financial Account, n.i.e.	211.1	-68.8	76.6	96.2	5.2	-34.6	126.4	19.1	20.6	84.3	113.0	200.5	359.4	976.4	1,261.6
Direct Investment Abroad	n.a.	-0.5	-0.6	-0.5	0.7	-0.1	-0.1	-0.1	-0.5	-0.1	-3.2	0.2	0.7	-12.0	-33.4
Dir. Invest. in Rep. Econ., n.i.e.	11.6	25.9	23.7	78.7	75.5	37.9	127.5	54.5	84.1	73.8	87.7	190.7	251.1	493.4	712.8
Portfolio Investment Assets	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	-3.2	-1.5	0.4	-1.5	-1.2	-0.2	-0.1	n.a.
Equity Securities	-0.4	n.a.	n.a.	n.a.	n.a.	0.0	0.0	0.0	0.0	-0.1	-0.2	0.0	-0.2	-0.1	n.a.
Debt Securities	n.a.	n.a.	n.a.	n.a.	n.a.	0.0	0.0	-3.2	-1.5	0.5	-1.3	-1.2	0.0	0.0	n.a.
Portfolio Investment Liab., n.i.e.	0.7	-0.5	30.8	18.6	-59.1	-7.3	-4.0	-3.9	-25.9	-24.2	-8.3	-5.8	-4.6	-4.4	6.4
Equity Securities	0.7	-0.5	0.8	3.7	6.5	5.2	2.9	2.8	2.3	0.7	-0.8	0.6	1.8	1.7	11.4
Debt Securities	n.a.	0.0	30.0	14.9	-65.6	-12.5	-6.9	-6.8	-28.2	-24.9	-7.5	-6.4	-6.4	-6.2	-4.9
Financial Derivatives Assets	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.0	0.0	-0.5	-1.7	-0.1	-0.5	n.a.
Financial Derivatives Liabilities	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.0	0.1	1.0	0.1	0.3	0.1	n.a.
Other Investment Assets	-81.7	-116.4	-51.4	1.8	-86.8	-107.4	-35.9	-22.2	-40.0	6.5	-31.6	-78.2	-49.4	41.3	26.7
Monetary Authorities	-1.3	2.9	0.3	3.7	2.9	0.0	0.1	0.0	0.0	0.0	-18.8	-14.1	0.0	0.0	n.a.
General Government	-4.1	11.9	12.2	1.6	-0.6	-4.3	0.0	8.3	0.5	-0.2	0.3	-0.2	0.0	0.0	n.a.
Banks	-10.1	-13.5	-6.5	10.6	-10.9	-15.4	-16.5	1.2	-15.7	-19.6	5.8	-50.7	-77.6	49.2	-36.2
Other Sectors	-66.2	-117.7	-57.4	-14.2	-78.2	-87.8	-19.6	-31.7	-24.8	26.4	-18.9	-13.1	28.2	-7.9	62.9
Other Investment Liab., n.i.e.	281.0	22.7	74.0	-3.4	74.8	42.3	38.8	-6.0	4.3	27.8	69.3	96.3	161.6	458.6	548.1
Monetary Authorities	3.1	1.8	-1.9	-2.7	5.2	-2.4	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General Government	147.0	-19.7	43.2	-59.2	9.7	-22.4	-11.1	-14.3	-12.6	-25.1	-19.1	-14.8	-29.9	-14.6	-21.3
Banks	-0.8	11.4	21.9	11.8	6.9	-21.2	4.2	-2.3	11.0	14.1	17.0	13.8	60.5	193.1	217.5
Other Sectors	131.6	29.2	10.7	46.6	53.1	88.3	45.9	10.5	6.0	38.8	71.4	97.3	131.0	280.2	351.9
Net Errors and Omissions	-115.2	-18.4	15.5	-8.0	-22.8	-3.8	-8.6	16.0	-24.1	47.4	100.6	178.3	64.2	151.6	82.2
Overall Balance	12.9	-175.4	-102.7	-187.8	-352.8	-115.9	-4.9	-22.6	-48.0	-17.6	148.2	114.2	16.4	372.3	257.7
Reserves and Related Items	-12.9	175.4	102.7	187.8	352.8	115.9	4.9	22.6	48.0	17.6	-148.2	-114.2	-16.4	-372.3	-257.7
Reserve Assets	-103.1	-76.7	-56.9	-50.2	225.7	-48.8	-47.4	-9.5	-27.0	-14.1	-148.0	-128.6	-140.7	-528.9	-452.0
Use of Fund Credit and Loans	71.5	64.8	25.2	0.8	-64.4	4.0	-12.7	-2.4	-5.6	-22.2	-21.6	-21.7	41.1	11.2	13.5

Source: IMF, 2009 (May). International Financial Statistics.

Table 3.1-3 Moldova's Exports by HS2002 in 2005 (MMUS\$)

	HS Code	Commodity Description	Value
1	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	202.9
2	410120	Whole bovine (incl. buffalo)/equine hides & skins, wt. per skin not >8kg (s ...	52.8
3	220820	Spirits obt. by distilling grape wine/grape marc	34.1
4	220430	Grape must (excl. of 20.09)	33.2
5	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	31.0
6	080232	Walnuts, shelled	30.3
7	151219	Sunflower seed/safflower oil, other than crude, & fractions thereof, wheth ...	23.1
8	610910	T-shirts, singlets & oth. vests, knitted or crocheted, of cotton	22.9
9	080810	Apples, fresh	20.3
10	120600	Sunflower seeds, whether or not broken	18.6
11	200979	Apple juice (excl. of 2009.71), unfermented & not cont. added spirit, wheth ...	18.4
12	640399	Footwear (excl. waterproof) with outer soles of rubber/plastics/composition ...	15.9
			503.5

Source: UN. COMTRADE.

Table 3.1-4 Moldova's Exports by HS2002 in 2006 (MMUS\$)

	HS Code	Commodity Description	Value
1	220421 ²	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	100.0
2	080232	Walnuts, shelled	37.3
3	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	33.6
4	701090	Carboys, bottles, flasks, jars, pots, phials & oth. conts., of glass, of a ...	27.7
5	721391	Bars & rods, hot-rolled, in irregularly wound coils, of iron/non-alloy stee ...	24.9
6	220430	Grape must (excl. of 20.09)	24.1
7	220820	Spirits obt. by distilling grape wine/grape marc	22.6
8	100190	Wheat other than durum wheat; meslin	21.3
9	610910	T-shirts, singlets & oth. vests, knitted or crocheted, of cotton	20.8
10	151219	Sunflower seed/safflower oil, other than crude, & fractions thereof, wheth ...	18.9
11	252020	Plasters (consisting of calcined gypsum/calcium sulphate) whether or not co ...	18.1
12	761699	Articles of aluminium n.e.s. in Ch.76	17.5
			366.9

Source: UN. COMTRADE.

² On the tables, commodity descriptions of HS code 220421 and 220429 are same. However, there are some differences of these two codes. That is, 220421 means "Other wine in containers holding 2 liters or less; grape must with fermentation prevented or arrested by the addition of alcohol" and 20429 means "Other wine, n.e.s.; grape must with fermentation prevented or arrested by the addition of alcohol" by the definitions. Briefly, 220421 is defined to be categorized by wine contained by 2 liters and 220429's wine is categorized by other containers.

Table 3.1-5 Moldova's Exports by HS2002 in 2007 (MMUS\$)

	HS Code	Commodity Description	Value
1	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	57.3
2	080232	Walnuts, shelled	46.7
3	200979	Apple juice (excl. of 2009.71), unfermented & not cont. added spirit, wheth ...	40.7
4	252020	Plasters (consisting of calcined gypsum/calcium sulphate) whether or not co ...	39.7
5	701090	Carboys, bottles, flasks, jars, pots, phials & oth. conts., of glass, of a ...	39.4
6	120600	Sunflower seeds, whether or not broken	29.7
7	721391	Bars & rods, hot-rolled, in irregularly wound coils, of iron/non-alloy stee ...	26.8
8	151219	Sunflower seed/safflower oil, other than crude, & fractions thereof, wheth ...	26.2
9	761699	Articles of aluminium n.e.s. in Ch.76	24.8
10	220820	Spirits obt. by distilling grape wine/grape marc	24.2
11	220430	Grape must (excl. of 20.09)	24.1
12	151211	Sunflower seed/safflower oil, crude	23.1
			402.7

Source: UN. COMTRADE.

Table 3.1-6 Moldova's Exports by HS2002 in 2008 (MMUS\$)

	HS Code	Commodity Description	Value
1	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	92.1
2	854420	Co-axial cable & oth. co-axial elec. conductors	78.6
3	252020	Plasters (consisting of calcined gypsum/calcium sulphate) whether or not co ...	55.3
4	721391	Bars & rods, hot-rolled, in irregularly wound coils, of iron/non-alloy stee ...	44.8
5	701090	Carboys, bottles, flasks, jars, pots, phials & oth. conts., of glass, of a ...	41.7
6	080232	Walnuts, shelled	40.5
7	220820	Spirits obt. by distilling grape wine/grape marc	35.3
8	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	34.2
9	100300	Barley	33.6
10	151219	Sunflower seed/safflower oil, other than crude, & fractions thereof, wheth ...	31.8
11	080810	Apples, fresh	25.2
12	120510	Low erucic acid rape/colza seeds, whether or not broken	23.0
			536.0

Source: UN. COMTRADE.

According to export by partner and by commodity, wine exports to Russia was declined dramatically to 41.7 MMUS\$ in 2006³. After that, wine has started exporting to Ukraine and Belarus and accomplished diversification. Diversification of commodities has also started especially to Russia in recent years.

³ Amount of wine exports to Russia in 2004 and 2005 (Billion US Dollars) was 1.46 and 1.58, respectively.

**Table 3.1-7 Moldova's Export by Partner and By Commodity (HS2002) in 2006
(MMUS\$)**

	Partner	HS Code	Commodity Description	Value
1	RUS	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	41.7
2	FRA	80232	Walnuts, shelled	16.9
3	UKR	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	16.8
4	BLR	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	15.6
5	RUS	761699	Articles of aluminium n.e.s. in Ch.76	15.5
6	TUR	610910	T-shirts, singlets & oth. vests, knitted or crocheted, of cotton	13.5
7	POL	721391	Bars & rods, hot-rolled, in irregularly wound coils, of iron/non-alloy stee ...	12.3
8	BLR	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	12.2
9	ROM	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	12.0
10	UKR	252020	Plasters (consisting of calcined gypsum/calcium sulphate) whether or not co ...	10.5
11	ROM	701090	Carboys, bottles, flasks, jars, pots, phials & oth. conts., of glass, of a ...	9.8
12	RUS	220820	Spirits obt. by distilling grape wine/grape marc	9.2
				185.9

Source: UN. COMTRADE.

**Table 3.1-8 Moldova's Export by Partner and By Commodity (HS2002) in 2007
(MMUS\$)**

	Partner	HS Code	Commodity Description	Value
1	AUT	200979	Apple juice (excl. of 2009.71), unfermented & not cont. added spirit, wheth ...	21.7
2	RUS	761699	Articles of aluminium n.e.s. in Ch.76	21.1
3	UKR	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	19.7
4	FRA	80232	Walnuts, shelled	19.0
5	RUS	170199	Cane/beet sugar & chemically pure sucrose, in solid form, not cont. added f ...	17.6
6	POL	721391	Bars & rods, hot-rolled, in irregularly wound coils, of iron/non-alloy stee ...	16.8
7	BLR	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	16.2
8	UKR	252020	Plasters (consisting of calcined gypsum/calcium sulphate) whether or not co ...	16.1
9	GER	740400	Copper waste & scrap	13.8
10	RUS	80810	Apples, fresh	13.7
11	UKR	220820	Spirits obt. by distilling grape wine/grape marc	13.7
12	GER	200979	Apple juice (excl. of 2009.71), unfermented & not cont. added spirit, wheth ...	13.4
				202.7

Source: UN. COMTRADE.

**Table 3.1-9 Moldova's Export by Partner and By Commodity (HS2002) in 2008
(MMUS\$)**

	Partner	HS Code	Commodity Description	Value
1	ROM	854420	Co-axial cable & oth. co-axial elec. conductors	78.5
2	RUS	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	38.4
3	BLR	220429	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	26.3
4	RUS	252020	Plasters (consisting of calcined gypsum/calcium sulphate) whether or not co ...	25.1
5	POL	721391	Bars & rods, hot-rolled, in irregularly wound coils, of iron/non-alloy stee ...	20.7
6	ROM	151219	Sunflower seed/safflower oil, other than crude, & fractions thereof, wheth ...	20.3
7	RUS	80810	Apples, fresh	20.2
8	UKR	220421	Wine other than sparkling wine of fresh grapes, incl. fortified; grape must ...	18.4
9	GBR	610620	Women's/girls' blouses, shirts & shirt-blouses, knitted or crocheted, of ma ...	16.2
10	SUI	100300	Barley	15.6
11	FRA	80232	Walnuts, shelled	14.0
12	RUS	220820	Spirits obt. by distilling grape wine/grape marc	13.4
				307.1

Source: UN. COMTRADE.

According to Moldova's import partners, imports from Russia have been approximately 20% in total in 2006 and in 2007. At the same time, Ukraine and Russia were followed by Russia in the same years. In addition, Germany and Italy were followed by these countries, which shares were more than 5% in the total imports.

Table 3.1-10 Moldova's Import Partners (MMUS\$ and %)

	2004			2005			2006			2007		
1	UKR	436.3	24.7%	UKR	479.8	20.9%	RUS	729.8	20.9%	RUS	957.3	20.5%
2	RUS	212.3	12.0%	RUS	268.2	11.7%	UKR	593.0	16.9%	UKR	735.9	15.8%
3	ROM	164.1	9.3%	ROM	257.3	11.2%	ROM	471.1	13.5%	ROM	700.7	15.0%
4	GER	150.2	8.5%	GER	191.1	8.3%	GER	305.3	8.7%	GER	407.7	8.7%
5	ITA	131.6	7.4%	ITA	152.0	6.6%	ITA	212.3	6.1%	ITA	265.9	5.7%
6	TUR	69.1	3.9%	TUR	93.0	4.1%	POL	154.2	4.4%	POL	193.4	4.1%
7	BLR	64.3	3.6%	BLR	84.3	3.7%	TUR	118.1	3.4%	TUR	160.2	3.4%
8	FRA	52.7	3.0%	CHN	73.9	3.2%	BLR	105.3	3.0%	BLR	159.0	3.4%
9	KAZ	50.3	2.8%	KAZ	67.0	2.9%	KAZ	82.8	2.4%	KAZ	102.7	2.2%
10	POL	44.8	2.5%	POL	65.1	2.8%	BRA	57.4	1.6%	FRA	92.8	2.0%
11	CHN	37.7	2.1%	FRA	64.4	2.8%	FRA	56.2	1.6%	NED	87.9	1.9%
12	BUL	29.6	1.7%	USA	40.8	1.8%	HUN	55.1	1.6%	HUN	79.7	1.7%
	Sub-total	1,443.0	81.6%	Sub-total	1,836.8	80.1%	Sub-total	2,940.6	84.0%	Sub-total	3,943.4	84.6%
	Total	1,768.5	100.0%	Total	2,293.0	100.0%	Total	3,499.8	100.0%	Total	4,663.1	100.0%

Source: IMF. 2009 (April). Direction of Trade Statistics.

According to Moldova's imports by commodities, petroleum oil, natural gas and light petroleum oil have been major three import items. In addition, electricity and medicament have been followed by these commodities after 2006. As mentioned above, although there have been some changes in ranks, import items have been nearly fixed. On the other hands, imported commodities followed by these items have been varied by year.

Table 3.1-11 Moldova's Imports by HS2002 in 2005 (MMUS\$)

	HS Code	Commodity Description	Value
1	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	184.2
2	271011	Light petroleum oils & preps.	114.7
3	271121	Natural gas, in gaseous state	107.9
4	410120	Whole bovine (incl. buffalo)/equine hides & skins, wt. per skin not >8kg (s ...	51.8
5	300490	Medicaments (excl. of 30.02/30.05/30.06) consisting of mixed/unmixed prods. ...	50.4
6	271600	Electrical energy (optional heading)	38.2
7	240220	Cigarettes cont. tobacco	32.6
8	870323	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	28.3
9	020714	Cuts & edible offal of species Gallus domesticus, frozen	21.3
10	852520	Transmission app. for radio-telephony/radio-telegraphy/radio-broadcasting/t ...	21.0
11	630790	Other made-up textile arts., incl. dress patterns, n.e.s.	20.5
12	380820	Fungicides, put up in forms or packings-RS/as preps./arts.	20.1
			691.0

Source: UN. COMTRADE.

Table 3.1-12 Moldova's Imports by HS2002 in 2006 (MMUS\$)

	HS Code	Commodity Description	Value
1	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	215.3
2	271121	Natural gas, in gaseous state	189.1
3	271011	Light petroleum oils & preps.	122.7
4	271600	Electrical energy (optional heading)	73.1
5	300490	Medicaments (excl. of 30.02/30.05/30.06) consisting of mixed/unmixed prods. ...	58.7
6	240220	Cigarettes cont. tobacco	42.5
7	870323	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	31.6
8	880240	Aeroplanes & oth. aircraft, of an unladen wt. >15000kg	21.2
9	721420	Bars & rods of iron/non-alloy steel (excl. of 72.13), cont. indentations/ri ...	20.5
10	870322	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	19.1
11	761699	Articles of aluminium n.e.s. in Ch.76	18.3
12	851790	Parts of the app. & equip. of 85.17	17.4
			829.6

Source: UN. COMTRADE.

Table 3.1-13 Moldova's Imports by HS2002 in 2007 (MMUS\$)

	HS Code	Commodity Description	Value
1	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	256.1
2	271121	Natural gas, in gaseous state	225.7
3	271011	Light petroleum oils & preps.	148.8
4	271600	Electrical energy (optional heading)	87.3
5	300490	Medicaments (excl. of 30.02/30.05/30.06) consisting of mixed/unmixed prods. ...	77.1
6	240220	Cigarettes cont. tobacco	58.4
7	870323	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	50.5
8	870120	Road tractors for semi-trailers (excl. of 87.09)	48.3
9	721420	Bars & rods of iron/non-alloy steel (excl. of 72.13), cont. indentations/ri ...	38.2
10	852520	Transmission app. for radio-telephony/radio-telegraphy/radio-broadcasting/t ...	37.8
11	830241	Mountings, fittings & sim. arts. suit. for buildings, of base metal (excl. ...	29.7
12	761699	Articles of aluminium n.e.s. in Ch.76	25.9
			1,083.7

Source: UN. COMTRADE.

Table 3.1-14 Moldova's Imports by HS2002 in 2008 (MMUS\$)

	HS Code	Commodity Description	Value
1	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	395.0
2	271121	Natural gas, in gaseous state	285.0
3	271011	Light petroleum oils & preps.	191.2
4	271600	Electrical energy (optional heading)	138.0
5	300490	Medicaments (excl. of 30.02/30.05/30.06) consisting of mixed/unmixed prods. ...	105.2
6	870323	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	86.1
7	999999	Commodities not specified according to kind	83.4
8	240220	Cigarettes cont. tobacco	68.6
9	870120	Road tractors for semi-trailers (excl. of 87.09)	51.7
10	854449	Electric conductors (excl. of 8544.11-8544.30), for a voltage not >80V, oth ...	50.0
11	721420	Bars & rods of iron/non-alloy steel (excl. of 72.13), cont. indentations/ri ...	34.5
12	870322	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	34.4
			1,523.0

Source: UN. COMTRADE.

According to Moldova's import by partner and by commodity, natural gas from Russia has been largest amount after 2006. In addition, import amounts of petroleum oils from Ukraine, Romania and Bulgaria have been ranked high. Import of light petroleum oil from Romania also have been followed by these commodities. Moreover, all of electrical energy have been imported from Ukraine.

Table 3.1-15 Moldova's Import by Partner and By Commodity (HS2002) in 2006 (MMUS\$)

	Partner	HS Code	Commodity Description	Value
1	RUS	271121	Natural gas, in gaseous state	189.1
2	UKR	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	97.5
3	ROM	271011	Light petroleum oils & preps.	96.2
4	ROM	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	72.3
5	UKR	271600	Electrical energy (optional heading)	63.1
6	RUS	240220	Cigarettes cont. tobacco	25.3
7	GER	880240	Aeroplanes & oth. aircraft, of an unladen wt. >15000kg	21.2
8	UKR	721420	Bars & rods of iron/non-alloy steel (excl. of 72,13), cont. indentations/ri ...	19.9
9	RUS	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	19.5
10	UKR	240220	Cigarettes cont. tobacco	16.3
11	BLR	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	15.2
12	TUR	611790	knitted or crocheted parts of garments/clothing accessories	12.7
				648.1

Source: UN. COMTRADE.

Table 3.1-16 Moldova's Import by Partner and By Commodity (HS2002) in 2007 (MMUS\$)

	Partner	HS Code	Commodity Description	Value
1	RUS	271121	Natural gas, in gaseous state	225.7
2	ROM	271011	Light petroleum oils & preps.	112.2
3	ROM	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	98.2
4	UKR	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	89.3
5	UKR	271600	Electrical energy (optional heading)	87.3
6	UKR	240220	Cigarettes cont. tobacco	42.9
7	BLR	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	37.8
8	UKR	721420	Bars & rods of iron/non-alloy steel (excl. of 72,13), cont. indentations/ri ...	31.5
9	GER	830241	Mountings, fittings & sim. arts. suit. for buildings, of base metal (excl. ...	26.9
10	ITA	761699	Articles of aluminium n.e.s. in Ch.76	20.6
11	JPN	870323	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	19.4
12	UKR	110100	Wheat/meslin flour	17.3
				809.1

Source: UN. COMTRADE.

Table 3.1-17 Moldova's Import by Partner and By Commodity (HS2002) in 2008 (MMUS\$)

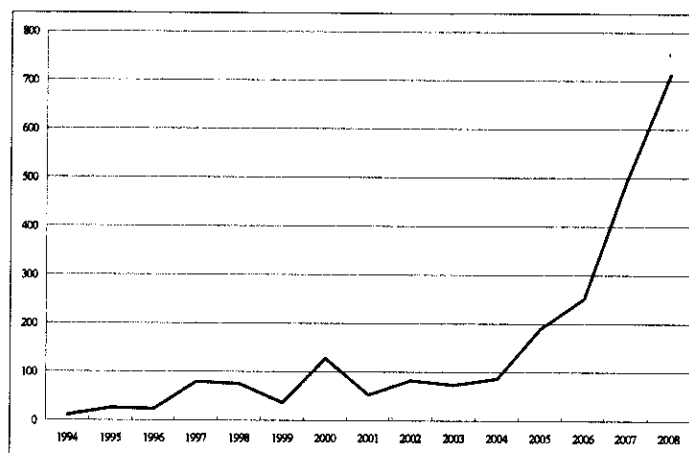
	Partner	HS Code	Commodity Description	Value
1	RUS	271121	Natural gas, in gaseous state	285.0
2	ROM	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	153.6
3	ROM	271011	Light petroleum oils & preps.	146.8
4	UKR	271600	Electrical energy (optional heading)	138.0
5	BLR	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	97.2
6	UKR	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	96.0
7	UKR	240220	Cigarettes cont. tobacco	51.6
8	JPN	870323	Vehicles (excl. of 87.02 & 8703.10) princ. designed for the tpt. of persons ...	36.5
9	AUT	854449	Electric conductors (excl. of 8544.11-8544.30), for a voltage not >80V, oth ...	32.7
10	UKR	721420	Bars & rods of iron/non-alloy steel (excl. of 72,13), cont. indentations/ri ...	26.7
11	RUS	271019	Petroleum oils & oils obt. from bituminous mins. (excl. crude) & preps. oth ...	24.1
12	RUS	271112	Propane, liquefied	22.2
				1,110.5

Source: UN. COMTRADE.

3.1.5 Positive Acceptance of Foreign Direct Investment (FDI)

Acceptance of Foreign Direct Investment (FDI) was increasing largely after 2005 based on active policies and institutions by the Moldova's government and private entities and became more than 700 MMUS\$ in 2008. This amount was worth of approximately 40% of exports.

Figure 3.1-22 Acceptance of Foreign Direct Investment (MMUS\$)



Source: IMF. 2009 (April). International Financial Statistics.

Increase of acceptance of FDI has been highly dependent upon establishment of Law on Investments in Entrepreneurial Activity, which was effective at the beginning of 2004. According to the law, without regard to nationality and/or shares of capital, all investors are guaranteed and protected by international law, which Moldova is affiliated.

According to Moldovan Investment and Export Promotion Organization (MIEPO) under the Ministry of Economy and Trade, amount of investment accumulated to 2.50 billion US Dollars from 86 countries from the time of market capitalization to the end of 2008⁴.

Table 3.1-18 Accumulated Amount of FDI to Moldova (MMUS\$)

Netherlands	357.5
Cyprus	186.0
Italy	182.5
Russia	126.1
Spain	92.8
Germany	90.8
U.S.A.	76.4
U.K.	72.2
France	60.3
Romania	55.5
Others	1,199.1
Total	2,499.2

Source: Moldovan Investment and Export Promotion Organization (MIEPO)

In addition, in the shares of investments to Moldova by sector, shares of sectors in "wholesales and retail trade," "processing industries," "finance," "real estate transactions" and "energy, gas and water" was more than 10% in total. In addition, these five sectors amounted for 89.2% in total investment.

⁴ Each country's Data by sectors and time-series data by investment amounts can not be obtained.

Table 3.1-19 Shares of FDI by Sector (%)

Sectors	Shares
Wholesale and Retail Trade	23.3
Processing Industries	19.2
Finance	17.6
Real Estate transactions	17.1
Energy, Gas and Water	12.0
Transport and Communication	6.3
Construction	2.0
Hotels and Restaurants	1.1
Agriculture	0.7
Others	0.7
Total	100.0

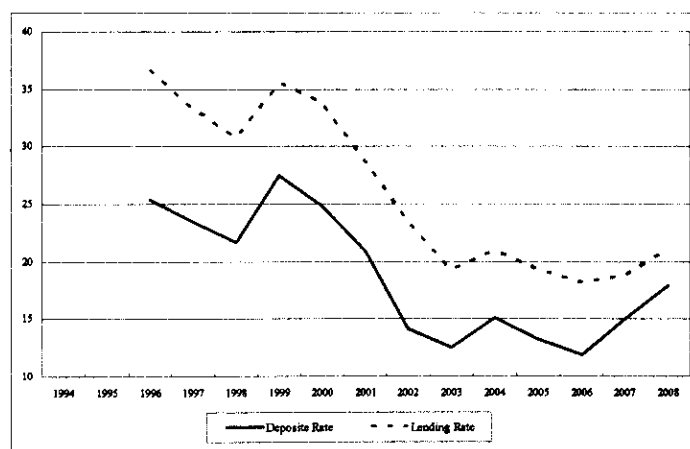
Source: MIEPO

The MIEPO introduced to major foreign investors on the Foreign Investment Guide (Updated: April 2009) as follows: i) Societe Generale (France, banking); ii) Lukoil Europe Ltd. (Russia, petroleum products); iii) Union Fenosa (Spain, energy distribution); iv) Lafarge (France, construction materials); v) France Telecom MI (France, telecommunication); vi) Veneto Banca (Italy, banking); vii) METRO Group A.G. (Germany, wholesale trade); viii) Danube Logistics (Netherlands, shipping and logistics); ix) Mabanaft A.G. (Germany, petroleum products); x) WNISEF (U.S.A., food industry, glass bottles, banking); and xi) KNAUF (Germany, construction).

3.1.6 Relatively High Interest Rate

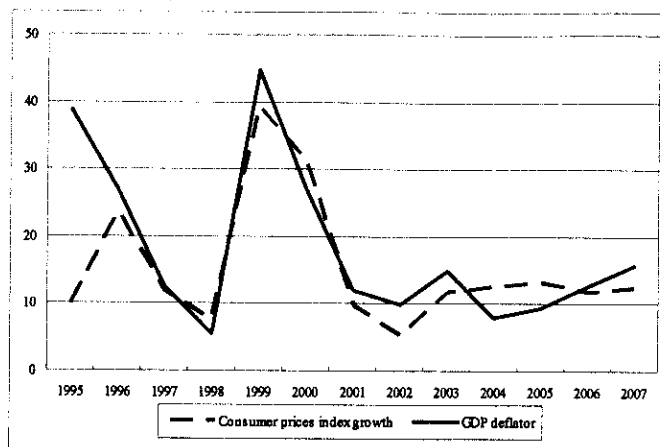
In Moldova, relatively high interest rate has been one of the negative factors for disincentive business environments. According to interviewing during field study, interest rate on loans was more than 20% in major banks in this country. In such situations, some Moldovan private enterprises set up branch office in Romania, which is relatively lower rate of interest on loans, and obtains loans through branch offices. The reason of relatively high interest rates is dependent on influences of high inflation. The inflation rates after 2001 have been fluctuating at the levels of approximately 10%.

Figure 3.1-23 Deposit and Lending Rate (%)



Source: IMF. 2009 (April). International Financial Statistics.

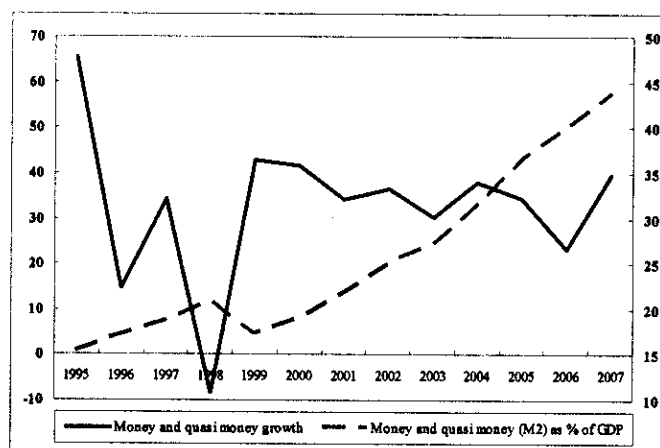
Figure 3.1-24 Inflation (%)



Source: The World Bank. 2009. World Development Indicators.

National Bank of Moldova promoted money supply (M2) of more than 30% to 40% in comparison with that in previous year after 1990 to respond active resource demand based on 10%’s inflation every year. Accordingly, money supply to GDP has accumulated to approximately 45%. Basic stance of IMF is traditionally reducing inflation as mentioned in “Fourth Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for Waiver of Nonobservance of Performance Criterion - Staff Report.”

Figure 3.1-25 Money Supply



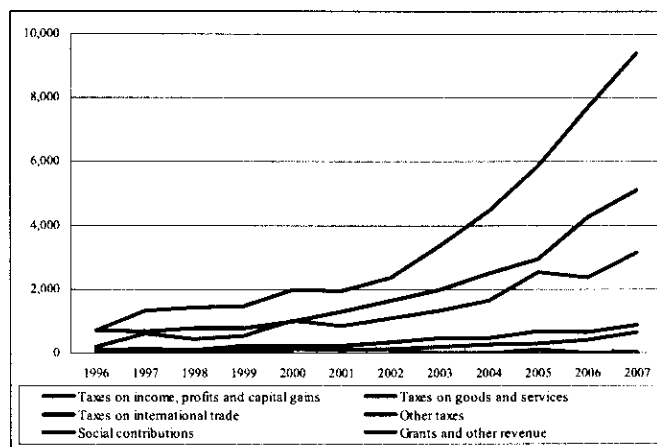
Source: The World Bank. 2009. World Development Indicators.

3.1.7 Fiscal Situations

By adding more than 3 billion Moldova’s lei’s worthy of grants, the country’s revenues have sustained surplus in FY2007, so-called fundamental balance has been continuing large deficits. In revenue in 2007, taxes on goods and services amounted to 48.9% to total revenue, followed by social contributions (26.6%) and grants and other revenues (15.4%). Therefore, 91.9% of total revenue were accumulated to these three kinds of sources. On the contrary, in expenditure, subsidies and other transfers amounted to 56.4% to total expenditure, followed by goods and

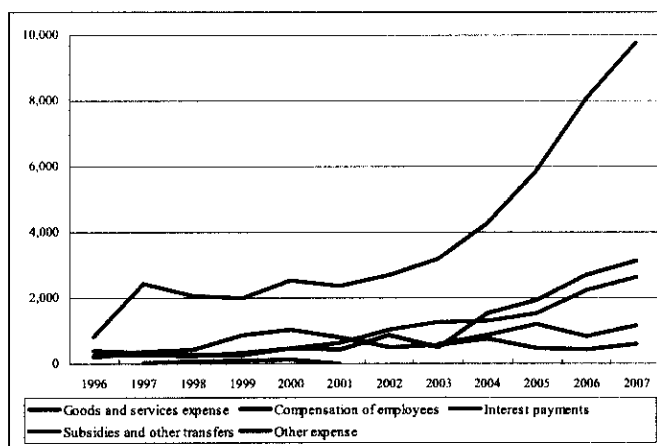
services expenses (18.2%) and compensation of employees (18.2%). In these three kinds of expenditure, 89.9% of expenditure was covered⁵.

Figure 3.1-26 Revenue (MMMDL)



Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-27 Expenditure (MMMDL)

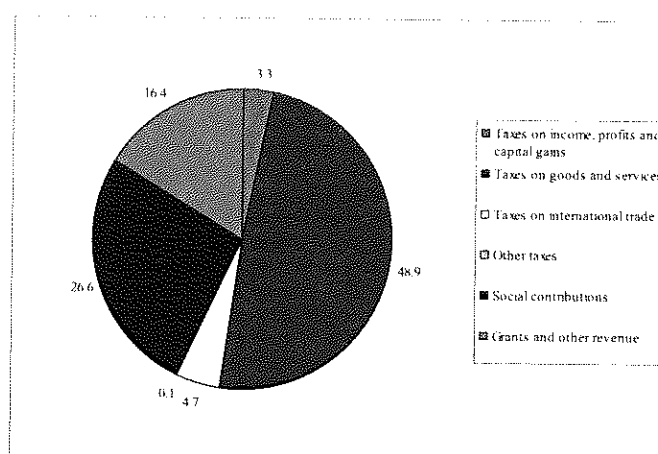


Source: The World Bank. 2009. World Development Indicators.

⁵

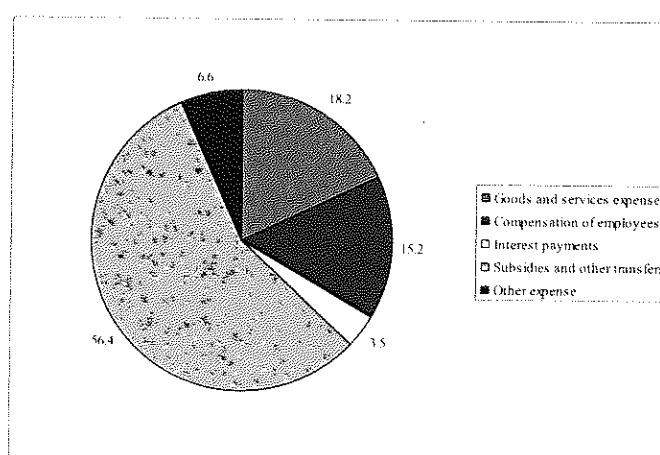
According to the World Development Indicators (2008), "social contributions include social security contributions by employees, employers, and self-employed individuals, and other contributions whose source cannot be determined. They also include actual or imputed contributions to social insurance schemes operated by governments."

Figure 3.1-28 Revenue (Share in Total Revenue) in 2007 (%)



Source: The World Bank. 2009. World Development Indicators.

Figure 3.1-29 Expenditure (Share in Total Expenditure) in 2007 (%)



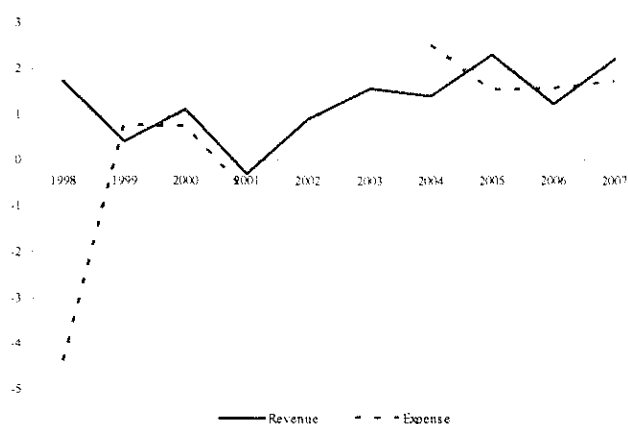
Source: The World Bank. 2009. World Development Indicators.

Facing global economic crisis, revenue has been drastically declined and can not cover expenditure in coming two to three months. In this situations, according to several interviewing survey in Moldova, the president went to Moscow from June 27 to 28, 2009, and it was said that he requested emergency grant aid to the Russian government, which amounted to 500 MMUS\$ in the weekend⁶. This visit yielded results and the Minister of Finance came to Moscow for practical meeting in the next week.

In addition, elasticities to GDP have been more than 1.00 after 2003 in revenue and after 2004 in expenditure. Therefore, it is clear that revenue and expenditure will be increased based on GDP growth.

⁶ According to several interviewing survey, there were other views that new Russian loan was a counteroffer of road construction planned by Millennium Challenge Corporation (MCC) of the U.S., worth of 300 MMUS\$. Details of road construction by the MCC are mentioned in the later.

Figure 3.1-30 Elasticities of Revenue and Expenditure to GDP



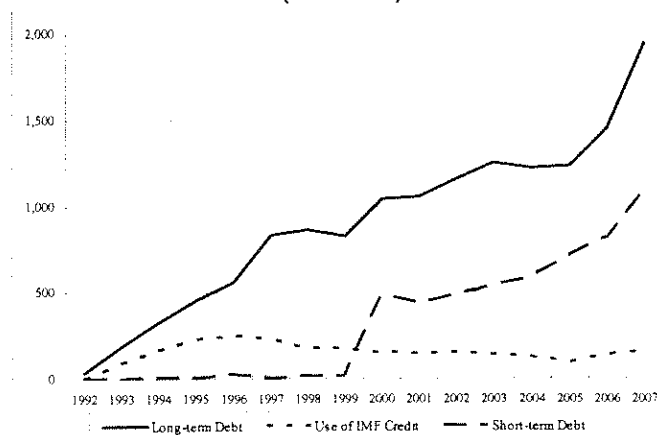
Source: IMF. 2009 (May). International Financial Statistics.

3.2 Major Debt Indicators

3.2.1 Debt Outstanding and Disbursement

Total debt stock of Moldova in 2007 was approximately 3.20 billion US Dollars. Of this, long-term debt amounted to approximately 1.95 billion US Dollars and 60% of total debt stock. This levels have been continuing from 2000. On the other hand, short-term debt has been increasing from 2004, exceeded 1.0 billion US Dollars in 2007 and was more than 30% in total debt stock⁷.

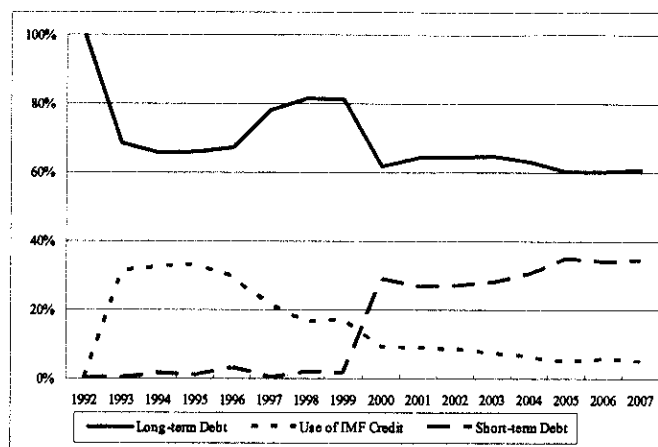
Figure 3.2-1 Outstanding of Long-term Debt, Use of IMF Credit and Short-term Debt (MMUS\$)



Source: The World Bank. 2009. Global Development Finance.

⁷ Data of the World Bank's Global Development Finance (GDF) in this study were obtained from CD-ROM for data upto 2006 and from website (<http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=5>) in 2007.

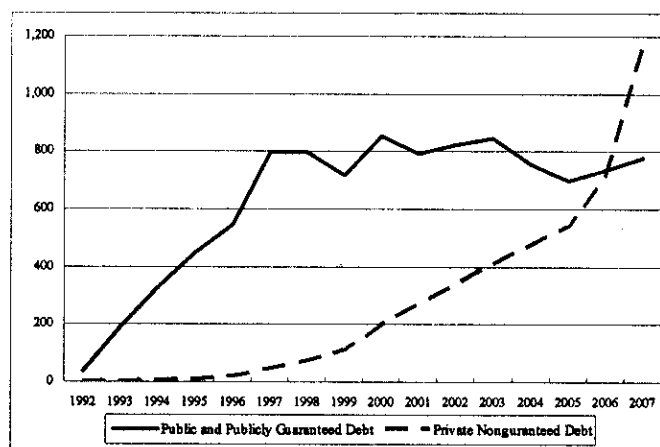
Figure 3.2-2 Shares of Outstanding in Long-term Debt, Use of IMF Credit and Short-term Debt in Total Debt Stock (%)



Source: The World Bank. 2009. Global Development Finance.

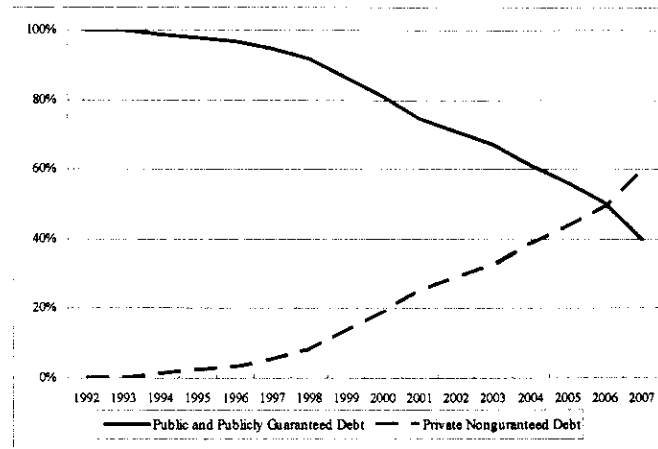
As a characteristics of outstanding in long-term debt in Moldova, it is true that public and publically guaranteed debt has been stable in approximately 800 MMUS\$ after 1997, while private nonguaranteed debt has been largely increasing to 1.17 billion US Dollars. Outstanding of private nonguaranteed debt in long-term debt was approximately 60% in 2007. In addition, of outstanding of 780 MMUS\$ in public and publically guaranteed debt, official creditors was 760 MMUS\$. The amount of 62.4% in official creditors was for multilateral ones. This means that this amount was much more than that for bilateral ones, 290 MMUS\$.

Figure 3.2-3 Outstanding of Debt in Public and Publicly Guaranteed (MMUS\$)



Source: The World Bank. 2009. Global Development Finance.

Figure 3.2-4 Shares of Outstanding of Debt in Public and Publicly Guaranteed in Total Debt Stock (%)



Source: The World Bank. 2009. Global Development Finance.

In the case of disbursement, the amount was 590 MMUS\$ in 2007. Of this, 92.0% of the amount was by the commercial banks in private nonguaranteed. In addition, among 473 MMUS\$, 98.5% or 466 MMUS\$ was by the multilateral creditors and the amount of bilateral creditors was less than one MMUS\$. The amount of disbursements by bilateral creditors have been same levels from 2000.

Table 3.2-1 Outstanding of Debt and Its Content (MMUS\$)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total Debt Stock	38.5	277.7	502.5	695.2	841.8	1,076.9	1,066.0	1,021.6	1,692.9	1,641.0	1,804.8	1,941.5	1,945.7	2,052.9	2,416.8	3,203.0
Long-term debt	38.5	190.3	330.3	459.0	567.3	839.8	868.2	830.3	1,050.2	1,059.3	1,164.1	1,258.1	1,227.1	1,239.9	1,454.1	1,948.0
Public and publicly guaranteed	38.5	190.3	326.4	449.5	548.7	795.8	796.5	719.1	852.8	792.0	825.8	848.2	754.3	699.7	736.1	778.5
Official Creditors	38.5	190.3	326.4	430.2	450.1	614.6	661.1	594.8	746.0	724.8	767.0	794.3	712.1	665.9	710.9	760.7
Multilateral	22.9	56.2	162.6	216.5	252.9	288.5	332.2	395.4	406.2	396.9	427.9	447.9	449.3	410.6	430.6	474.6
Concessional	0.0	0.0	0.0	0.0	0.0	34.6	38.2	77.0	103.6	114.0	147.3	180.4	208.7	217.5	254.6	311.1
Bilateral	15.6	134.1	163.8	213.7	197.2	326.1	329.0	199.4	339.7	327.9	339.1	346.4	262.8	255.3	280.3	286.1
Concessional	9.9	19.2	47.2	101.2	109.4	105.9	113.0	111.1	102.1	92.5	116.0	126.0	140.8	133.2	135.4	141.1
Private Creditors	0.0	0.0	0.0	19.3	98.6	181.2	135.4	124.3	106.9	67.2	58.8	53.9	42.2	33.8	25.2	17.9
Bonds	0.0	0.0	0.0	0.0	0.0	75.0	75.0	75.0	75.0	39.6	35.7	33.7	31.7	25.4	19.0	12.7
Commercial Banks	0.0	0.0	0.0	4.3	83.6	78.1	32.2	29.5	12.5	11.6	7.0	9.2	9.6	7.5	6.2	5.2
Private nonguaranteed	0.0	0.0	3.9	9.5	18.6	44.0	71.6	111.2	197.4	267.3	338.3	409.9	472.9	540.2	718.0	1,169.5
Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Banks	0.0	0.0	3.9	9.5	18.6	44.0	71.6	111.2	197.4	267.3	338.3	409.9	472.9	540.2	718.0	1,169.5
Use of IMF Credit	0.0	86.5	164.2	230.2	247.7	233.1	176.8	175.3	154.1	146.1	152.0	142.6	126.4	95.5	141.1	159.5
Short-term debt	0.0	0.9	8.1	6.0	26.8	4.0	21.1	16.0	488.6	435.5	488.8	540.8	592.2	717.6	821.6	1,095.5

Source: The World Bank. 2009. Global Development Finance.

Table 3.2-2 Total Debt Flows (MMUS\$)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Disbursement	35.1	66.1	137.9	165.6	162.7	346.2	104.8	177.1	164.3	94.0	126.8	95.3	222.8	237.3	351.0	588.2
Public and publicly guaranteed	35.1	66.1	134.0	158.7	149.9	306.5	62.3	110.5	54.2	30.1	36.0	23.9	23.7	26.0	31.2	47.3
Official Creditors	35.1	66.1	134.0	139.3	69.0	207.7	60.3	102.3	51.8	30.1	36.0	23.9	23.7	26.0	31.2	47.3
Multilateral	24.5	35.8	98.9	81.4	51.6	59.5	46.2	86.2	50.4	29.7	35.4	21.7	21.3	24.9	28.5	46.6
Concessional	0.0	0.0	0.0	0.0	0.0	35.0	2.3	39.3	30.5	14.6	23.6	18.1	19.0	24.9	26.0	45.2
Bilateral	10.6	30.3	35.1	57.9	17.4	148.2	14.1	16.1	1.4	0.4	0.6	2.2	2.4	1.0	2.7	0.8
Concessional	9.9	9.4	28.0	57.9	12.5	0.1	10.1	0.0	0.0	0.0	0.6	2.2	2.4	1.0	2.7	0.8
Private Creditors	0.0	0.0	0.0	19.3	80.8	98.9	1.9	8.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bonds	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Banks	0.0	0.0	0.0	4.3	80.8	21.9	1.9	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private nonguaranteed	0.0	0.0	3.9	7.0	12.8	39.7	42.5	66.6	110.1	63.9	90.8	71.4	199.1	211.3	319.8	540.9
Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Banks	0.0	0.0	3.9	7.0	12.8	39.7	42.5	66.6	110.1	63.9	90.8	71.4	199.1	211.3	319.8	540.9

Source: The World Bank. 2009. Global Development Finance.

3.2.2 Major Debt Indicators

In order to clarify Moldova's debt situations, major debt indicators, which are usually applied, are to be used in this study. The major 10 indicators are as follows:

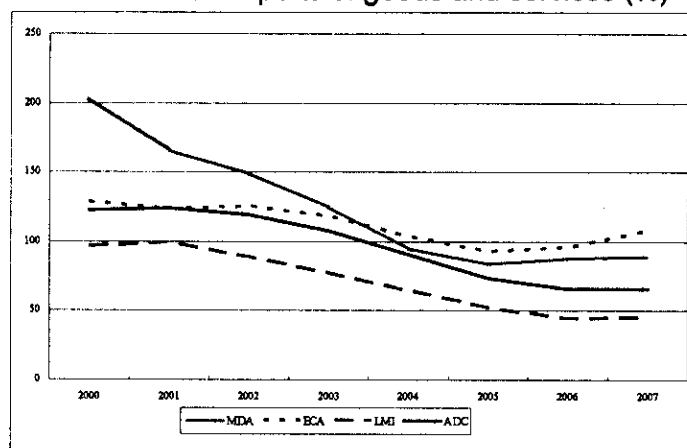
- 1) Total debt / Exports of goods and services (%)
- 2) Total debt / GNI (%)
- 3) Debt service / Exports of goods and services (%) (=Debt Service Ratio)
- 4) Interest / Exports of goods and services (%) (=Interest Service Ratio)
- 5) Interest / GNI (%)
- 6) Reserves / Total debt (%)
- 7) Reserves / Imports of goods and services (months)
- 8) Short-term debt / Total debt (%)
- 9) Concessional debt / Total debt (%)
- 10) Multilateral debt / Total debt (%)

In this study, these indicators were compared (i) Moldova (MDA) with (ii) Europe and Central Asia (ECA) countries, (iii) lower middle income (LMI) countries and (iv) all developing countries (ADC), of which categories Moldova belongs to.

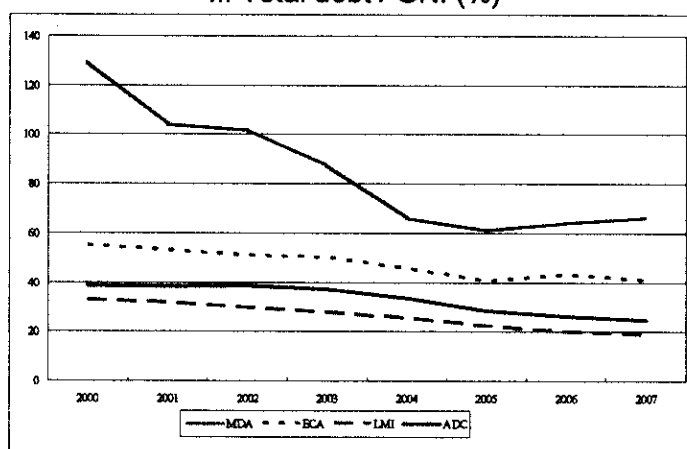
Figure 3.2-5 10 Debt Indicators

Source: The World Bank. 2009. Global Development Finance.

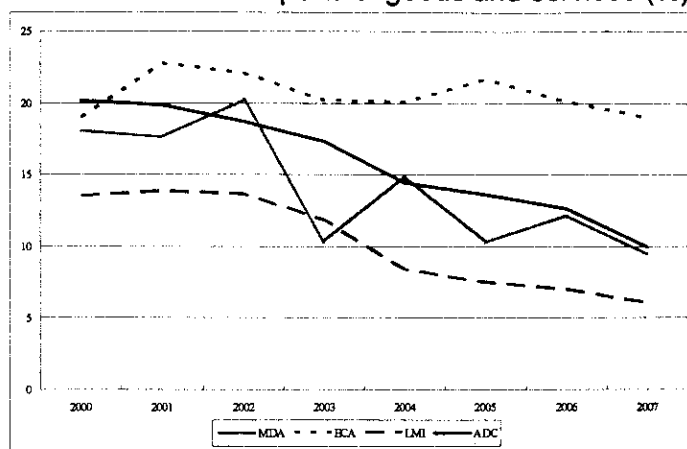
I. Total debt / Exports of goods and services (%)



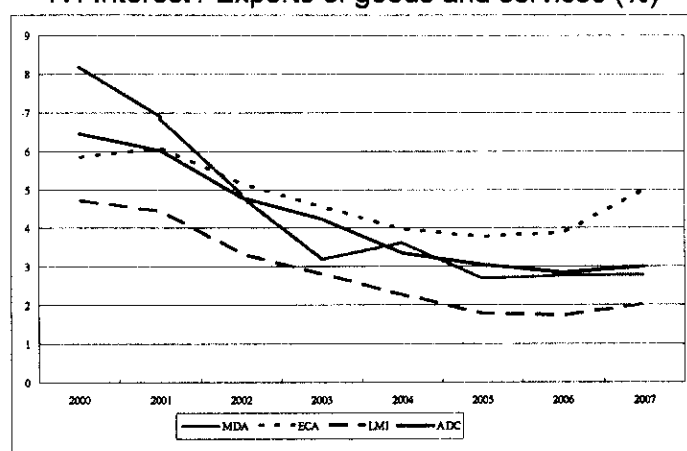
II. Total debt / GNI (%)



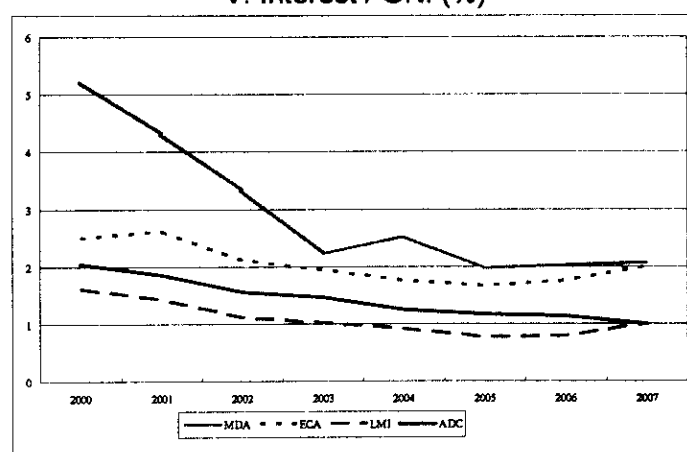
III. Debt service / Exports of goods and services (%)



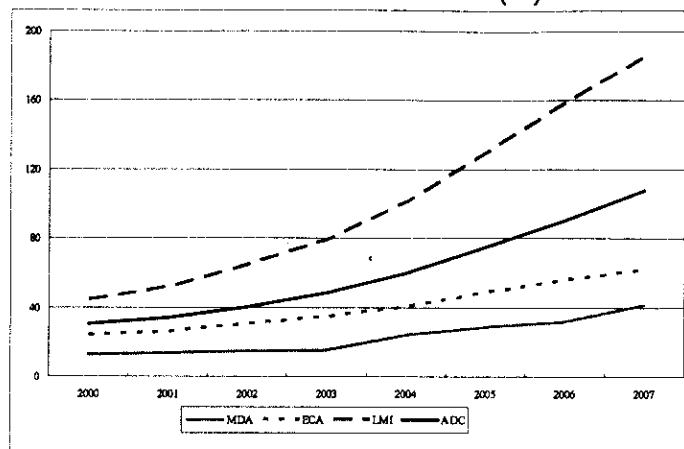
IV. Interest / Exports of goods and services (%)



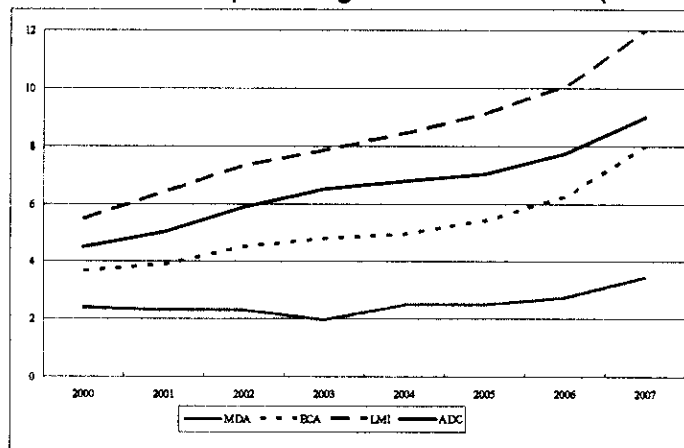
V. Interest / GNI (%)



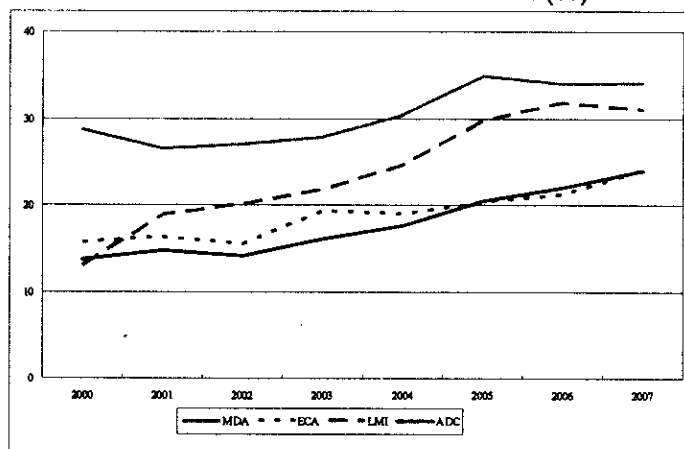
VI. Reserves / Total debt (%)



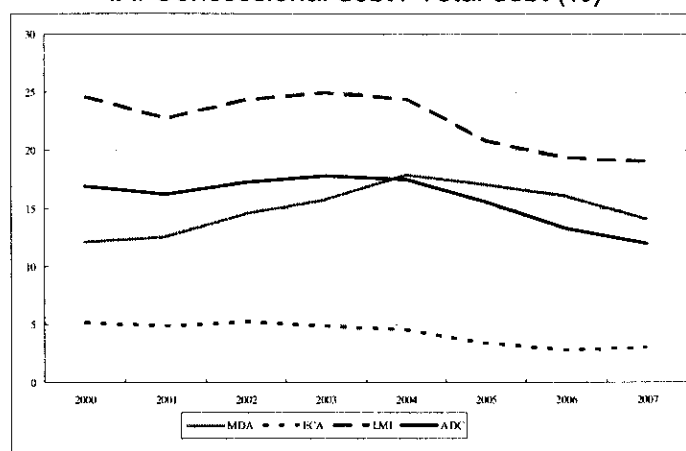
VII. Reserves / Imports of goods and services (months)



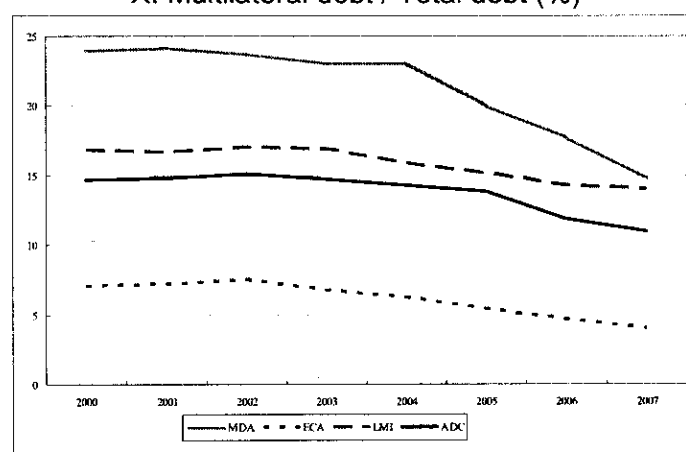
VIII. Short-term debt / Total debt (%)



IX. Concessional debt / Total debt (%)



X. Multilateral debt / Total debt (%)



Some points that should be indicated in these indicators is that Moldova is conservative to get external debt and it is usually judged for Moldova to have debt sustainability. On the other hands, mid- and long-term macroeconomic performance, especially GDP growth and export growth, are very important for debt sustainability because principal payments of loans after market-oriented economic reform will fully start in the near future. Based on these basic understandings, some points can be referred as follows. At first, "Total debt / GNI" of Moldova has been relatively higher, which lower is better. At the same time, "Total debt / Exports of goods and services" of Moldova has been lower than that in Europe and Central Asia (ECA) countries, which lower is also better. Secondly, DSR and ISR have been relatively lower and these indicators have been lower than those in category (ii), (iii) and (iv), which is thought that lower is more sustainable. However, only "Interest / GNI" has been relatively higher, which lower is also more sustainable. Third, levels of reserves have been relatively lower than those in category (ii), (iii) and (iv), which higher is better. Fourth, "Short-term debt / Total debt" has been relatively higher, which lower is better. Fifthly, "Concessional debt / Total debt" has been relatively on middle level. Finally, "Multilateral debt / Total debt" has been relatively on the higher level.

As mentioned above, almost all of disbursement of loans to Moldova have been from multilateral organizations. According to OECD, however, Germany has continued ODA loans to Moldova from 2002 and the U.S.A. disbursed loans to the country on 2007.

Table 3.2-3 Disbursement of ODA Loans to Moldova by Donor (Gross)
(MMUS\$)

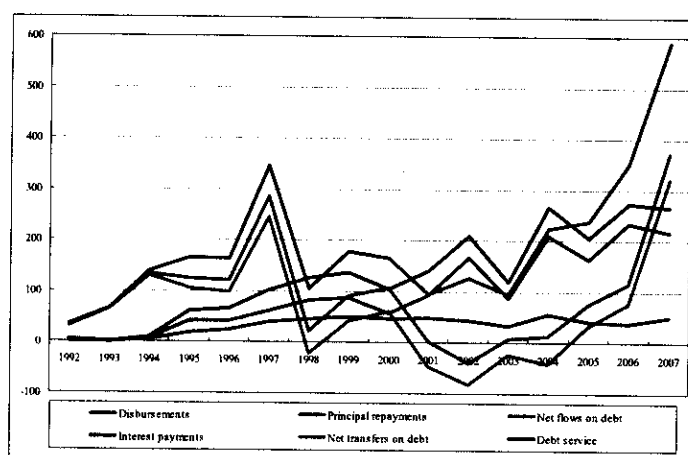
	2001	2002	2003	2004	2005	2006	2007
Total in DAC		0.6	2.2	1.8	1.7	1.7	4.0
Germany		0.6	2.2	1.8	1.7	1.7	0.6
U.S.A.							3.4
Total in Non-DAC						1.0	0.2
Multilateral Donors	26.3	35.6	18.1	19.0	24.9	89.9	78.4
Total	26.3	36.2	20.3	20.8	26.6	92.6	82.5

Source: OECD. 2009. OECD.StatExtracts (<http://stats.oecd.org/index.aspx>)

3.2.3 Aggregate Net Resource Flows and Aggregate Net Transfers

In the case of net resource flows on debt, the amount was accumulated drastically because of rapid increase of loan disbursements while principal repayments have been relatively stable especially from 2004. In addition, as interest payments have been stable from mid-1990, net transfers on debt in 2007 increased at the same pace. Meanwhile, net transfers on debt had been negative from 2001 to 2004.

Figure 3.2-6 Net Resource Flows on Debt, Net Transfers on Debt and Debt Service
(MMUS\$)

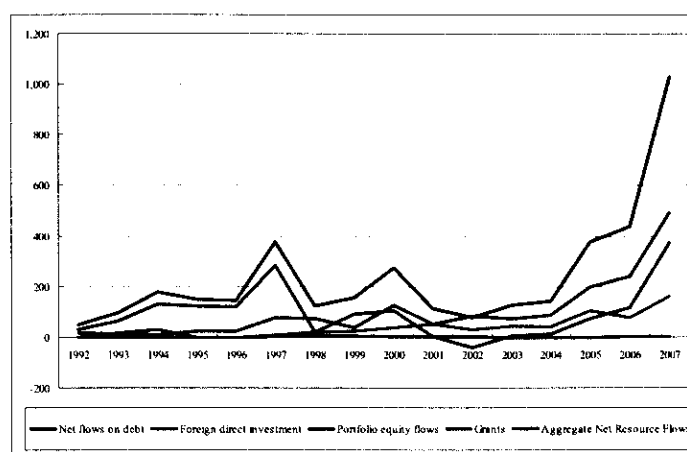


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Disbursements	35.1	66.1	137.9	165.6	162.7	346.2	104.8	177.1	164.3	94.0	126.8	95.3	222.8	237.3	351.0	588.2
Principal repayments	5.0	0.8	5.2	41.4	41.1	61.6	82.3	86.6	57.6	92.0	167.1	87.7	209.2	163.0	234.7	216.2
Net resource flows on debt	30.1	65.4	132.7	124.2	121.6	284.6	22.5	90.6	106.7	1.9	-40.3	7.6	13.6	74.3	116.3	372.0
Interest payments	0.0	0.3	3.6	19.2	24.3	39.8	44.3	50.0	46.6	48.4	42.3	32.1	56.0	42.0	38.4	50.5
Net Transfer on Debt	30.1	65.1	129.1	105.0	97.3	244.8	-21.8	40.6	60.1	-46.5	-82.6	-24.5	-42.4	32.3	77.9	321.5
Debt service	5.0	1.0	8.8	60.6	65.4	101.4	126.6	136.5	104.2	140.5	209.4	119.8	265.2	205.0	273.1	266.6

Source: The World Bank. 2009. Global Development Finance.

In addition, because of increases in net resource flows on debt, attraction of foreign direct investment as well as official grants, aggregate net resource flows in 2007 was more than one billion US Dollars. This amount was 2.3 times more than that in previous year.

Figure 3.2-7 Aggregate Net Resource Flows (MMUS\$)

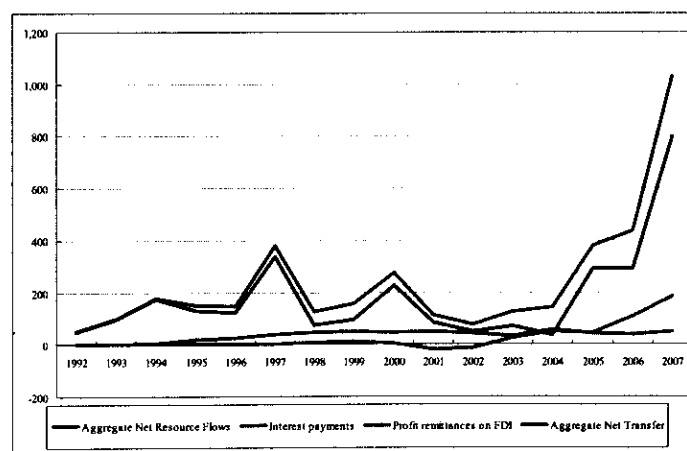


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Net resource flows on debt	30.1	65.4	132.7	124.2	121.6	284.6	22.5	90.6	106.7	1.9	-40.3	7.6	13.6	74.3	116.3	372.0
Foreign Direct Investment	17.0	14.0	11.6	25.9	23.7	78.7	75.5	37.9	127.5	54.5	84.1	73.8	87.7	190.7	251.1	493.4
Portfolio equity flows	0.0	0.0	0.6	-0.5	0.8	3.7	6.5	5.2	2.9	2.8	2.3	0.7	-0.8	0.6	1.8	1.7
Official grants	0.7	18.0	32.4	0.0	0.0	11.5	19.8	22.9	37.1	53.6	31.6	44.5	41.2	106.0	79.3	163.0
Aggregate net resource flows	47.8	97.4	177.3	149.6	146.2	378.5	124.3	156.5	274.3	112.9	77.6	126.5	141.7	371.7	448.4	1,030.1

Source: The World Bank. 2009. Global Development Finance.

Furthermore, based on increases in aggregate net resource flows, because loan interest was stable while FDI profits was increased, aggregate net transfers in 2007 was increased drastically and 2.64 time more than that in the previous year.

Figure 3.2-8 Aggregate net Transfers (MMUS\$)



	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Aggregate net resource flows	47.8	97.4	177.3	149.6	146.2	378.5	124.3	156.5	274.3	112.9	77.6	126.5	141.7	371.7	448.4	1,030.1
Loan interest	0.0	0.3	3.6	19.2	24.3	39.8	44.3	50.0	46.6	48.4	42.3	32.1	56.0	42.0	38.4	50.5
FDI profits	0.0	0.0	0.0	0.1	0.8	1.9	7.0	11.6	2.7	-20.7	-13.6	24.7	49.5	44.9	108.5	183.2
Aggregate net transfers	47.8	97.1	173.7	130.3	121.0	336.9	73.0	95.0	224.9	85.1	48.9	69.6	36.1	284.8	301.6	796.4

Source: The World Bank. 2009. Global Development Finance.

3.2.4 Debt Relief

Observing Total change in debt stocks of Moldova, the amount increased drastically from 2005. During this period, net flows on debt has have a tendency to be increased. In addition, net changes in interest arrears have been fluctuated. Moldova had experienced to conduct five times of interest rescheduled (capitalized) and three times of debt forgiveness or reduction after 1992. Moldova agreed on debt relief by the Huston Term on May 12, 2006. The cut-off-date was December 31, 2000 and the amounts was 155 MMUS\$⁸.

Table 3.2-4 Moldova's Debt Relief

Categories of debts treated	Treatment of arrears as of April 30, 2006, treatment of maturities falling due from May 01, 2006 up to December 31, 2008	
Specific provisions	First phase:	From May 01, 2006 up to April 30, 2007 implemented at the signature of the agreement
	Second phase:	From May 01, 2007 up to April 30, 2008 implemented at August 07, 2007
	Third phase:	From May 01, 2008 up to December 31, 2008 implemented at August 13, 2008

Table 3.2-5 Debt Stock-Flow Reconciliation (MMUS\$)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total change in debt stocks	28.5	239.2	224.8	192.7	146.7	235.0	-10.8	-44.4	671.4	-52.0	163.8	136.7	4.2	107.2	363.8	786.3
Total net flows on debt	30.1	153.3	203.6	188.5	171.9	262.8	-38.0	87.9	559.6	-45.0	-16.7	28.4	55.3	156.5	300.9	651.2
Net change in interest arrears	0.0	0.9	6.2	-2.1	-4.2	-0.4	13.6	0.6	7.3	-8.7	23.8	9.1	-12.0	21.7	-40.8	5.7
Interest rescheduled (capitalized)	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	5.5	0.0	1.5	0.0	0.0	0.0	36.0	10.7
Debt forgiveness or reduction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-122.6	0.0	-10.4	0.0	0.0	-59.2	0.0	0.0	0.0
Cross-currency valuation	0.0	-2.2	-46.2	-8.6	-47.2	-44.7	-5.4	-17.6	-31.7	-24.2	48.0	60.2	27.3	-47.4	24.7	29.5
Residual	-1.6	87.1	60.3	14.8	19.6	17.3	19.0	7.3	130.7	36.3	107.2	39.0	-7.2	-23.6	43.0	89.2

Source: The World Bank. 2009. Global Development Finance.

Table 3.2-6 Debt Restructuring (MMUS\$)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total debt rescheduled	0.0	88.9	0.0	0.0	118.8	18.8	0.0	0.0	245.7	0.0	67.8	3.3	17.7	0.0	87.5	31.8
Debt stock rescheduled	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.7	0.0	8.9	0.0	3.4	0.0	0.0	0.0
Principal rescheduled	0.0	0.0	0.0	0.0	111.9	0.0	0.0	0.0	93.9	0.0	11.7	3.2	14.3	0.0	48.5	21.1
Official	0.0	0.0	0.0	0.0	111.9	0.0	0.0	0.0	76.3	0.0	0.9	0.0	14.3	0.0	47.2	20.4
Private	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	10.8	3.2	0.0	0.0	1.3	0.7
Interest rescheduled	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	5.5	0.0	1.5	0.0	0.0	0.0	36.0	10.7
Official	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	5.4	0.0	0.6	0.0	0.0	0.0	35.4	10.4
Private	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.0	0.0	0.0	0.6	0.3

Source: The World Bank. 2009. Global Development Finance.

⁸ Huston Terms are: 1) repayment of non ODA credits over 15 years , with 5 years of grace, 2) repayment of ODA credits over 20 years with 10 years of grace

3.3 Impact of Global Economic Crisis to Moldova's Economy and Future Prospects

The global economic crisis occurred in mid-2008 hit heavily central and eastern European countries after 20 years of collapse of the Berlin Wall at the beginning of 2009. This exposed vulnerability of rapid market-oriented economic reform in transition period. The economic crisis hit by the countries was spread to Moldova without exception and had serious consequences to the economy.

According to the IMF's World Economic Outlook (WEO) on April 2008, which was prior to the crisis, real GDP growth ratio in 2009 was expected to 8.0%. However, WEO (October, 2008) forecasted that the ratio was downwardly revised to 6.5% and WEO (April, 2009) was again lowered at a stretch to -3.4% by emerging economic crisis. According to Ministry of Economy and Trade, which has responsibility to macroeconomic forecast, the ratio in 2009 was estimated to -5.0%. Furthermore, there were some prospects that the ratio will be -10.0% at the time of field study⁹.

Table 3.3-1 Real GDP Growth by IMF's World Economic Outlook (WEO) (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
WEO (2006/09)	2.1	6.1	7.8	6.6	7.4	7.1	3.0	3.0					
WEO (2007/04)	2.1	6.1	7.8	6.6	7.4	7.5	4.0	4.5	5.0				
WEO (2007/10)	2.1	6.1	7.8	6.6	7.4	7.5	4.0	5.0	5.0				
WEO (2008/04)	2.1	6.1	7.8	6.6	7.4	7.5	4.0	5.0	7.0	8.0	7.5	7.0	6.5
WEO (2008/10)	2.1	6.1	7.8	6.6	7.4	7.5	4.8	4.0	6.5	6.5	7.0	7.0	6.5
WEO (2009/04)	2.1	6.1	7.8	6.6	7.4	7.5	4.8	4.0	7.2	-3.4	0.0	3.0	5.0
Ministry of Economy and Trade									7.2	-5.0	0.0	5.0	6.0

Italic numbers are estimations.

Source: IMF. World Economic Outlook (Every year) and Moldova's Ministry of Economy and Trade. For example, WEO (2006/09) means "IMF. 2006 (September). World Economic Outlook.

The results are made by rapid decreases of exports and acceptance of Remittance¹⁰. As mentioned above, Moldova's heavy deficit was compensated by the remittance, which amount was more than exports. However, many emigrant workers have gone off to Russia and European countries. As these countries have had serious negative impacts by the recent global economic crisis, the country has been facing declines of acceptance of remittances as well as returns of emigrants.

3.4 Review of IMF's Debt Sustainability Analysis

3.4.1 IMF's Latest Debt Sustainability Analysis

Although IMF sent experts to Moldova for Article IV Consultation as usual year, there have been no discussion with Moldova's government because of lengthening of elections. Therefore, latest version of debt sustainability analysis (DSA) is "Republic of Moldova: 2007 Article IV Consultation and Third Review Under the Three - Year Arrangement Under the Poverty Reduction and Growth Facility - Staff Report; Staff Supplement; Public Information Notice and

⁹ For example, private view of IMF's Country Representative was that real GDP growth ratio in 2009 was to be - 9.0%. This estimate was lower than that by the Ministry of Economy and Trade, which was -5.0%.

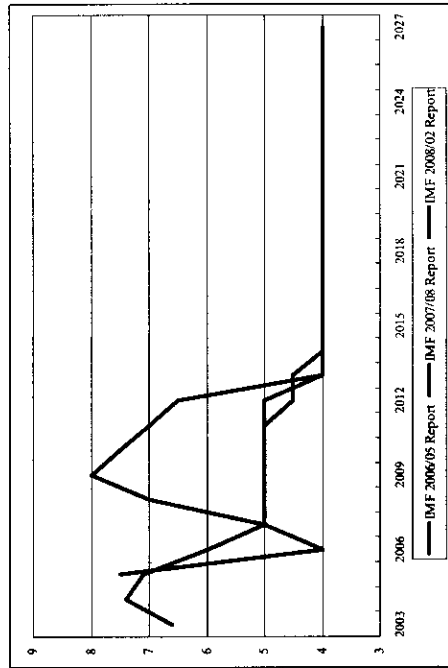
¹⁰ According to the Ministry of Economy and Trade, major macroeconomic forecasts in 2009, 2010, 2011 and 2012 are as follows: real GDP growth (-5.0, 0.0, 5.0, 6.0); inflation (1.4, 7.0, 5.8, 5.0); export growth (-20.0, 2.0, 11.5, 10.5) and import growth (-25.0, 0.5, 8.0, 9.0), respectively.

Press Release on the Executive Board Discussion; and Statement by the Executive Director for the Republic of Moldova: Country Report No. 08/139) ” dated on April 25, 2008¹¹. (As DSA was made on February, 2008, this is referred to “IMF 2008/02 Report” hereinafter.)

The DSA of IMF 2008/02 Report was based on the data by above-mentioned WEO (2008/04). However, updated real GDP growth ratio is much less than that in WEO (2009/04) and by the Ministry of Economy and Trade. The ratios of export and import growths are also less than those in the past data.

¹¹ There were two Moldova’s DSA report as May, 2006 (IMF 2006/05 Report, hereinafter) and August, 2007 (IMF 2007/08 Report, hereinafter).

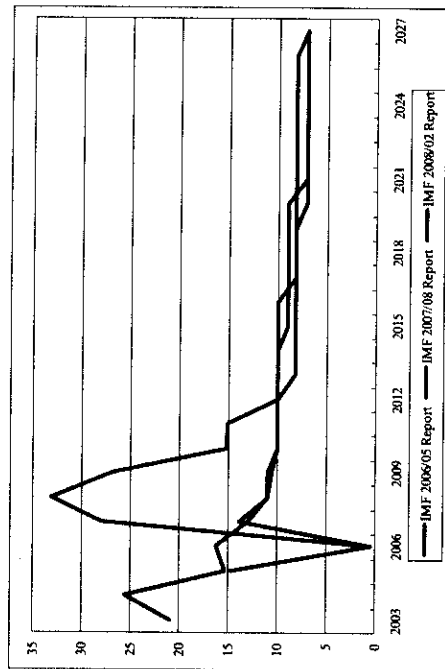
Figure 3.4-1 Real GDP Growth Ratios by DSA's Report



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
IMF 2006/05 Report	6.6	7.4	7.1	6.0	5.0	5.0	5.0	5.0	5.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
IMF 2007/08 Report				4.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
IMF 2008/02 Report				4.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
WEO (2008/04)	6.6	7.4	7.5	4.0	5.0	7.0	8.0	7.5	7.0	6.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
WEO (2009/04)	6.6	7.4	7.5	4.8	4.0	7.2	-3.4	0.0	3.0	5.0															
Moldova's Ministry of Economy and Trade						7.2	-5.0	0.0	5.0	6.0															

Source: Each Report.

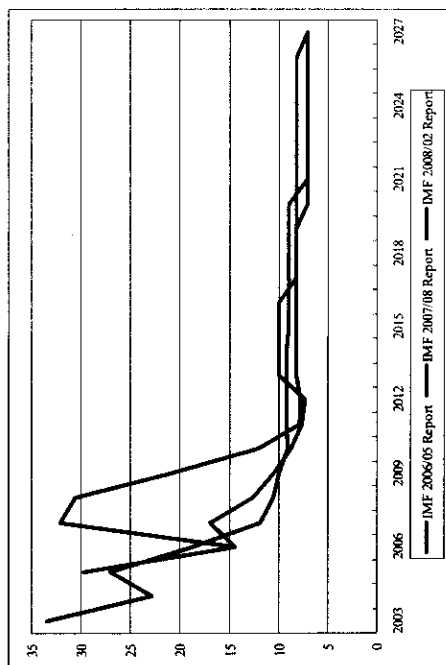
Figure 3.4-2 Export Growths by DSA's Report



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
IMF 2006/05 Report	20.9	25.6	15.3	16.2	13.0	11.0	11.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	9.0	9.0	9.0	9.0	7.1	7.1	7.1	7.1	7.1		
IMF 2007/08 Report			14.8	0.5	13.9	11.0	10.6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2		
IMF 2008/02 Report			14.8	0.5	28.0	33.1	26.8	15.2	15.1	10.0	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Moldova's Ministry of Economy and Trade						18.6	-20.0	2.0	11.5	10.0															

Source: Each Report.

Figure 3.4-3 Import Growths by DSA's Report

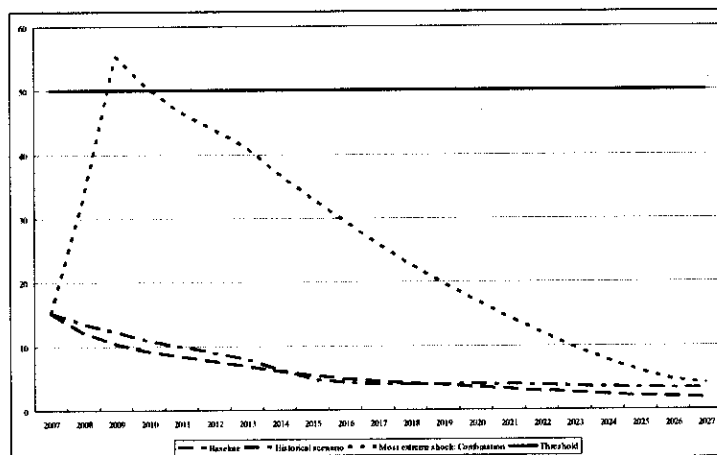


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
IMF 2006/05 Report	33.5	22.8	27.0	18.7	11.9	10.5	10.0	9.1	9.2	9.2	9.2	9.2	9.0	9.0	9.0	9.0	9.0	9.0	9.0	7.1	7.1	7.1	7.1	7.1	7.1
IMF 2007/08 Report			29.7	14.4	16.9	12.6	10.5	8.8	7.6	7.3	10.0	10.0	10.0	10.0	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.1
IMF 2008/02 Report			29.7	14.4	32.1	30.6	21.2	12.1	7.9	7.7	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Moldova's Ministry of Economy and Trade						32.8	-25.0	0.5	11.5	10.0															

Source: Each Report.

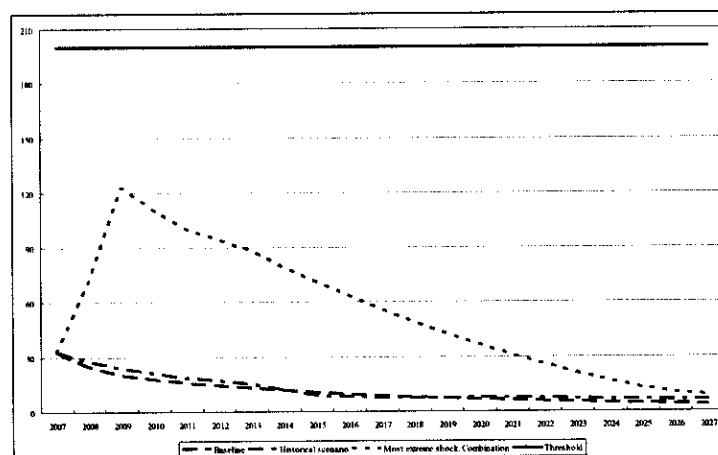
Three indicators of (i) NPV of Debt to GDP, (ii) NPV of Debt to Exports and (iii) Debt Service to Exports by IMF 2008/02 Report (with no consideration of global economic crisis after mid-2008) are as follows. According to these indicators, the results were less than thresholds except NPV of Debt to GDP for limited time. Therefore, based on ideas of Debt Sustainability Framework (DSF), disbursement of ODA loans to Moldova can be possible.

Figure 3.4-4 NPV of Debt to GDP



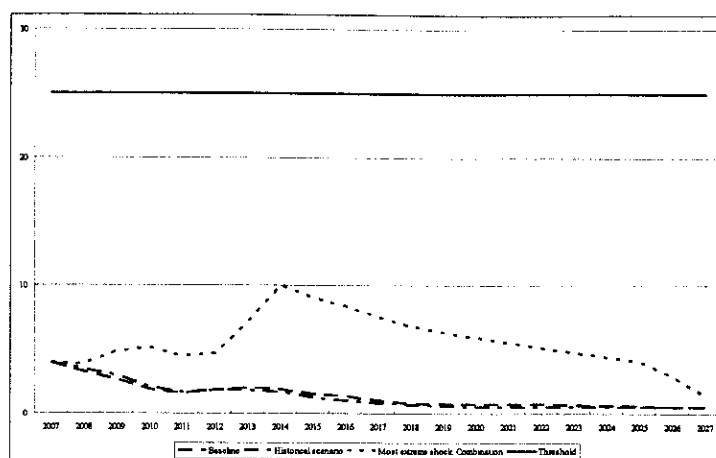
Source: "IMF 2008/02 Report"

Figure 3.4-5 NPV of Debt to Exports



Source: "IMF 2008/02 Report"

Figure 3.4-6 Debt Service to Exports

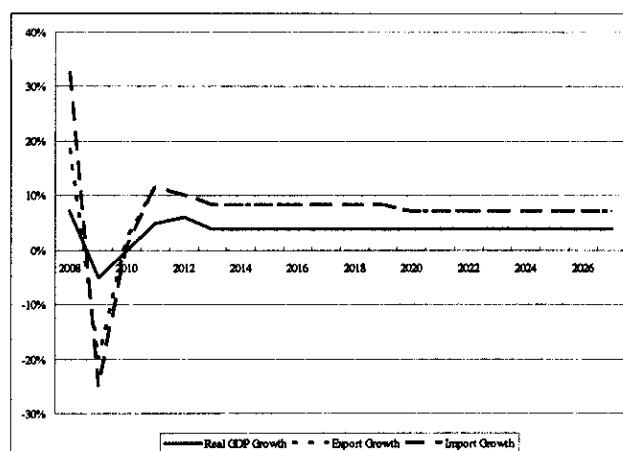


Source: "IMF 2008/02 Report"

3.4.2 DSA by This Study

There is no official (or published) DSA including any impact of global economic crisis from mid-2008. In this report, by using forecasts of the Ministry of Economy and Trade to 2012 and IMF 2008/02 Report from 2013, DSA is to be conducted. The data that is used in this report are as follows:

Figure 3.4-7 Data Used from 2008 in This Report



The results of this report can be obtained as follows:

At first, as major macroeconomic data is to be worsened, results of such major indicators as (i) NPV of Debt to GDP, (ii) NPV of Debt to Exports and (iii) Debt Service to Exports have been increased. Especially by the declines of major macroeconomic indicators in the first period, the results by using historical scenario including past trends are to be worsened. In addition, the impacts are relatively light in the case of baseline scenario, which has some negative impact especially in 2009. On the other hand, indicators with stresses and shocks shows that NPV of Debt to GDP will exceed threshold for relatively long period of time. However, at the same time, the indicators are expected to show less than threshold after 2014.

Figure 3.4-8 NPV of Debt to GDP

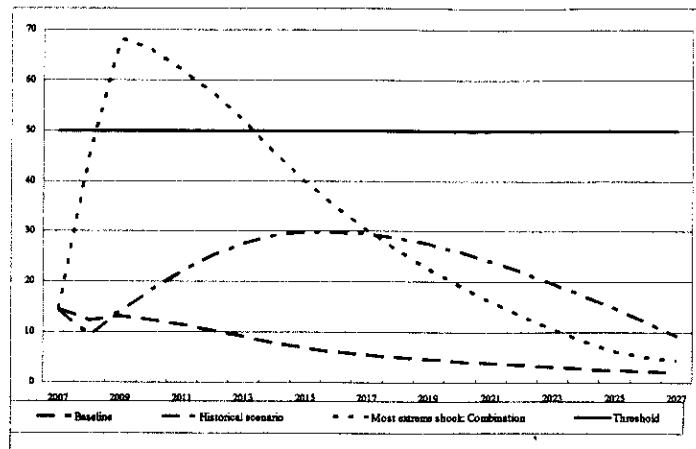


Figure 3.4-9 NPV of Debt to Exports

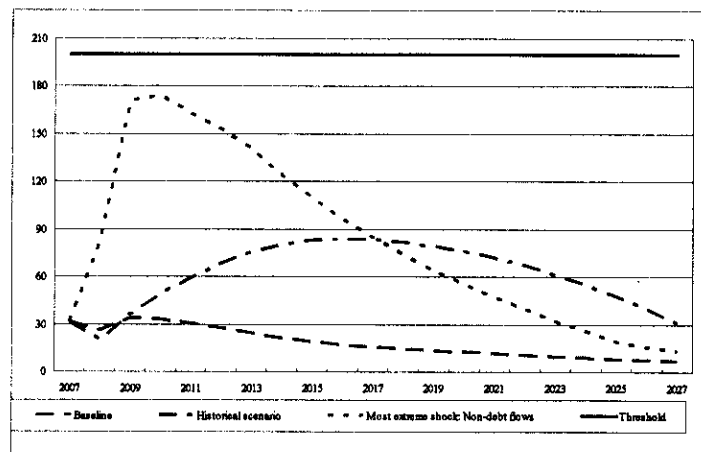
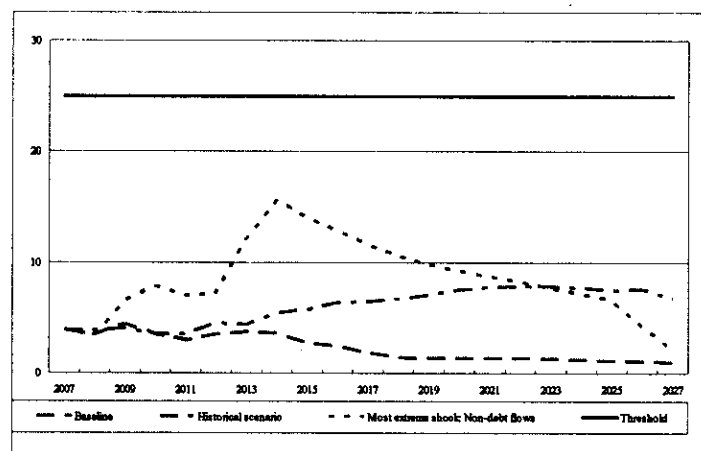


Figure 3.4-10 Debt Service to Exports



As shown in the above, Moldova's debt sustainability will be acceptable even inclusion of global economic crisis after mid-2008 in the mid- and long-term perspectives.

3.5 Analysis and Evaluation of Government's Borrowing Capacity

3.5.1 Points of Analysis

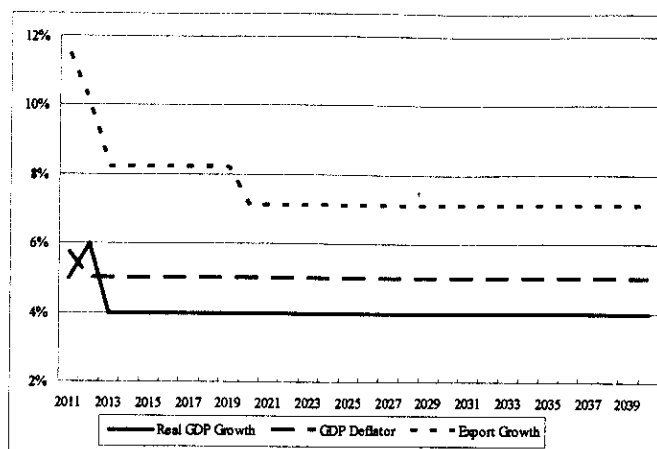
In order to make analysis and evaluation of Moldovan government's borrowing capacity, at the first setout, cash flow is to be calculated and impacts of pushup by Japanese Yen loans in the second step. The preconditions are as follows:

- (1) Assumption of Japanese Yen loans from 3 to 10 billion Japanese Yen.
- (2) Assumption that disbursement starts from 2011年 and 50% disbursement will be conducted in each of 2011 and 2012.
- (3) Exchange rate: ¥95.00/US\$ across-the-board
- (4) Macroeconomic indicators to 2040 are shown in the right.
- (5) The conditions are as follows: Interest: 1.40%, date of maturity: 30 years, and moratorium period: 10 years as Moldova is defined as low income country.

Table 3.5-1 Assumptions

	RealGDP Growth	GDP Deflator	Export Growth
2011	5.0%	5.8%	11.5%
2012	6.0%	5.0%	10.0%
2013	4.0%	5.0%	8.2%
2014	4.0%	5.0%	8.2%
2015	4.0%	5.0%	8.2%
2016	4.0%	5.0%	8.2%
2017	4.0%	5.0%	8.2%
2018	4.0%	5.0%	8.2%
2019	4.0%	5.0%	8.2%
2020	4.0%	5.0%	7.1%
2021	4.0%	5.0%	7.1%
2022	4.0%	5.0%	7.1%
2023	4.0%	5.0%	7.1%
2024	4.0%	5.0%	7.1%
2025	4.0%	5.0%	7.1%
2026	4.0%	5.0%	7.1%
2027	4.0%	5.0%	7.1%
2028	4.0%	5.0%	7.1%
2029	4.0%	5.0%	7.1%
2030	4.0%	5.0%	7.1%
2031	4.0%	5.0%	7.1%
2032	4.0%	5.0%	7.1%
2033	4.0%	5.0%	7.1%
2034	4.0%	5.0%	7.1%
2035	4.0%	5.0%	7.1%
2036	4.0%	5.0%	7.1%
2037	4.0%	5.0%	7.1%
2038	4.0%	5.0%	7.1%
2039	4.0%	5.0%	7.1%
2040	4.0%	5.0%	7.1%

Figure 3.5-1 Assumption by 2040



« Rationale of Assumptions »

- (1) Real GDP Growth: As shown in the assumption by the Ministry of Economy and Trade to 2012; Data from IMF 2008/02 Report from 2013.
- (2) GDP Deflator: As shown in the assumption by the Ministry of Economy and Trade to 2012; 2012's data is used after 2013.
- (3) Export Growth: As shown in the assumption by the Ministry of Economy and Trade to 2012; Data from IMF 2008/02 Report from 2013.

3.5.2 NPV of Debt to GDP and NPV of Debt to Exports

The NPV to Debt is calculated based on the above-mentioned assumptions. As shown in the following table, only interest will be paid in the first ten years. After that, decreases of amount of NPV to Debt became larger because of repayments of principal.

Table 3.5-2 NPV of Debt

Year	NPV of Debt							
	30 *	40	50	60	70	80	90	100
2011	31.0	41.4	51.7	62.1	72.4	82.7	93.1	103.4
2012	30.8	41.1	51.3	61.6	71.9	82.2	92.4	102.7
2013	30.4	40.5	50.6	60.8	70.9	81.0	91.1	101.3
2014	30.0	39.9	49.9	59.9	69.9	79.9	89.9	99.9
2015	29.5	39.4	49.2	59.1	68.9	78.8	88.6	98.5
2016	29.1	38.8	48.5	58.2	68.0	77.7	87.4	97.1
2017	28.7	38.3	47.9	57.4	67.0	76.6	86.2	95.7
2018	28.3	37.8	47.2	56.6	66.1	75.5	85.0	94.4
2019	27.9	37.2	46.5	55.8	65.1	74.5	83.8	93.1
2020	27.5	36.7	45.9	55.1	64.2	73.4	82.6	91.8
2021	27.1	36.2	45.2	54.3	63.3	72.4	81.4	90.5
2022	25.4	33.9	42.4	50.9	59.3	67.8	76.3	84.8
2023	23.8	31.7	39.6	47.5	55.4	63.4	71.3	79.2
2024	22.1	29.5	36.9	44.3	51.6	59.0	66.4	73.8
2025	20.5	27.4	34.2	41.1	47.9	54.8	61.6	68.5
2026	19.0	25.3	31.6	38.0	44.3	50.6	57.0	63.3
2027	17.5	23.3	29.1	34.9	40.8	46.6	52.4	58.2
2028	16.0	21.3	26.7	32.0	37.3	42.7	48.0	53.3
2029	14.6	19.4	24.3	29.1	34.0	38.8	43.7	48.5
2030	13.2	17.6	21.9	26.3	30.7	35.1	39.5	43.9
2031	11.8	15.7	19.7	23.6	27.5	31.5	35.4	39.3
2032	10.5	14.0	17.5	20.9	24.4	27.9	31.4	34.9
2033	9.2	12.2	15.3	18.4	21.4	24.5	27.5	30.6
2034	7.9	10.6	13.2	15.8	18.5	21.1	23.8	26.4
2035	6.7	8.9	11.2	13.4	15.6	17.9	20.1	22.3
2036	5.5	7.3	9.2	11.0	12.8	14.7	16.5	18.3
2037	4.3	5.8	7.2	8.7	10.1	11.6	13.0	14.5
2038	3.2	4.3	5.4	6.4	7.5	8.6	9.6	10.7
2039	2.1	2.8	3.5	4.2	4.9	5.6	6.3	7.0
2040	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.5

* 30 means 3.0 billion Japanese Yen of Japanese Yen Loans.

Based on the results as well as real GDP growth, GDP deflator and export growth assumed in the previous part, (i) NPV of Debt to GDP and (ii) NPV of Debt to Exports until 2040 are calculated as follows:

Table 3.5-3 NPV of Debt to GDP and NPV of Debt to Exports

year	NPV of Debt to GDP								NPV of Debt to Exports							
	30	40	50	60	70	80	90	100	30	40	50	60	70	80	90	100
2011	0.5%	0.7%	0.9%	1.0%	1.2%	1.4%	1.5%	1.7%	1.4%	1.9%	2.4%	2.9%	3.3%	3.8%	4.3%	4.8%
2012	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.4%	1.5%	1.3%	1.7%	2.2%	2.6%	3.0%	3.4%	3.9%	4.3%
2013	0.4%	0.5%	0.7%	0.8%	1.0%	1.1%	1.2%	1.4%	1.2%	1.6%	2.0%	2.4%	2.8%	3.1%	3.5%	3.9%
2014	0.4%	0.5%	0.6%	0.7%	0.9%	1.0%	1.1%	1.2%	1.1%	1.4%	1.8%	2.1%	2.5%	2.9%	3.2%	3.6%
2015	0.3%	0.4%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.0%	1.3%	1.6%	2.0%	2.3%	2.6%	2.9%	3.3%
2016	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	0.9%	1.2%	1.5%	1.8%	2.1%	2.4%	2.7%	3.0%
2017	0.3%	0.4%	0.5%	0.5%	0.6%	0.7%	0.8%	0.9%	0.8%	1.1%	1.4%	1.6%	1.9%	2.2%	2.4%	2.7%
2018	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.8%	0.7%	1.0%	1.2%	1.5%	1.7%	2.0%	2.2%	2.5%
2019	0.2%	0.3%	0.4%	0.4%	0.5%	0.6%	0.7%	0.7%	0.7%	0.9%	1.1%	1.4%	1.6%	1.8%	2.0%	2.3%
2020	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.7%	0.6%	0.8%	1.0%	1.2%	1.5%	1.7%	1.9%	2.1%
2021	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.5%	0.6%	0.6%	0.8%	1.0%	1.1%	1.3%	1.5%	1.7%	1.9%
2022	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%	0.7%	0.8%	1.0%	1.2%	1.3%	1.5%	1.7%
2023	0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.6%	0.7%	0.9%	1.0%	1.2%	1.3%	1.5%
2024	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	0.5%	0.6%	0.8%	0.9%	1.0%	1.1%	1.3%
2025	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.4%	0.5%	0.7%	0.8%	0.9%	1.0%	1.1%
2026	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	0.9%
2027	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.8%
2028	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.4%	0.5%	0.6%	0.6%	0.7%
2029	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%	0.5%	0.6%
2030	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%
2031	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%
2032	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%
2033	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%
2034	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%
2035	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
2036	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2037	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2038	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
2039	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2040	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Figure 3.5-2 NPV of Debt to GDP by Amount of Japanese Yen Loans (100 MMUS\$)

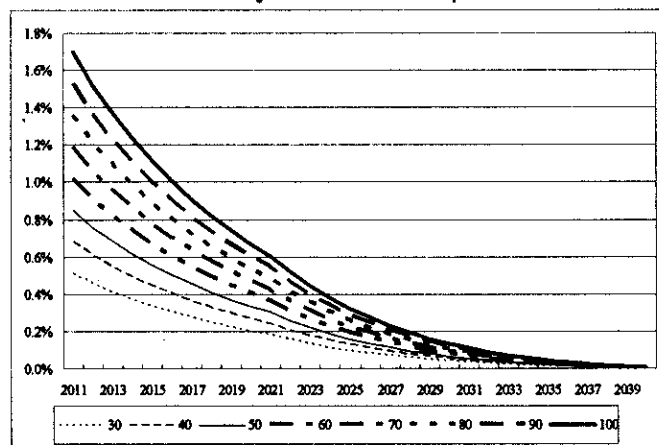
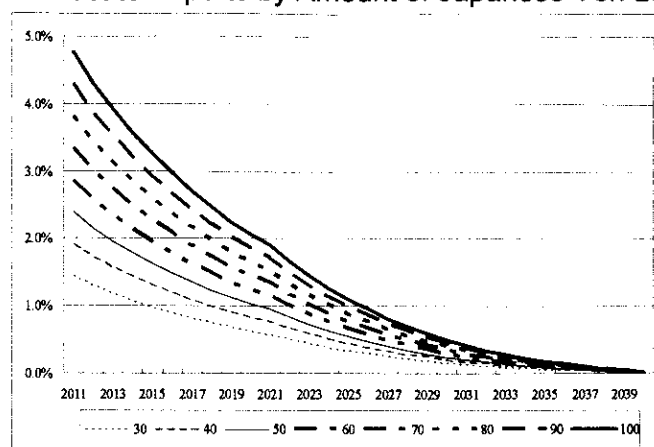


Figure 3.5-3 NPV of Debt to Exports by Amount of Japanese Yen Loans (100 MMUS\$)



According to the results, impact of pushup by 10 billion Japanese Yen loans is 1.7% in the case of NPV of Debt to GDP in 2011 and 0.5% by 3 billion Japanese Yen loans. On the other hand, 4.8% of pushup impact is to be caused in 2011 by 10 billion Japanese Yen loans in the NPV of Debt to Exports and 1.4% by 3 billion Japanese Yen loans.

3.5.3 Debt Service to Exports

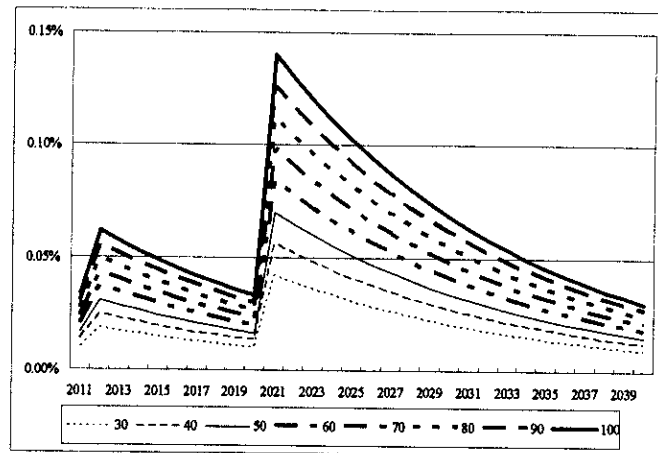
In the same way, debt service is calculated based on assumption of “3.5.1. Points of Analysis” as follows. As shown in the following table, amount of debt service will be increased from 2021 because of start of principal repayments. Debt service to exports calculated by the amount of export and debt service until 2040 are as follows:

Table 3.5-4 Debt Service to Exports

Year	Debt Service								Debt Service to Exports							
	30	40	50	60	70	80	90	100	30	40	50	60	70	80	90	100
2011	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.7	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2012	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
2013	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
2014	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
2015	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2016	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2017	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2021	2.0	2.7	3.3	4.0	4.7	5.3	6.0	6.7	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2022	2.0	2.6	3.3	4.0	4.6	5.3	5.9	6.6	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2023	2.0	2.6	3.3	3.9	4.6	5.2	5.9	6.5	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2024	1.9	2.6	3.2	3.9	4.5	5.2	5.8	6.4	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2025	1.9	2.5	3.2	3.8	4.5	5.1	5.7	6.4	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
2026	1.9	2.5	3.1	3.8	4.4	5.0	5.7	6.3	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
2027	1.9	2.5	3.1	3.7	4.4	5.0	5.6	6.2	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
2028	1.8	2.5	3.1	3.7	4.3	4.9	5.5	6.1	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
2029	1.8	2.4	3.0	3.6	4.3	4.9	5.5	6.1	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
2030	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
2031	1.8	2.4	3.0	3.6	4.1	4.7	5.3	5.9	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
2032	1.8	2.3	2.9	3.5	4.1	4.7	5.3	5.9	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
2033	1.7	2.3	2.9	3.5	4.0	4.6	5.2	5.8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%

2034	1.7	2.3	2.9	3.4	4.0	4.6	5.1	5.7	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2035	1.7	2.3	2.8	3.4	3.9	4.5	5.1	5.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2036	1.7	2.2	2.8	3.3	3.9	4.4	5.0	5.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2037	1.6	2.2	2.7	3.3	3.8	4.4	4.9	5.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2038	1.6	2.2	2.7	3.2	3.8	4.3	4.9	5.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2039	1.6	2.1	2.7	3.2	3.7	4.3	4.8	5.3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2040	1.6	2.1	2.6	3.2	3.7	4.2	4.7	5.3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Figure 3.5-4 Debt Service to Exports by Amount of Japanese Yen Loans (100 MMUS\$)
(%)



According to the results, impacts of pushup are to be increased in 2012, which means that second half of loans will be disbursed, while these indicators are to be decreased until 2020. In addition, indicators will be peaked in 2021 because of start of principal repayments. At that point, the indicators will be 0.14% by 10 billion Japanese Yen loans. The indicators will be declined after that.

3.6 Recommendation of Financing Methods and Levels of Japanese Yen Loans

3.6.1 Consideration of Japanese Yen Loans Alone

In order to clarify appropriate levels of Japanese Yen Loans for Moldova's government, Some indicators of Debt Sustainability Framework (DSF) is to be introduced¹².

Among five indicators, (i) NPV of Debt to GDP, (ii) NPV of Debt to Exports and (iii) Debt Service to Export (DSR) became important in consideration of external debt.

¹² DSF is referred to Ministry of Economy, Trade and Industry. 2007. Study on Impacts of Debt Issues to Official Export Credits in Developing Countries (in Japanese) (by Mitsubishi UFJ Research and Consulting).

Table 3.6-1 Concept of DSF (%)

	CPIA Index		
	Poor	Medium	Strong
(i) NPV of Debt to GDP	30	40	50
(ii) NPV of Debt to Exports	100	150	200
NPV of Debt to Revenue	200	250	300
(iii) Debt Service to Export (DSR)	15	20	25
Debt Service to Revenue	25	30	35

Source: Ministry of Economy, Trade and Industry. 2007. Study on Impacts of Debt Issues to Official Export Credits in Developing Countries (in Japanese) (by Mitsubishi UFJ Research and Consulting).

As Moldova's CPIA index is categorized as "strong" by the World Bank, the followings are to be discussed by introducing three thresholds on the table¹³.

(1) NPV of Debt to GDP

Based on assumption in the "3.5.1. Points of Analysis" as mentioned, impact of pushup by 10 billion Japanese Yen loans alone is 1.7% in 2011 as calculations. As there is 50% allowance to threshold, the pushup is to be acceptable.

(2) NPV of Debt to Exports

Likewise, impact of pushup by 10 billion Japanese Yen Loans alone is calculated as 4.8% in the NPV of Debt to Exports. As there is 200% allowance to threshold, it seems to be no problems.

(3) Debt Service to Export (DSR)

In the DSF, there is up to 25% allowance in the Debt Service to Export (DSR)¹⁴. The pushup of 10 billion Japanese Yen loans alone is 0.14%. This level is an acceptable one for providing loans.

As shown in the above, it can be judged that 10 billion Japanese Yen loans alone to Moldova is acceptable for debt sustainability if the country maintains levels of macroeconomic performance mentioned in the "3.5.1. Points of Analysis" and, at the same time, continue present levels of performance in the policies and institutions.

3.6.2 Consideration of Moldova's External Debt Stock in Total

As shown in the "3.4 Review of IMF's Debt Sustainability Analysis" as above-mentioned, Moldova's debt sustainability is, most likely, acceptable in consideration of "IMF 2008/02 Report," which is not inclusive of global economic crisis, and of "3.4.2. DSA by This Study," which assumes the crisis. This is the results that real GDP growth and export growth, which will become denominator in the major debt indicators, will be continuously positive with little exemption. In addition, Moldovan government's attitude toward external debt is also positively affected to the present levels of external debt.

From these observation, with the inclusion of the results of "3.6.1. Consideration of Japanese Yen Loans Alone" as mentioned above, it can be said that Moldova's debt sustainability might be acceptable.

¹³ In DSF, policies and institutions are evaluated by the Assessment of Institutional Strength and Quality of Policies based on IDA's Country Policy and Institutional Assessment (CPIA) Index.

¹⁴ In practice for private financial institutions to measure country risk, 25% is an acceptable levels of allowance. This levels is same in the case of DSF.

Attachment 3 Source Data for Graphs

Graph #	Title	2000	2001	2002	2003	2004	2005	2006	2007	2008
3.1-1	GDP growth (annual %)	2.1	6.1	7.8	6.6	7.4	7.5	4.8	3.0	
3.1-2	GDP per capita, PPP (current international \$)	1,287.4	1,418.1	1,577.2	1,741.0	1,949.4	2,190.5	2,394.7	2,551.1	
	GDP per capita growth (annual %)	3.5	7.6	9.3	8.1	8.8	8.8	6.0	3.8	
3.1-3	Population, total (million)	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	
	Population growth (annual %)	-1.3	-1.4	-1.4	-1.4	-1.3	-1.2	-1.1	-0.8	
3.1-4	Population ages 0-14 (% of total)	24.3	23.5	22.6	21.7	20.8	20.0	19.4	18.8	
	Population ages 15-64 (% of total)	65.8	66.4	67.0	67.7	68.3	68.9	69.5	70.1	
	Population ages 65 and above (% of total)	9.9	10.2	10.4	10.7	10.9	11.1	11.1	11.1	
3.1-6	Net migration (thousand)	-250.0					-250.0			
	Workers' remittances and compensation of employees, received (% of GDP)	13.9	16.4	19.5	24.6	27.1	30.8	34.7	34.1	
3.1-7	Agriculture, value added (% of GDP)	29.0	26.0	24.1	21.5	20.5	19.5	17.4	12.0	
	Industry, value added (% of GDP)	21.7	24.1	23.2	24.5	17.3	16.3	15.6	14.8	
	Manufacturing, value added (% of GDP)	16.3	18.1	17.0	18.3	16.9	15.9	15.0	14.2	
	Services, etc., value added (% of GDP)	49.2	49.9	52.7	54.0	62.2	64.1	67.0	73.2	
3.1-8	Degree of contribution of GDP: Household final consumption expenditure, etc. (%)	10.7	5.3	4.4	18.1	3.3	16.3	10.4	6.8	
	Degree of contribution of GDP: General government final consumption expenditure (%)	0.2	4.3	3.3	0.3	-2.8	1.3	4.2	-2.2	
	Degree of contribution of GDP: Gross capital formation (%)	2.9	-2.1	3.9	2.4	1.9	2.2	6.5	5.1	
	Degree of contribution of GDP: Exports of goods and services (%)	4.8	7.5	10.8	11.4	5.6	12.5	2.3	4.6	
	Degree of contribution of GDP: Imports of goods and services (%)	-15.9	-9.1	-14.3	-24.9	-0.4	-24.2	-19.0	-9.9	
	GDP growth (annual %)	2.1	6.1	7.8	6.6	7.4	7.5	4.8	3.0	
3.1-9	Goods exports (current million US\$)	476.8	564.6	659.7	805.1	994.1	1,104.6	1,058.7	1,368.4	1,646.7
	Goods imports (current million US\$)	770.3	879.7	1,037.5	1,428.1	1,748.2	2,296.1	2,644.4	3,676.4	4,870.0
3.1-10	Service exports (current million US\$)	164.6	170.9	216.7	250.0	332.1	398.9	488.6	649.7	849.8
	Services imports (current million US\$)	201.6	208.8	257.0	294.3	353.1	419.7	484.4	630.0	824.0
3.1-12	Food exports (% of merchandise exports)	61.6	63.1	63.7	59.2	53.0	71.3	62.9	57.4	
	Agricultural raw materials exports (% of merchandise exports)	3.1	2.1	3.0	5.0	5.9	0.7	1.0	1.4	
	Ores and metals exports (% of merchandise exports)	1.5	1.2	2.2	2.8	2.3	3.0	5.0	8.9	
	Fuel exports (% of merchandise exports)	0.1	0.0	0.0	0.6	1.6	0.2	0.3	0.2	
	Manufactures exports (% of merchandise exports)	33.4	33.5	31.0	32.2	33.9	24.8	30.8	32.1	
3.1-13	Food imports (% of merchandise imports)	13.1	14.3	13.3	13.5	11.6	11.5	11.2	12.1	
	Agricultural raw materials imports (% of merchandise imports)	2.4	2.5	2.5	4.1	4.7	4.0	1.8	1.7	
	Ores and metals imports (% of merchandise imports)	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.9	
	Fuel imports (% of merchandise imports)	32.4	26.6	22.3	20.5	21.0	21.2	24.1	21.0	
	Manufactures imports (% of merchandise imports)	51.0	55.5	60.8	60.8	58.8	62.4	62.0	64.2	
3.1-14	Computer, communications and other services (% of commercial service exports)	19.5	20.9	21.2	20.1	26.1	28.0	27.7	26.7	
	Insurance and financial services (% of commercial service exports)	1.5	2.1	1.4	1.2	0.8	1.0	1.0	1.0	
	Transport services (% of commercial service exports)	53.6	52.9	52.9	55.1	44.6	44.1	47.5	46.3	
	Travel services (% of commercial service exports)	25.5	24.1	24.4	23.6	28.5	26.9	23.7	26.0	
3.1-15	Computer, communications and other services (% of commercial service imports)	27.7	24.6	27.9	23.6	29.3	24.4	18.7	20.7	
	Insurance and financial services (% of commercial service imports)	1.6	2.0	1.5	2.0	1.5	1.7	2.3	2.1	
	Transport services (% of commercial service imports)	32.3	34.9	31.3	37.3	35.0	37.7	37.7	41.3	
	Travel services (% of commercial service imports)	38.4	38.4	39.3	37.1	34.1	36.2	41.2	35.9	

Graph #	Title	2000	2001	2002	2003	2004	2005	2006	2007	2008
3.1-16	Household final consumption expenditure, etc. (% of GDP)	91.4	88.6	83.3	90.9	89.6	94.0	95.6	95.1	
	General government final consumption expenditure (% of GDP)	10.3	15.1	20.2	19.7	15.3	15.7	18.2	18.9	
	Final consumption expenditure, etc. (% of GDP)	101.7	103.7	103.5	110.6	104.9	109.7	113.8	114.1	
	Gross capital formation (% of GDP)	23.9	20.0	21.7	23.2	26.4	30.8	32.7	38.2	
	Exports of goods and services (% of GDP)	49.8	49.9	52.7	53.5	50.7	51.1	45.2	45.7	
	Imports of goods and services (% of GDP)	75.4	73.5	77.9	87.2	82.0	91.7	91.8	97.9	
3.1-17	Current Transfers (Credit) (million US\$)	213.6	236.0	255.6	334.0	406.8	596.8	854.9	1,206.6	1,659.2
3.1-18	Export elasticity to GDP (%)	0.8	1.0	1.4	1.1	0.7	0.9	0.4	1.1	
3.1-19	Import elasticity to GDP (%)	1.5	0.8	1.4	1.6	0.5	1.8	1.1	1.4	
3.1-20	Consumer propensity (household) to GDP (%)	1.8	0.9	0.7	1.5	0.9	1.3	1.0	0.9	
	Consumer propensity (government) to GDP (%)	0.9	0.9	3.6	0.9	-0.6	1.7	2.3	0.9	
	Consumer propensity to GDP (%)	1.6	0.9	1.1	1.4	0.6	1.4	1.2	0.9	
3.1-21	Elasticity of current transfer (credit) to GDP (%)	5.5	0.5	0.4	1.3	1.3	2.8	2.3	2.2	
3.1-22	Foreign direct investment (received) (million US\$)	127.5	54.5	84.1	73.8	87.7	190.7	251.1	493.4	712.8
3.1-23	Deposit rate	24.9	20.9	14.2	12.6	15.1	13.2	11.9	15.0	17.9
	Lending rate	33.8	28.7	23.5	19.3	20.9	19.3	18.1	18.8	21.1
3.1-24	Rate of increase in consumer price index (%)	31.3	9.8	5.3	11.7	12.5	12.0	12.8	12.4	
	GDP deflator (%)	27.3	12.1	9.8	14.9	8.0	9.3	13.4	15.8	
3.1-25	Money and quasi money growth (annual %)	41.7	34.1	36.5	30.4	38.1	34.4	23.5	39.8	
	Money and quasi money (M2) as % of GDP	19.0	21.9	25.1	27.3	31.7	36.7	39.5	43.9	
3.1-26	Taxes on income, profits and capital gains (million MDL)	136.7	119.6	140.2	211.8	282.1	301.9	422.9	644.6	
	Taxes on goods and services (million MDL)	1,987.6	1,965.1	2,378.2	3,364.2	4,461.8	5,882.5	7,686.0	9,425.1	
	Taxes on international trade (million MDL)	230.7	234.1	332.9	476.6	495.6	685.0	637.4	900.0	
	Other taxes (million MDL)	4.0	-	54.2	-0.1	0.1	90.7	12.6	19.0	
	Social contributions (million MDL)	1,005.0	1,303.7	1,643.8	1,978.2	2,492.5	2,949.2	4,244.1	5,116.4	
	Grants and other revenue (million MDL)	1,027.4	865.3	1,113.5	1,346.1	1,639.6	2,539.1	2,358.8	3,160.4	
3.1-27	Goods and services expense (million MDL)	460.1	438.7	861.8	497.0	1,534.5	1,936.0	2,704.3	3,149.7	
	Compensation of employees (million MDL)	479.4	631.8	1,028.9	1,257.1	1,308.8	1,545.4	2,227.7	2,634.4	
	Interest payments (million MDL)	1,020.7	797.2	486.3	579.5	772.7	470.5	428.6	609.8	
	Subsidies and other transfers (million MDL)	2,547.6	2,370.2	2,709.5	3,201.1	4,259.9	5,879.8	8,062.8	9,772.0	
	Other expense (million MDL)	125.9	6.6	-	601.3	855.5	1,207.2	838.2	1,150.5	
3.1-30	Elasticity of revenue to GDP (%)	1.1	-0.3	0.9	1.6	1.5	2.3	1.3	2.2	
	Elasticity of expenditure to GDP (%)	0.7	-0.7	-	-	2.6	1.6	1.6	1.7	

Graph #	Title	2000	2005	2010	2015	2020	2030	2040	2050
3.1-5	Population, total (million)	4.1	3.9	3.7	3.6	3.5	3.2	2.9	2.5
	Production population to total (%)	65.8	68.9	72.3	72.6	70.9	67.9	65.2	63.5

Graph #	Title	2000	2001	2002	2003	2004	2005	2006	2007
3.2-1	External debt stocks, long-term (million US\$)	1,050.2	1,059.3	1,164.1	1,258.1	1,227.1	1,239.9	1,454.1	1,948.0
	Use of IMF credit (million US\$)	154.1	146.1	152.0	142.6	126.4	95.5	141.1	159.5
	External debt stocks, short-term (million US\$)	488.6	435.5	488.8	540.8	592.2	717.6	821.6	1,095.5
3.2-2	External debt stocks (long-term) to total debt stocks (%)	62.0	64.6	64.5	64.8	63.1	60.4	60.2	60.8
	Use of IMF credit to total debt stocks (%)	9.1	8.9	8.4	7.3	6.5	4.6	5.8	5.0
	External debt stocks (short-term) to total debt stocks (%)	28.9	26.5	27.1	27.9	30.4	35.0	34.0	34.2
3.2-3	External debt stocks, public and publicly guaranteed (million US\$)	852.8	792.0	825.8	848.2	754.3	699.7	736.1	778.5
	External debt stocks, private nonguaranteed (million US\$)	197.4	267.3	338.3	409.9	472.9	540.2	718.0	1,169.5
3.2-4	External debt stocks (public and publicly guaranteed) to total debt stocks (%)	81.2	74.8	70.9	67.4	61.5	56.4	50.6	40.0
	External debt stocks (private nonguaranteed) to total debt stocks (%)	18.8	25.2	29.1	32.6	38.5	43.6	49.4	60.0

Graph #	Title	2000	2001	2002	2003	2004	2005	2006	2007
3.2-5	Total debt/Exports of goods and services: MDA (%)	203.2	165.8	149.5	125.4	95.5	84.2	87.8	89.7
	Total debt/Exports of goods and services: ECA (%)	128.4	123.7	125.1	118.0	103.9	92.6	95.6	108.0
	Total debt/Exports of goods and services: LMI (%)	96.7	99.2	88.8	77.1	64.4	52.0	44.4	45.0
	Total debt/Exports of goods and services: ADC (%)	122.6	124.3	119.2	108.0	91.0	73.6	65.8	66.0
	Total debt/GNI: MDA (%)	129.2	104.1	101.9	87.7	66.3	61.3	64.3	66.5
	Total debt/GNI: ECA (%)	54.8	52.9	51.0	50.1	45.6	40.7	43.2	41.0
	Total debt/GNI: LMI (%)	33.0	31.8	29.5	27.9	25.8	22.3	19.9	19.0
	Total debt/GNI: ADC (%)	38.8	38.4	38.7	37.3	33.7	28.4	26.4	25.0
	Debt service/Exports of goods and services: MDA (%)	18.1	17.6	20.2	10.3	15.0	10.3	12.2	9.5
	Debt service/Exports of goods and services: ECA (%)	19.0	22.7	22.1	20.1	20.0	21.7	20.0	19.0
	Debt service/Exports of goods and services: LMI (%)	13.5	13.8	13.6	11.8	8.4	7.4	7.0	6.0
	Debt service/Exports of goods and services: ADC (%)	20.2	19.8	18.7	17.3	14.5	13.6	12.6	10.0
	Interest/Exports of goods and services: MDA (%)	8.2	6.9	4.9	3.2	3.6	2.7	2.8	2.8
	Interest/Exports of goods and services: ECA (%)	5.8	6.1	5.2	4.6	4.0	3.8	3.9	5.0
	Interest/Exports of goods and services: LMI (%)	4.7	4.4	3.3	2.8	2.3	1.8	1.7	2.0
	Interest/Exports of goods and services: ADC (%)	6.4	6.0	4.8	4.2	3.4	3.0	2.9	3.0
	Interest/GNI: MDA (%)	5.2	4.3	3.3	2.2	2.5	2.0	2.0	2.1
	Interest/GNI: ECA (%)	2.5	2.6	2.1	1.9	1.7	1.7	1.8	2.0
	Interest/GNI: LMI (%)	1.6	1.4	1.1	1.0	0.9	0.8	0.8	1.0
	Interest/GNI: ADC (%)	2.0	1.9	1.6	1.5	1.2	1.2	1.1	1.0
	Reserves/Total debt: MDA (%)	13.1	13.9	14.9	15.6	24.2	29.1	32.1	41.6
	Reserves/Total debt: ECA (%)	23.5	25.7	30.4	34.7	40.4	48.6	55.7	62.0
	Reserves/Total debt: LMI (%)	44.3	51.6	64.4	78.9	101.2	129.6	158.9	185.0
	Reserves/Total debt: ADC (%)	30.7	34.0	40.3	48.6	60.1	74.9	90.5	108.0
	Reserves/Imports of goods and services: MDA (months)	2.5	2.4	2.4	2.0	2.5	2.5	2.8	3.5
	Reserves/Imports of goods and services: ECA (months)	3.7	3.9	4.5	4.8	4.9	5.4	6.2	8.0
	Reserves/Imports of goods and services: LMI (months)	5.5	6.4	7.3	7.8	8.4	9.1	10.1	12.0
	Reserves/Imports of goods and services: ADC (months)	4.5	5.0	5.9	6.5	6.8	7.0	7.7	9.0
	Short-term debt/Total debt: MDA (%)	28.9	26.5	27.1	27.9	30.4	35.0	34.0	34.2
	Short-term debt/Total debt: ECA (%)	15.7	16.3	15.5	19.3	18.9	20.4	21.2	24.0
	Short-term debt/Total debt: LMI (%)	13.0	18.9	20.1	21.8	24.6	29.8	31.8	31.0
	Short-term debt/Total debt: ADC (%)	13.7	14.8	14.2	16.1	17.6	20.5	22.1	24.0
	Concessional debt/Total debt: MDA (%)	12.2	12.6	14.6	15.8	18.0	17.1	16.1	14.1
	Concessional debt/Total debt: ECA (%)	5.1	4.8	5.2	4.9	4.5	3.4	2.8	3.0
	Concessional debt/Total debt: LMI (%)	24.6	22.7	24.3	24.9	24.4	20.8	19.3	19.0
	Concessional debt/Total debt: ADC (%)	16.9	16.2	17.3	17.8	17.5	15.6	13.2	12.0
	Multilateral debt/Total debt: MDA (%)	24.0	24.2	23.7	23.1	23.1	20.0	17.8	14.8
	Multilateral debt/Total debt: ECA (%)	7.1	7.2	7.5	6.7	6.3	5.4	4.6	4.0
	Multilateral debt/Total debt: LMI (%)	16.8	16.6	17.0	16.9	15.9	15.2	14.3	14.0
	Multilateral debt/Total debt: ADC (%)	14.7	14.8	15.1	14.8	14.3	13.9	11.9	11.0
Graph #	Title	2007	2008	2009	2010	2015	2020	2025	2027
3.4-4	Baseline	15.1	12.1	10.3	9.1	5.4	3.5	2.1	1.8
	Historical scenario	15.1	13.4	12.1	10.8	4.7	4.0	3.4	3.3
	Most extreme shock: Combination	15.1	33.0	55.4	50.2	33.0	16.9	5.9	4.0
3.4-5	Baseline	32.5	24.7	20.1	17.6	10.2	6.6	4.0	3.3
	Historical scenario	32.5	27.5	23.7	20.9	8.9	7.6	6.4	6.2
	Most extreme shock: Combination	32.5	72.0	122.9	110.5	70.8	36.3	12.6	8.7
3.4-6	Baseline	4.0	3.2	2.6	1.8	1.5	0.7	0.6	0.5
	Historical scenario	4.0	3.5	3.0	2.0	1.2	0.5	0.5	0.5
	Most extreme shock: Combination	4.0	3.8	4.8	5.2	9.0	5.9	4.1	1.4
3.4-7	GDP growth (annual %)	-	7.2	-5.0	0.0	4.0	4.0	4.0	4.0
	Export growth (annual %)	-	18.6	-20.0	2.0	8.2	7.1	7.1	7.1
	Import growth (annual %)	-	32.8	-25.0	0.5	8.2	7.1	7.1	7.1

Graph #	Title	2007	2008	2009	2010	2015	2020	2025	2027
3.4-8	Baseline	14.5	12.2	13.0	12.3	6.8	4.2	2.4	1.9
	Historical scenario	14.5	9.3	14.2	18.3	29.8	25.8	14.6	9.2
	Most extreme shock: Combination	14.5	45.1	68.2	66.0	39.8	19.1	6.1	4.2
3.4-9	Baseline	31.6	25.9	33.4	33.0	18.9	12.2	7.8	6.4
	Historical scenario	31.6	19.8	36.3	49.2	83.0	75.9	47.5	31.0
	Most extreme shock: Combination	31.6	81.2	171.0	173.8	109.8	55.3	19.1	13.2
3.4-10	Baseline	3.9	3.4	4.4	3.5	2.7	1.3	1.1	0.9
	Historical scenario	3.9	3.8	4.0	3.5	5.7	7.5	7.5	6.7
	Most extreme shock: Combination	3.9	3.4	6.6	7.8	14.0	9.2	6.6	2.2

Chapter 4 Cooperation Strategy by International Aid Organizations and Donors

This chapter explains cooperation strategies by international aid organizations and donors common to the sectors targeted. Chapter 5 describes the strategies by sector, relating to the cooperation experience, cooperation directions, and issues to be solved in the sector.

4.1 Outlines of States of Donors' Cooperation

4.1.1 Donors' Meeting

Donors' Meeting has been held, through coordination by World Bank and UNDP, once a month at which international aid organizations and other country donors attend. Table 4.1-1 lists the meeting dates and the agenda thereof in 2009. All the meetings had the agenda handling the effects by the Global Economic Crisis. The fact shows how large the effects are in Moldova.

Table 4.1-1 Donors' Meeting Held in the Year of 2009

Date	Meeting Agenda
January 29	<ul style="list-style-type: none">- Presentation on SIDA's new organization and SIDA's program in Moldova- General Information from the Government Office: launching of exercises "Donors' Presence Matrix"; Procedures of modification of the Government decision on tax exemption no. 1357.- Exchange of information about Gas crisis impact on Moldova
February 26	<ul style="list-style-type: none">- Update on the proposed assistance to the Government on Aid Coordination- Discussions on the potential donors' activities in the area of early warning and emergency response- Discussions on impact of the elections on the development assistance
March 26	NA
April 30	<ul style="list-style-type: none">- Update on Policy Notes- Discussion on the Financial Crisis Impact- Aid Coordination Consultant interviews overview
May 28	<ul style="list-style-type: none">- Introduction of Aid Coordination Consultant- Request of Government of Moldova regarding the support of the Water sector- Update on Policy Notes for the Government- Discussions on the Global Economic Crisis impact on Moldova
June 25	<ul style="list-style-type: none">- Update on the Aid Coordination process- Update on the Global Economic Crisis impact on Moldova- Briefing on the regional consultation of ENP countries on Child Care System Reform

Source : United Nation in Moldova¹

The Study Team participated the Donors' Meeting held on 25 June. The outline of the meeting contents are as follows:²

- 1) Update on the Aid Coordination Process (Presented by WB)

¹ UN in Moldova : http://www.un.md/donors/meetings/2009/mtg_2009.shtml

² Donors' Meeting; The study team participated in the meeting held on June 25, 2009.

A Questionnaire was proposed to assess the status of assistance. This is to be filled in by agencies, so that in the end a document is produced to avoid an overlap in the aid targeted by the donors.

2) Update on the Global Economic Crisis Impact on Moldova (Presented by IMF)

General characteristic was that it is getting worse and worse. It looks that nothing can keep the economy going. The overall picture is the following: there is a 40% drop of remittances; a 40% drop of investments; a 35 – 37% drop of imports; a 30% drop of exports

3) Briefing on the regional Consultation of ENP countries on Child Care Reform (Presented by UNICEF)

The childcare system reform in Moldova was explained in the presentation. Support should also be made to vulnerable families in the rural area, to avoid child malnutrition. Social policies need to be developed to prevent separation of children from their families.

4.1.2 Cooperation Experiences by Donors

Table 4.1-2 illustrates the cooperation experiences to Moldova by the international aid organizations.

Table 4.1-2 Cooperation Made by the International Aid Organizations (Net disbursements, Unit: MMUS\$)

Year	1st		2nd		3rd		4th		5th		Others	Total
2002	IDA	21.87	IMF	11.96	CEC	11.27	IFAD	1.77	UNHCR	0.89	2.76	50.52
2003	IDA	15.90	CEC	8.48	IFAD	2.43	UNTA	1.29	GFATM	1.09	3.64	32.83
2004	IDA	17.68	CEC	10.04	GFATM	1.89	IFAD	1.75	UNDP	1.49	4.18	37.03
2005	CEC	40.44	IDA	24.78	GFATM	3.98	UNDP	1.81	GEF	1.74	4.68	77.43
2006	IMF	63.86	IDA	26.49	CEC	26.22	IFAD	3.48	GEF	3.03	7.96	131.04

IDA= International Development Association; CEC= Commission of the European Communities; IMF= International Monetary Fund; IFAD= International Fund for Agricultural Development; GFATM=The Global Fund to fight AIDS, Tuberculosis and Malaria; UNTA= United Nations Regular Program for Technical Assistance UNDP= United Nations Development Program; UNHCR= Office of the United Nations High Commissioner for Refugees; GEF= Global Environmental Facility

Source: OECD/DAC

Bilateral cooperation to Moldova is listed in Table 4.1.3.

Table 4.1-3 Bilateral Cooperation to Moldova (Net disbursements, unit in MMUS\$)

Year	1st		2nd		3rd		4th		5th		Japan	Total
2002	USA	56.91	Japan	5.91	Sweden	4.57	Nether-lands	3.47	UK	3.32	5.91	86.34
2003	USA	41.70	Germany	5.52	UK	5.31	Nether-lands	4.91	Sweden	4.55	4.30	80.41
2004	USA	32.76	Sweden	7.22	Germany	6.25	Nether-lands	5.60	UK	4.86	3.33	76.55
2005	USA	30.09	France	25.80	Sweden	8.52	Nether-lands	8.30	Germany	3.71	3.71	105.70
2006	USA	23.89	Sweden	11.86	Germany	9.42	Nether-lands	7.00	France	6.11	6.11	83.50

Source: OECD/DAC

4.2 Cooperation Strategy by the Japanese Government

4.2.1 Basic Strategy of Japan's ODA Loan by the Former JBIC

Basic Strategy of Japan's ODA Loan (The Medium-Term Strategy for Overseas Economic Cooperation Operations)³ stipulates the strategy as follows:

The importance of the European region in the global economy has been rising with an expansion of the EU. To Japan, strengthening the relationship with countries in the vicinity of the EU and the political stability in the former conflict zones have become even more important than before.

Moldova has the Transnistria problem; therefore, Moldova should be regarded as a country having a war area. Peace infrastructure improvement within the areas that indirectly support peace construction is the priority task.

Based on the conditions and policies of individual countries, we will focus our efforts on the above-mentioned infrastructure development and environmental measures, which represent a common high priority goal of the region. When providing such assistance, we will work closely with such international organizations as the EU, the World Bank, and European Bank for Reconstruction and Development, and also be mindful of ethnic issues and economic disparities, especially in the areas of old conflicts.

4.2.2 Directions in ODA to Moldova

Directions in ODA to Moldova are explained at the internet-web site of the Japanese foreign ministry⁴:

(1) Significance of Japanese ODA to Moldova

Moldova is located at the area between the former Soviet and the European countries. The stability of Moldova is important to the stability of Europe. Moldova is one of the poorest countries in Europe and Moldova is currently propelling the poverty reduction, the shift for the market economy, and the democratization. It is very significant for Japan to support such policies by the Moldovan government from view points where Japan and Moldova can have a relation to develop commonly the poverty reduction and the sustainable economic growth and furtherer to respect commonly universal values of human rights, democracy, the market economy, the rule of laws in the development

(2) Principal Direction in ODA to Moldova

Through the support for the shift for the market economy, Japanese cooperation would rehabilitate the agriculture and the food industries of the principal industries in Moldova, develop SMEs, and improve the sanitary environment in the rural area consequently to realize the development of the Moldovan economy. Through recovery of the social security sectors such as health-care system that were exhausted after the collapse of the socialism system, the cooperation aims at improving of the life state of the residents taking a central part in the market economy.

(3) Fields with Overriding Priority

The following two fields are named as ones with priority:

1) Society (Health and Sanitary Field)

³ p8, Assistance Strategy for Each region and Key countries, Basic Strategy of Japan's ODA Loan (The Medium-Term Strategy for Overseas Economic Cooperation Operations)

⁴ Japanese Foreign Ministry Web Site, Country Data Book "Moldova"

2) Market Economy Field

4.2.3 Japanese Cooperation to Moldova

Cooperation experiences by sector are described in the Chapter 5.

4.2.3.1 Grant-aid Assistance

Japanese cooperation to Moldova from 2003 to 2007 is shown in Table 4.2.1. The cooperation can be classified as follows, in which cooperation to the agriculture sector accounts for a considerable share in the whole cooperation.

- 1) Grant Aid to Make the Economic / Social Reform and the Poverty Reduction
- 2) Grant Aid to Procure and Prepare the Agricultural Machinery
- 3) Grant Aid for Grassroots Human Security Projects “Kusanone”
- 4) Cultural Grant Aid

Table 4.2-1 Japanese Grant Aid to Moldova

Year	Project Names	Project Outlines	Sectors
2003	Assistance for Increase of Food Production	Providing 32 Sampo combine harvesters	Agri-culture
2004	Non-Project Grant Aid	Promotion of Small and Medium Enterprises Sector Program	Common
2005	Assistance for Increase of Food Production	Providing 82 Kubota tractors	Agri-culture
2005	Non-Project Grant Aid	Promotion of Small and Medium Enterprises Sector Program	Common
2005	Cultural Grant Aid	Improvement of Audio-Visual and Exhibition Equipment of the National Art Museum of Moldova	Common
2006	Non-Project Grant Aid	Promotion of Small and Medium Enterprises Sector Program	Common
2006	Assistance for Increase of Food Production	Providing 100 Belarus tractors	Agri-culture
2007	Non-Project Grant Aid	Promotion of Small and Medium Enterprises Sector Program	Common
2007	Assistance for Increase of Food Production	Providing 1 Belarus tractors and 7 Deutz combine harvester	Agri-culture
2007	Training Center for Agricultural Mechanization	Training equipment to the national training center for agricultural mechanization of the republic of Moldova	Agri-culture
2008	Kusanone	Biomass heating system for the kindergarten and school in Hirtopul mare Village	Common
2008	Kusanone	New medical and rehabilitation equipment granted to the institute of neurology and neurosurgery of Moldova	Agri-culture

Note: Kusanone = Grant Aid for Grassroots Human Security Projects “Kusanone”;

Source: Japanese Foreign Ministry Web Site and English-version Data from Japanese Embassy Located at Ukraine

4.2.3.2 Technical Cooperation

Table 4.2-2 shows the technical cooperation to Moldova by Japan from 2003 to 2007.

Table 4.2-2 Technical Cooperation to Moldova by Japan

Year	Receiving Moldovan Experts	Dispatching Japanese Experts	Sending Study Team	Providing Machinery	Receiving Students
2003	20 Persons	1 Person	-	26.57MM Yen	3 Persons
2004	34 Persons	1 Person	5 Persons	4.19 MM Yen	4 Persons
2005	36 Persons	-	11 Persons	0.04 MM Yen	7 Persons
2006	28 Persons	-	9 Persons	-	3 Persons
2007	28 Persons	-	4 Persons	-	

Source: Japanese Foreign Ministry Web Site

4.3 Aid Strategies by the Other Donors

This section describes the aid strategies addressing to Moldova by the other donors than Japan. The aid organizations that make assistance in the sole sector in Moldova, for example, WHO for the health sector, are explained in the Chapter 5 on what strategies they plot to develop the sector.

4.3.1 International Aid Organization

(1) World Bank

The Country Partnership Strategy (CPS) for Moldova for 2009-2012 is the main assistance framework at the country level, which will guide the World Bank's interventions in Moldova over the next four years. The new CPS aims to lay the foundations for inclusive economic growth in Moldova by⁵:

- Improving economic competitiveness to support sustainable economic growth;
- Minimizing social and environmental risks, building human capital, and promoting social inclusion; and
- Improving public sector governance.

(2) United Nations Development Programme (UNDP) ⁶

The UNDP program in Moldova is regulated by the Country Cooperation Framework (CCF) and Country Program Action Plan (2007-2011), which is in line with the priorities and action plan of the Government.

Through its work within the CCF, UNDP builds on the resources in Moldovan society, notably on national and local government capacities, civil society organizations and the private sector. UNDP also aims to attract more external assistance to help Moldova deal with these issues.

4.3.2 European Aid Organization

(1) EC·EU⁷

EU carries out the European Neighborhood Policy Instrument (ENPI) from 2007 to 2011, in order to stabilize the macro economy, to control the public funds and to reform the public

⁵ News & Broadcast,
<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:22050182~pagePK:34370~piPK:34424~theSitePK:4607,00.html>

⁶ UNDP Moldova, Our Mission, http://www.undp.md/about/country_mandate.shtml

⁷ In this report, EU is described as a body not distinguished from EC (European Commission) because the EC has a function of the cabinet function out of EU.

administration. The TACIS programme is over. Starting at 2006 the ENPI is in place (European Union Neighborhood Partnership Instrument). This is a budget support facility, related to specific sectors in Moldova: (a) 2007 – Social Sector; (b) 2008 – Health Protection; and (c) 2009 – Water and Sanitation⁸.

(2) European Bank for Reconstruction and Development (EBRD)

EBRD will - within the limits of its mandate - assist Moldova to implement its reform programme by drawing among others on the instruments and grant financing available to EBRD in the context of its Early Transition Countries (ETC) initiative. In particular, EBRD will pursue the following operational objectives⁹:

- 1) Private Enterprise
- 2) Financial Institutions
- 3) Infrastructure

The EBRD is different from the other donors in the following functions¹⁰:

- 1) To make the banking services, and to make a loan at the same rate as EBI (50 : 50) for the project requiring the financing;
- 2) To manage the projects which the other donors implement from a viewpoint of financing;
- 3) The lending conditions are LIBOR plus 1% for the public sector. The repayment period is set at 10 to 15 years together with the grace period corresponding to the construction one.

4.3.3 Donors of the Other Countries

(1) Austrian Development Agency in Moldova (ADA)

Austrian Development Cooperation in Moldova attaches priority to water supply and wastewater disposal and to private sector development and employment, focusing on vocational and technical education and training¹¹.

(2) KfW Bankengruppe (KfW)

The bilateral cooperation primarily aims to reduce migration and poverty by promoting market economy and sustainable growth, facilitating financial restructuring (KMU credits) and supporting social infrastructure (through participation in the Moldova Social Investment Fund of the World Bank). New projects will support SMEs, infrastructure investments and measures to assist approximation to EU standards in the agricultural sector¹².

(3) Swiss Agency for Development and Cooperation (SDC)

Since 2004, SDC has been supporting reforms in social development and health as well as in the vocational education and micro-finance sector within the framework of bilateral

⁸ Interview to EU on June 26, 2009

⁹ STRATEGY FOR MOLDOVA by EBRD <http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>, Sep. 2007

¹⁰ Interview to EBRD on July 7, 2009

¹¹ ADC Portal Site: <http://www.entwicklung.at/en/countries-and-regions/south-eastern-europewestern-balkans/moldova.html>

¹² Described referring to the following EBRD's report: P31, STRATEGY FOR MOLDOVA by EBRD <http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>

technical cooperation. The Swiss cooperation with Moldova includes the following programs¹³:

- Public Health Program
- Water and Sanitation Program (ApaSan)
- Economy and Employment Program t

(4) Swedish International Development Cooperation Agency (SIDA)

SIDA's current strategy (2007 -2010) focuses on good democratic governance, increased competitiveness in the rural areas and reduced vulnerability in the energy area¹⁴.

(5) United States Agency for International Development (USAID)

Since 1993, USAID has focused primarily on land and energy sector privatization, health and humanitarian needs, rule of law programs, business development, and financial sector reform¹⁵.

(6) Cooperation By Russia and Romania

Before the general election were held on July 29, 2009, President of Moldova was in Russia and discussed with the leaders of Russia possible ways to enhance bilateral political and economical cooperation. The Moldovan side expected to receive a credit of half a billion of US dollars from Russia¹⁶. However, after the election, as described in the paragraph 1.1.1, the opposition parties to the Communists secured a greater percentage of the vote, and are now in discussion over forming a coalition. Consequently, the credit may not be realized by the Russian side.

Romania has its political direction to make cooperation to Moldova through EU's ENPI as a member of EU (Refer to 4.3.2(2))¹⁷. However, the Moldovan side criticized Romania for their involvement in the riot that broke out just after the election in April 2009, which shows difficulties laid on the two countries.

¹³ SDC in Moldova http://www.sdc.md/en/Home/Swiss_cooperation_with_Moldova

¹⁴ Described referring to the following EBRD's report: P32, STRATEGY FOR MOLDOVA by EBRD
<http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>

¹⁵ USAID / Moldova, About Us: <http://moldova.usaid.gov/about.shtml>

¹⁶ Statement by the Deputy Minister of Foreign Affairs: <http://blogs.eliamep.gr/en/admin/interview-with-the-deputy-minister-of-foreign-affairs-of-the-republic-of-moldova-mr-valeriu-ostalep/>

¹⁷ Statement by Ministry of European Integration of Romania on January 2007:
<http://www.mie.ro/stiri.php?s=305&lang=en>

Chapter 5 Analysis on the Sector Targeted

5.1 Electric Sector

5.1.1 Outlines of the Sector

5.1.1.1 Composition and Outlines of the Sector¹

(1) Structure of Electricity Generation and Consumption in Moldova

Because Moldova lacks energy resources, Moldova should import fossil fuels such as petroleum and coal from Romania or Ukraine of the neighboring countries.

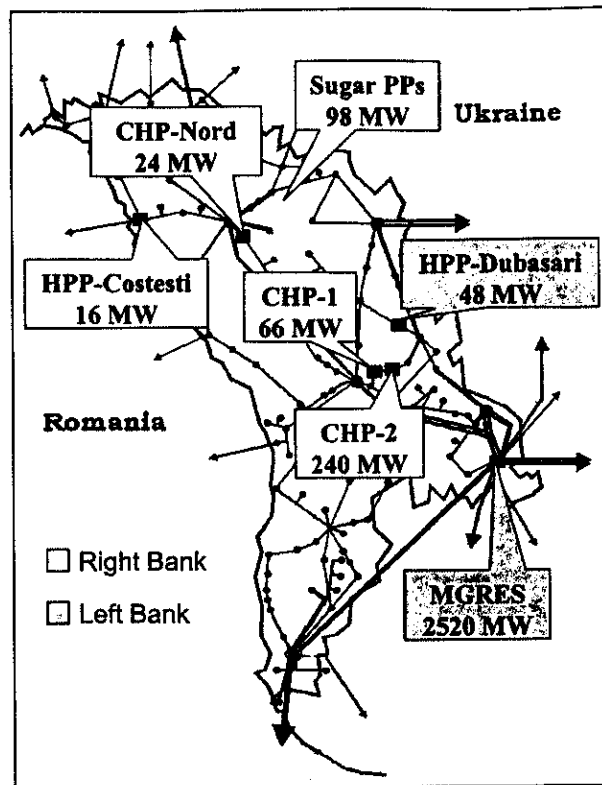
Table 5.1-1 lists the power generation plants and the capacities thereof located in Moldova. Moldova has 1,356MW in total at an available electric capacity, 948MW, 70 % of which is generated in Transnistria. The remains of the 30%, 408MW, is generated in the right bank of the Dniester River. (Figure 5.1-1). Most of the power generation plants use natural gas as the fuel, which means that Moldova depends on the gas in the electric sector.

Table 5.1-1 Rated Capacities and the Available Capacities of the Power Generation Plants in Moldova

Power Plant	Installed capacity		Available capacity		
	MW	% of the total	MW	% of the total	% of the installed capacity
Plants on the right bank of the Dniester including:	440	14.6	408	30.1	92.7
CHP-1 Chisinau	58	1.9	47	3.5	81
CHP-2 Chisinau	240	8.0	240	17.7	100
CHP-North Balti	28	0.9	15	1.1	53.6
Hydroelectric power plant Costesti	16	0.5	16	1.2	100
Power plants of sugar factories	98	3.3	90	6.6	91.8
Power plants on the left bank of the Dniester including:	2568	85.4	948	69.9	36.9
Cuciurgan thermal Power Plant	2520	83.8	900	66.4	35.7
Hydroelectric power plant Dubasari	48	1.6	48	3.5	100
Total:	3008	100	1356	100	45.1

Source: p10, "Regulation of the Energy Market in the Republic of Moldova, 2008, ANRE

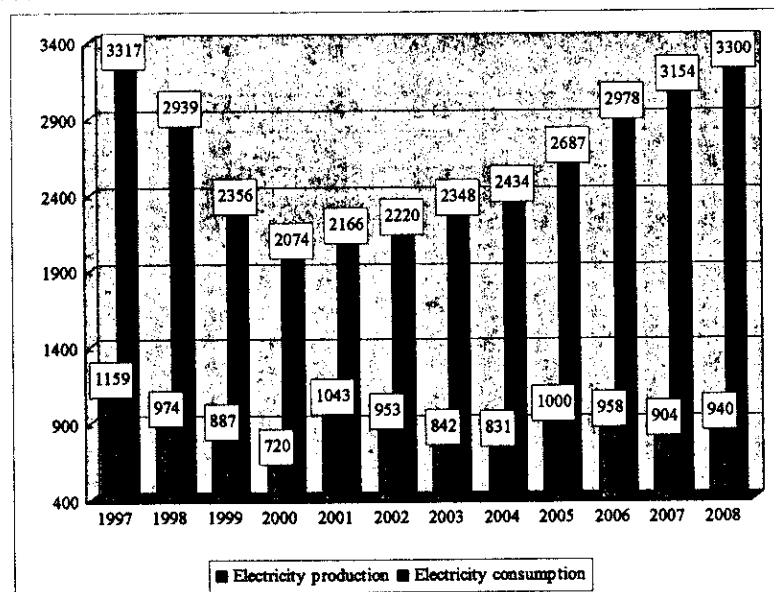
¹ p10~p15, "Regulation of the Energy Market in the Republic of Moldova", 2008, ANRE



Source: p15, "Regulation of the Energy Market in the Republic of Moldova", 2008, ANRE

Figure 5.1-1 Locations of the Power Generation Plants in Moldova

The Figure 5.1-2 illustrates the change of the electric consumption in Moldova in which the consumption has steadily grown at an annual average rate of 6% from 2000 to the period of the Global Economic Crisis in 2008.

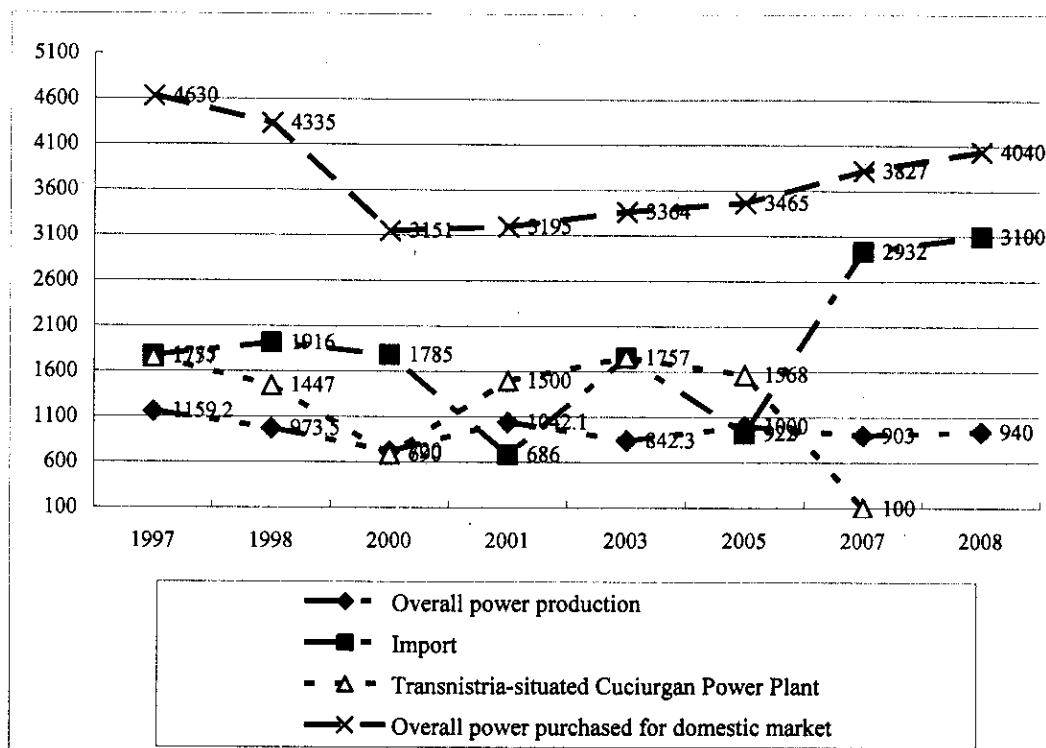


Source: p15, "Regulation of the Energy Market in the Republic of Moldova", 2008, ANRE

Figure 5.1-2 Electric Generation and Consumption from 1997 to 2008

Cuciurgan Power Plant in Transnistria imports gas from Ukraine as the fuel to export the electricity to Romania with permission by the related authorities in Moldova. The three (3) power generation plants, as a combined heat and power plant (CHP), in the right bank of the Dniester River, make cogeneration of electricity as well as hot water, two of which are located in Chisinau and the other is in Balti.

Figure 5.1-3 illustrates the change of the electric demand and supply in Moldova, in which the electricity import has fluctuated depending on the electricity supply to the domestic from Cuciurgan Power Generation Plant.



Source: p16, "Regulation of the Energy Market in the Republic of Moldova", 2008, ANRE

Figure 5.1-3 Change of the Electric Generation, Import in Moldova from 1997 to 2008

Out of the power-generation enterprises, the Cuciurgan Power Plant is owned by Inter RAO EES of Russia and the CHP companies are of the state-owned companies

(2) Power Transmission and Distribution

Moldova's power transmission network is managed by the state-owned company Moldelectrica to ensure the interaction between the national power system and those of Ukraine and Romania.

The distribution of electricity on the right bank of the river Dniester is carried out as follows:

- 1) Chisinau managed by the Red Union Fenorsa with majority stock held by Spanish capital;
- 2) Northern Region including Balti by Red North of a state-owned company;
- 3) Northwestern Region including Briceni, Edinet, Ocnita, Donduseni, Drochia, and Soroca.

The fluctuations of electric voltage and frequency, of the former issue to be solved have been currently improved. The electricity loss is now improved at a rate from 36.4% in 2001 to 16% in 2008².

(3) Tariff of Electricity to Be Paid by the End User

The tariff structure is of cost-recovery based. End users purchase electricity from an electricity distributing company and pay the tariff to the company. The company sells electricity to the user at a tariff rate calculated to be added a profit up to 10% of the amount of electricity purchasing cost plus operation cost. This tariff scheme is managed by ANRE.³

(4) Movement toward Energy Saving and Energy-efficiency Improvement

The energy sector has issues to improve the following: the energy efficiency of public facilities such as schools, the efficiency of the electric interconnection at a boarder, and the energy efficiency in the building inside⁴. At present an energy efficiency agency is being separately built from AREE of a NPO organization. Moldovan side requests the international donors to establish a fund for an energy efficiency program.⁵

5.1.1.2 Issues to Be Solved in the Sector

(1) Large Dependence on Gas Fuel by the Electric Sector

Russian Gazprom interrupted the gas supply to Moldova in the 2009 winter, in which hospitals in Chisinau experienced a harsh winter because the heating was difficult. It is necessary to equip public institutions with a heating not depending on such gas.⁶

(2) Setting of the Electricity Tariff

Thermocom that run the above-mentioned CHP-1 has been in virtual bankruptcy from the year of 2002. In Chisinau a new company should be established to replace Thermocom to serve the heating⁷. The tariff setting rate was too low for Thermocom to run, and WB, IMF, EU, and SIDA are now supporting in setting a new cost-recovery tariff.⁸ In addition, the natural gas for power generation as the fuel is controlled in the supply.

The debts structure of Thermocom is now restructured in addition that its activities were postponed more three years from 2008, which would make the CHP-1 to be a bankable project. To enforce the system relating to such energy companies may be big issues to the new cabinet to be born in July 2009⁹.

MoEC recognizes that it is important to monitor setting of the tariff in all the projects of the above-mentioned CHP. It is expected that the legislation reform would be made aiming at the setting.¹⁰ As for the accounting scheme of the company to run and maintain the CHP, MoEC considers that the rate of asset to debt should be proper; therefore, to value the asset is an important issue¹¹.

² p18, "Regulation of the Energy Market in the Republic of Moldova", 2008, ANRE

³ Interview to ANRE on July 9, 2009

⁴ Interview to PIU of WB on July 1, 2009

⁵ Interview to PIU of WB on July 1, 2009

⁶ Interview to NCPM on July 6, 2009

⁷ Interview to EBRD on July 7, 2009

⁸ Interview to PIU of WB on July 1, 2009

⁹ Interview to MoEC on July 8, 2009

¹⁰ Interview to MoEC on July 8, 2009

¹¹ Interview to MoEC on July 8, 2009

The study team recommends that JICA should assist the CHP companies after the tariff setting and the asset / debt structure are clarified.

The donor side considers that a transmission / distribution company has not a large problem on the tariff because it is set at a cost-recovery base¹².

(3) State of the Electric Infrastructure

Monthly electric consumption per capita at home is estimated at 107KWh in Moldova that is a about quarter of 400KWh by Russian.¹³

According to KfW's report, the electricity supply of a social infrastructure has not been invested so much; therefore, the infrastructure has not been maintained well so that a part of schools or public offices have not been heated even in the coldest period.

The infrastructure state in the rural area is much poorer. Because the population decreases in Moldova, School institutions become so large to the students that they feel colder and more hungry especially in the winter in the background where the energy was restricted in supply of the gas from Russia. WB and UNICEF make assistance to improve this situation.¹⁴

5.1.2 Administrative Organizations, Bodies and Companies Related to the Sector in Moldova

5.1.2.1 Administrative Organizations, Bodies and Companies Regarding Plan, Construction and Completion of Project

In progress of the Project, the related ministries make a legal-frame work at the end time of the design and at the construction, and it is necessary for a state agency to make inspection and permission in order that the project might enter into the phase of operation and maintenance. In addition, the evaluation for EIA by MENR is required. The norm and regulation necessary for the project implementation are drawn up and set by MCTD. As for the environmental standards, EU or Moldovan standards are adopted and MCTD and MENR make inspections with the standards.¹⁵

(1) Ministry of Construction and Territorial Development (MCTD)

The ministry, established in 2008, is responsible for elaborating the state policy in construction, urban design, territorial development including the infrastructure relating to roads, energy, and waterworks, production of construction materials, housing and the construction of roads.

In a large-scale project for the infrastructure construction the ministry provides the project with the legislation to implement and makes examination and inspection. Small-scale projects are conducted to be managed by themselves.¹⁶

The ministry should prepare and settle norms and regulations as shown in the Attachment 5.1.1 in the project implementation hereby to make inspections and control with use of the norms and regulations.¹⁷

¹² Interview to EBRD on July 7, 2009

¹³ IEA Energy Statistics

¹⁴ Interview to UNICEF on June 25, 2009

¹⁵ Interview to MoEC on July 3, 2009

¹⁶ Interview to MCTD on July 2, 2009

¹⁷ Interview to MCTD on July 2, 2009

(2) Ministry of Local Public Administration (MLPA)

The ministry is a central specialized body of public administration, which is responsible for:¹⁸:

- Monitoring the enforcement of the provisions enshrined within the programs for enhancing and fortifying local public administration;
- Initiating and facilitating actions for attracting investments meant for the fulfillment of programs and action plans at local level;
- Promoting the implementation of new technologies and new practices in its field of activity.

The rural areas in Moldova are mainly classified into the north, the central and the south regions which there exist a regional development agency respectively in accordance with the classification by EU. The agencies conduct such projects as a) energy, b) waterworks, c) environment, d) social infrastructure, and MLPA manages the projects. NBS handles statistical data in accordance with the regional classification to collect and calculate the data¹⁹

MLPA coordinates the budget funds; however, is not responsible for their implementation²⁰.

(3) Ministry of Economy and Commerce (MoEC)

MoEC participates in drawing up the budget relating to electric projects.

The Ministry, which had been the lead agency in drafting the EGPRSP and setting the associated policy agenda, is now the institution responsible for coordinating implementation of the National Development Plan (NDP).

(4) Former Ministry of Industry and Infrastructure (MII)

MII was dissolved and its functions have been followed by MoEC in drawing up the budget and by MCTD in managing the project.

5.1.2.2 Administrative Organizations, Bodies and Companies Regarding Operation, Maintenance and Management of Project

(1) Moldova Social Investment Fund (MSIF)²¹

MSIF is of a public institution and assisted financially by WB, USAID, etc. MSIS started operation of a pilot project at 1999 and experienced 72MMUS\$ of the expenditure for 10 years. The activities by MSIF are legislated with the Act 2002. MSIF has assisted 1,166 villages for the 10 years at an average assistant amount of 54,000US\$. MSIF has provided equipment / machinery and furniture such as tables and beds to public institutions such as kinder gardens and schools. MSIF staffs total 34 persons composed of engineers, social workers and economists.²²

¹⁸ Interview to MLPA on June 30, 2009

¹⁹ Interview to MLPA on June 30, 2009

²⁰ Interview to MLPA on June 30, 2009

²¹ This section explains MSIF because MSIF has requested for Japanese cooperation to the energy-sector project.

²² Interview to MSIF on July 3, 2009

5.1.2.3 Others

(1) National Energy Regulatory Agency (ANRE)

ANRE was established in 1997 in order to regulate electricity, natural gas, and district heating sub-sectors and to promote competition in the energy markets. It oversees the application of energy tariffs such as ones of electricity, heating, etc., and its Tariff Calculation Methodology (TCM) was adopted in June 1999, using a cost-plus system. The agency's responsibilities include: licensing, tariff setting, establishing quality of service standards, consumer protection and promotion of competition and energy efficiency²³

(2) Agency for Energy Efficiency (AEER)

AEER is of a NGO with a goal to contribute to the promotion of strategies and policies in the field of energy efficiency (EE), renewable energy resources (RES) and environment protection.²⁴

5.1.3 Strategy by the Moldovan Side to Develop the Sector

MoEC places the priorities on; (i) modernization, (ii) supply of equipment, (iii) power generation²⁵.

- (1) The Moldovan government has a strategy on the power generation to propel construction of power plants in the north region, Chisinau and the south region on the right bank of the river Dniester.²⁶
- (2) The electric interconnection is strengthened in accordance with the UNCE (Moldova to connect EU) Program to connect with Romania at 400KV and with Ukraine at 330KV.²⁷ Moldova drew up a policy document regarding to the long-term period of 2009 to 2020.²⁸
- (3) Issues to be tackled are as follows: (i) To use alternative energy; (ii) To improve energy efficiencies. A new energy efficiency agency will be established, for which a draft for an energy-efficiency law will be prepared.²⁹

The "Energy Strategy of the Republic of Moldova to the Year 2020" was effected in August 2007, in which the following goals are aimed with use of the data accumulated by 2005 in the electric sector.³⁰

- To strengthen the electricity transmission and distribution networks; and;
- To increase electricity generation at power stations located on the Right Bank of the Nistru river by building mini-CHP stations, using renewable energy sources and upgrading existing capacities.

5.1.4 Effect by the Global Economic Crisis to the Sector

The study team made interviews to the following ministries / agencies hereby to obtain their opinions on the effect:

²³ Interview to ANRE on July 9, 2009

²⁴ AEER: <http://www.managenergy.net/actors/A5134.htm>

²⁵ Interview to MoEC on July 1, 2009

²⁶ Interview to ANRE on July 9, 2009

²⁷ Interview to MoEC on July 1, 2009

²⁸ Interview to MoEC on July 8, 2009

²⁹ Interview to MoEC on July 8, 2009

³⁰ p29, "Energy Strategy of the Republic of Moldova to the Year 2020", MII, 2007年8月

5.1.4.1 MCTD³¹

The ministry should the expenditure by 20%, in which the ministry makes efforts to repay the foreign debt and may stop launching of a new project.

5.1.4.2 MLPA³²

The ministry has a budget reduced by 20% and is requested to cut effectively the expenditures. Moldova does not have the statistical data showing concretely the effect. The regional administrations should tackle with ensuring of the debt repayment. The ministry will stop launching of new projects and make measures to cover the operation costs.

5.1.5 Donors' Strategies to Develop the Sector

Project lists by each aid organizations are summarized in 5.1.6.5.

5.1.5.1 International Aid Organizations

(1) WB³³

There are a number of successes being made in Moldova in protecting the environment. 11 biomass boilers were installed in demonstration sites under the Renewable Energy from Agricultural Waste Project to act as catalysts for the introduction and promotion of the use of agricultural waste.

(2) European Aid Organizations

1) EU³⁴

Reinforced support will be provided in the area of improving energy efficiency and promoting new or renewable energies in particular at local level.³⁵

2) EBRD

To enable Moldova to take full advantage of its new EU neighborhood status, EBRD will give priority to infrastructure projects that promote regional integration and interconnection with neighboring countries. EBRD is also committed to resume its municipal infrastructure lending provided sufficient grant financing can be attracted to address affordability constraints. EBRD will continue to support private infrastructure investments.³⁶

5.1.5.2 Other Country Donors

(1) SIDA

Reduced vulnerability in the field of energy: to make an energy-policy more sustainable which will lead to reduced vulnerability in the field of energy³⁷

³¹ Interview to MCTD on July 2, 2009

³² Interview to MLPA on June 30, 2009

³³ World Bank Launches New Partnership Strategy with Moldova (Jan. 2009)
<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:22050182~pagePK:34370~piPK:34424~theSitePK:4607,00.html>

³⁴ In this report, EU is described as a body not distinguished from EC (European Commission) because the EC has a function of the cabinet function out of EU.

³⁵ ENP's Country Strategy Paper 2007-2013: http://ec.europa.eu/world/enp/pdf/country/enpi_csp_moldova_en.pdf

³⁶ EBRD Local Offices Contacts <http://www.ebrd.com/about/contacts/local.htm>

³⁷ P12, Strategy for Development Cooperation with Moldova,
<http://www.sweden.gov.se/content/1/c6/03/96/44/2303d476.pdf>

5.1.6 Projects Implemented or Planned in the Sector

5.1.6.1 Progress Status of the National Action Plan

The action plans are stipulated as follows in the National Development Strategy (NDS) Report.³⁸

Table 5.1-2 Action Plans Stipulated in the NDS and Progress Status Thereof

NDS No.	Objects Targeted	Projects and Progress Thereof	Ministries or Agencies (Note)	Expected Schedule
Common	As of July 2009, the following projects have been progressed on schedule: ³⁹			
84	Power Plant	Upgrade, provide basic equipment for the joint stock company (JSC) "CET-1" and increase the electrical power generation capacity up to 90 MW ----- The debts structure related to CET-1 is now restructured ⁴⁰ , which would make the CHP-1 to be a bankable project. To enforce the system relating to such energy companies may be big issues to the new cabinet to be born in July 2009. ⁴¹ MoEC considers that the rate of asset to debt should be proper; therefore, to value the asset is an important issue. ⁴²	MII to MoEC	2009 - 2011
85	Power Plant	Upgrade, provide basic equipment for the JSC "CET-North" and increase the electrical power generation capacity up to 100 MW ----- Similarly as NDS84, it is important to monitor setting of the tariff and of asset / debt structure in the heating company.	MII to MoEC	2009 - 2011
87	Power Transmission	Build cross-connection lines with power systems from neighboring Ukraine and Romania in order to improve their cross-connectivity ----- EBRD is conducting the F/S on the construction of interconnection line at a study cost of 500,000EUR(0.7MMUS\$) and will finish it in 2009.	MII to MoEC	2008 - 2011
88	Energy Resources	Build gas main high pressure connection pipe Balti-Ungheni	MII to MoEC	2008 - 2011

Note: The ministry in charge was changed from MII to MoEC.

Note: At present, CEP goes by name of CHP

5.1.6.2 Progress States of the "Indicative Action Plan for Implementation of the Energy Strategy until the Year 2020"⁴³

The following table illustrates the progress states of the action plans which are scheduled to implement in 2009:

³⁸ NDS: Republic of Moldova: Poverty Reduction Strategy Paper—National Development Strategy Report for 2008-2011

³⁹ Interview to MoEC on July 8, 2009

⁴⁰ Refer to description in the 5.1.1.2(2). The project is coped with by WB/SIDA on the Thermocom issue as shown in the Table 5.1-5

⁴¹ Interview to MoEC on July 8, 2009

⁴² Interview to MoEC on July 8, 2009

⁴³ ANNEX I. INDICATIVE ACTION PLAN FOR IMPLEMENTATION OF THE ENERGY STRATEGY UNTIL THE YEAR 2020

Table 5.1-3 Action Plans Related to the Energy Sector and Progress States Thereof

No.	Objects Targeted	Projects and Progress Thereof ⁴⁴	Ministries or Agencies	Fund Sources
1-1.	Power Transmission	OHPL 110kV Falcu-Gotesti ----- Constructed its 9.1km by Moldovaelectrica, and will be finished in 2010.	Moldovaelectrica MII to MoEC	EBRD
1-2.	Power Transmission	OHPL 330 kV (second line) Novodnestrovsc - Balti ----- Its F/S was conducted by the local government. The project cost was estimated at 36MMUS\$ in 2006.	Ditto	Ditto
1-4.	Power Transmission	OHPL 330 kV Balti-Straseni 2 ----- This line is recognized as a future line.	Ditto	IFI, State Contribution, Moldelectrica
1-12.	Power Distribution	Implementation of Energy Project II (electricity component) ----- The project is conducted by Moldovaelectrica. WB makes loan at 28MMUS\$ in total, 17 MMUS\$ of which will be used for development of the distribution and the IT and telecommunication, and 10MMUS\$ of which is used for heating –energy development.	Ditto	World Bank Credit; State funds - Moldelectrica
1-13.	Power Distribution	Development of Electricity Distribution Networks ----- As for setting of the electricity tariff for the distribution company, ANRE has attached the lowest condition to the tariff, which was approved by the congress. MoEC recognized that the maintenance of the distribution network is important in security of the electricity	Authorized Energy Undertakings (DISCOs)	Private Funds (DISCOs)

5.1.6.3 Projects Requested for Japanese Assistance from Moldova

The following tables show the projects which are requested from the Moldovan side for the Japanese Cooperation.

(1) Technical Cooperation to MCTD⁴⁵

1.	[Project Objectives and Expected Benefits] To strengthen the MCTD system to implement a project. It is expected as the benefits that projects planned in Moldova could be properly implemented under the monitoring by MCTD.
2.	[Contents of Cooperation] To dispatch Japanese experts with expertise on implementation of projects, and receive the MCTD experts for their training in Japan.
3.	[Background Information] MCTD should prepare and settle norms and regulations as shown in the Attachment 5.1.1 in the project implementation hereby to make inspections and control with use of the s norms and regulations. Since MCTD has not experience in drawing up the legislation and making inspections and control of projects, MCTD makes requests for the technical cooperation.

⁴⁴ Interview to MoEC on July 8, 2009

⁴⁵ Interview to MCTD on July 2, 2009

4.	[Planned Area to Implement the Project] MCTD in Chisinau
5.	[Facilities or Services Targeted in the Project] Capacity building of the staffs in charge of the project implementation in MCTD
6.	[Expected Project Cost] The cost should be clarified through discussion with MCTD targeting at infrastructure projects of energy or waterworks in the rural area.
7.	[Expected Schedule to Implement the Project] The schedule should be clarified similarly to the above.
8.	[C/P and Organization to Implement the Project] Expected C/P: Investments, Programs and European Integration Division of MCTD. MCTD may be unfamiliar with the foreign cooperation for projects.
9.	[Relation to the Environmental Impact Analysis] To conduct properly the Environmental Impact Analysis through smooth implementation of projects by MCTD.
10.	[References] Attachment 5.1.1 and 5.1.2

The study team obtained the list of projects requesting for Japanese cooperation by MCTD as shown in the Attachment 5.1.2.

(2) Technical / Grant Assistance to MSIF⁴⁶

1.	[Project Objectives and Expected Benefits] To provide rural public facilities with heating using the renewable energy. It is expected as the benefits to secure the energy resources not depending on the natural gas.
2.	[Contents of Cooperation] (a) To conduct F/S; (b) To purchase, install and construct the boilers, etc.
3.	[Background Information] In Moldova the energy depends mostly on importing of the natural gas. The government recommends to lay gas pipelines in the rural area; however, the gas supply has been controlled by Gazprom of a Russian company. It is important to Moldova to utilize a renewable energy and to develop the biomass technology originated from sunflowers and straws. EC recommends to use solar energy. MSIF makes a proposal to provide the public facilities such rural as schools and hospitals with heating utilizing of the solar light and the biomass .
4.	[Planned Area to Implement the Project] MSIF would select 30 and more public institutions such as schools and kindergartens. In Attachment 5.1.3 (TOR), the institutions are composed of 16 schools, 16 kindergartens, and 6 additional ones. On the other hands, MSIF explained at the interview that the project has an objective to provide 32 district-level hospitals with hot water. Since a hospital varies in number of beds from 60 to 200 per hospital, MSIF estimates the project costs from 300,000—500,000US\$ (Note: in the case of a hospital project, the institution targeted is clarified as the district-level hospital, and the project would have a larger impact. The criteria to select the project and the selection way should be studied and discussed with MSIF.)
5.	[Facilities or Services Targeted in the Project] Public facilities such as schools and hospitals, and procurement, installation and construction of boilers there

⁴⁶ Interview to MSIF on July 3, 2009

6.	[Expected Project Cost] (a) To conduct F/S: 500,000 US\$, (b) To implement the projects: 9.5MM US\$ ⁴⁷ . The project would use hot water as the heating medium. It should be confirmed at a pilot plant and site how to heat the water. The project costs may depend on such method.
7.	[Expected Schedule to Implement the Project] Not planned.
8.	[C/P and Organization to Implement the Project] MSIF has many successful experience with grant funds from United Kingdom, Netherlands, Sweden, and Japan and capability to cope with the foreign cooperation. MSIF would select the projects and construct the facilities thereof which followed the rural community would operate and maintain the projects.
9.	[Relation to the Environmental Impact Analysis] Plus evaluation with use of solar energy and biomass of a renewable energy.
10.	[References] The letter from MSIF requesting for Japanese cooperation (Refer to Attachment 5.1.3)

(3) Technical Cooperation to MLPA⁴⁸

Since MLPA was established in 2006 so the ministry has not much experience in its works, the ministry is requesting for Japanese cooperation to make capacity building in MLPA aiming at development of experience, knowledge and information on decentralization. It is being now discussed in Moldova on how financing and funds should be made for the rural area⁴⁹.

5.1.6.4 Cooperation Made by Japan

The following cooperation was made in the electric sector for Moldova⁵⁰.

Table 5.1-4 Japanese Cooperation Experienced in the Electric Sector of Moldova

Classification	Projects and contents	Amounts Provided	Expected Schedule
Grant Assistance for Grass-roots Human Security Projects (KUSANONE) scheme	Biomass Heating System for the Kindergarten and School in Hirtopul-mare Village	88,450 US\$	FY2008
	To provide two Biomass Heating boilers to the Kindergarten and School.		

⁴⁷ MSIF's mail addressed to the study team, dated July 6, 2009.

⁴⁸ Interview to MLPA on June 30, 2009

⁴⁹ Requests made by MLPA belong to the different sector from those handled by this study, and its contents have not been clarified to us; therefore the project is not listed in a table form such as 1) or 2).

⁵⁰ Japanese Embassy located in Ukraine prepared the document of English version in March 2009.

5.1.6.5 Projects by the Other Country Donors

Table 5.1-5 Projects by the Other-country Donors Planned or Implemented

Objects Targeted	Donors	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
Transmission, Distribution and Heating	WB SIDA	Energy II Project ⁵¹ ----- To make rehabilitation of infrastructure for electricity transmission and distribution, assistance on Thermocom, and improvement of the energy efficiency.	MoEC	2006 - 2009
Distribution Companies	EBRD	Post-Privatization Power Distribution Loan ⁵² ----- To finance a loan to three power distribution companies owned by Union Fenosa Internacional	MoEC	From Nov. 2000
Distribution Companies	EBRD	Moldova Power Distribution Equity Investment ⁵³ ----- To make a minority equity investment alongside Union Fenosa Internacional of Spain (UFISA), a strategic investor, in three power distribution companies	MoEC	From March 2000
Public Facilities	SIDA	Energy Extension ⁵⁴ ----- To increase the reliability and efficiency of the heat supply in selected public buildings.	MoEC	2007 - 2008

5.1.6.6 Other Project (New Power Plant Project by Czech's J&T Group located in Ungheni)

This is the sole project to construct a power generation plant in Moldova and of a private project. An agreement will be concluded between the Moldovan government and J&T in order to clarify the project objectives. After the conclusion, the project will be authorized with a government decree addressing to the project. The project should pass the environmental impact analysis (EIA) at the design phase. Since the project uses coal as a fuel, it may not so easy to get the EIA approval.⁵⁵

Considering that coal will be used as a fuel in the project, such use may be doubtful in the Moldovan profits in the environmental view.⁵⁶

5.1.7 Moldovan Capability to Cope with the Foreign Cooperation

- (1) MCTD and MLPA of a central ministries relating to implementation of projects are short in man power and are requesting for the cooperation for their capacity building.
- (2) MoEC has a function to draw up project budgets; however, MoEC has not much experience in the electric sector.
- (3) MSIF has many successful experience with grant funds from United Kingdom, Netherlands, Sweden, and Japan⁵⁷ and capability to cope with the foreign cooperation.

⁵¹ MEPIU: <http://www.mepiu.moldnet.md/>

⁵² Project Summary Document : <http://www.ebrd.com/projects/psd/psd2000/13220.htm>

⁵³ Project Summary Document : <http://www.ebrd.com/projects/psd/psd2000/6206.htm>

⁵⁴ List of the Projects Financed by the Swedish Government / SIDA in Moldova, June 2009

⁵⁵ Interview to MoEC on July 1, 2009

⁵⁶ Interview to PIU of WB on July 1, 2009

⁵⁷ Funds are provided partly from Japan Social Development Fund (JSDF) (Interview to MSIF on July 3.)

Attachment 5.1.1 List of laws which needs to be created or require amendments⁵⁸

1. Law on execution of construction works authorization
2. Law on Housing
3. Law on settlements' sanitation
4. Law on the quality of constructions
5. Law amending the Law no. 173-XIII of 06.07.1994 regarding the publication and entry into force of official acts
6. Law on Social House of Builders
7. Law amending the road law
8. Law on design
9. Law on the execution of works in construction sector
10. Law on the building reception
11. Law on amending and supplementing the law on urban planning and town planning
12. Law amending the Law no. 721-XIII of 02.02.1996 on the quality of constructions
13. Strategy on construction sector building
14. National program of reconstruction and modernization of the hostels of higher and medium education institutions for the years 2009-2013
15. Program on construction, upgrading and rehabilitation of roads in 2009
16. The maintenance of roads program
17. The investment program or the development of building materials industry for the years 2010-2014 within ministry
18. National Program "Rural Housing"
19. The reconstruction, rehabilitation and maintenance of existing housing stock

Note: For most of the laws there are existing drafts

⁵⁸ Refer to 5.1.2.1(1) and 5.1.6.3 (1).

Attachment 5.1.2 : Projects for foreign finance/ investments

#	Project title	Project goal	Target group	Estimated budget (euro)	Duration	Co-finance
1.	Harmonize existing legislative framework to EU requirements	Improve and develop the legal framework in the areas of building construction, architecture and urban planning.	Central and local public administration, economic agents	200 000	2009-2011	Yes/ own sources
2.	Construction of processing wastes plant in Bălți and upgrade the existing waste collection	Improving ecological situation in the region, development of sanitation service.	Residents of the city and residents of adjacent territories	14 mln.	2009-2011	N/A
3.	Financial assistance for strengthening the capacity of the associations of home owners	Provide information management assistance in issues linked to housing stock, maintenance, the rights of consumers of communal services and other information necessary for the proper functioning of associations	The owners of privatized housing, the housing fund managers	10 000	2009-2010	N/A
4	Promoting alternative energy and energy efficiency and conservation of buildings	Improving energy efficiency in housing blocks	Residents of the housing blocks	7,5 mln.	2009-2015	N/A- pilot project running
5	Rehabilitation of 12 bridges located on roads auto E583, E577, E58, E581.	Increasing sustainability of exploitation of bridges	Internal and external auto transporters	30 mln.	2009-	N/A/ in discussion for Cross border Cooperation EC
6	Reform and innovate technical regulations systems in building	Harmonization of national technical regulations for construction standards, methodology through reforming technical construction regulatory framework	The construction sector design organizations, contractors, construction beneficiaries	100 000	2009-2011	Yes/ EBRD

7	Production glass and mineral wool and thermo isolating materials in the central part of the republic with a capacity of 100 000 m ³ / year	Develop production of thermo isolating materials and articles based on mineral wool, perlite, liquid glass, quartz Sands, etc.	Economic agents Construction companies		2009-2011	N/A
8	Production of light elements for the assembly of individual building, pyramid roofs, and prefabricated houses and minifarms in the center and south of the country, with a capacity of 200 000 m ² / year	Development of new buildings and individual houses and other small construction	Economic agents Construction companies		2009-2011	N/A
9	Funding programs of protection and safety of the fund built and seismic risk reduction.	Reduct and mitigate natural disasters risks	Society - people who will live in houses in question.		N/A	N/A

5.2 Agriculture / Irrigation Sector

5.2.1 Outlines of the Sector

5.2.1.1 Composition and Outlines of the Sector

(1) Agriculture Sector

The GDP share rate of the agriculture sector has decreased continuously to 9% in 2008, which may be resulted from it that the sector has lower productivity than the other sectors and that number of the farmers is reducing due to the emigration, in other words, the 770 thousands population of the sector in 2000 reduced to 390 thousands in 2008.¹

Agriculture output decreased a bit under sharp decrease of labor forces, which means agriculture mechanization has advanced in agriculture corporations. Agriculture labor forces decreased to half only in 8 years, which is correspondent to 20-30% empty houses in villages.² In 2000s emigration has been popular due to big wage difference. There are many short period emigrants while farmers have idle time during October to next March, but they will come back in busy season of April - September. Further wage difference will be improved by increase of agriculture incomes owing to high value agriculture. As a result, farmers' emigrants and agriculture labor forces will slow down in future.

Due to import increase supported by the remittance from the emigration, the export/import ratio dropped to 33% in 2008 from 61% in 2000. In such circumstances, the agriculture export is dominant accounting for 45% including agro-based industries such as food oil, wine, tobacco, hide, pulp and furniture.³ Agriculture related services such as transport, commerce etc. as well as food processing are growing. Agriculture shall be pondered from the view point of multiple relations as well as long-term prospects. MIEPO and CCIRM place the agriculture products/ processed food and wine at the core products for importance of Moldova's economic development. Agriculture is still an important sector in Moldova.

Action plans related to the agriculture are classified as follows in NDS.

Table 5.2-1 Action Plans of Agriculture / Irrigation in NDS

NDS No.	Categories
129~130	Improvement of agriculture land, improvement of soil
131	Improvement of irrigation
132~134	Agriculture mechanization, modernization of markets, strengthening small/medium agriculture processing factories
135~138	Animal husbandry promotion, fitting slaughter-house and related regulations to EU standard
139~140	Wine laboratory, competitiveness of Moldova-vin
141~143	Agriculture laboratories, vocational education for agriculture, efficiency of public fund

¹ NGS:http://www.statistica.md/public/files/serii_de_timp_forta_de_munca/populatie_ocupata/infraanuale/Distri_pop_occup_sector_sexe_trim.xls

² Interviews to MoEC, MAFI and Lencauti village mayor.

³ NGS:http://www.statistica.md/public/files/serii_de_timp/comert_exterior/serii?anuale/eng/4_eng.xls

(2) Agriculture Products and Cultivation Land in Moldova

Moldova has a mild climate, and is a hilly country without mountainous regions. Three quarters (3/4) of the land is used for cultivation. Fertile black soil called "Chernozem" is spread at a thickness of one to three meters in the central and southern areas. Generally speaking ordinary agriculture land has 0.3m thickness. Temperature is comparatively high, and rainfall amount is comparatively low at 300-350mm/annual, which gives benefits to grape cultivation. There are many wineries in this area; also the climate is fit to sunflowers, fruits, vegetables, grains, and husbandry. In the north, beats, tobacco, walnuts, flowers, sunflowers are suitable owing to the cooler climate while more rains of 400-450mm per year.

Cultivation acreage has the following shares: cereals: 67%, industrial products: 23%, grape yard: 9%, and 5% each for vegetables, feeds, fruits. These land usage has not changed much from the past. As for number of husbandries, poultry and horses have not changed, but cattle, pigs and sheep/goats are decreasing.

Table 5.2-2 Sown Area by Agriculture Crops

unit : thousand ha

	Total	Sown area	cereal	Industrial crops	Vegetables	forage	fruits	vineyards
2005	1,784.0	1,540.3	1034.7	358.0	79.8	67.8	103.5	140.2
2006	1,725.9	1,483.4	917.6	400.7	87.6	77.5	102.1	140.4
2007	1,738.7	1,499.2	955.4	368.2	81.5	94.1	101.2	138.3
2008	1,736.0	1,500.3	1005.8	342.1	81.2	71.1	99.0	136.7

(Note1) Cereals are composed of wheat, barley and maize. Industrial crops are sugar beet, sunflowers, soy and tobacco.

(Note 2) Vegetables are of potatoes, vegetable, melons and gourds.

Sources: NBS "Moldova in Figures 2009"

Table 5.2-3 Husbandry

unit : thousand

	Cattle	Pigs	Sheep / goats	Horse	Poultry
2005	311	461	938	69	22,235
2006	299	532	947	67	22,531
2007	232	299	853	58	17,157
2008	218	284	866	56	18,328

Source: NBS "Moldova in Figures 2009"

(3) Productivities in Agriculture

Generally speaking, individual farmers have higher land productivity with labor intensiveness in smaller land while agricultural corporations⁴ have higher labor productivity with mechanized agriculture in wider lands. Individual farmers are focusing at higher value products such as milk, meats, fruits and vegetables, on the other hand, agricultural incorporations are promoting the agriculture requiring for broad land and mechanization to produce sugar beet, wheat, sunflowers etc. rather than for labors⁵.

⁴ There are 300-400 agricultural corporations besides agriculture cooperatives.

⁵ Sources: Survey report on Assistance for Increase of Food Production (2KR) in 2006, JICA

(4) Wine

Ninety five percents (95%) of wine is exported and wine is a main export item in Moldova where there exist famous vineyards, 200 wineries, 60 cognac producers, and 14 vodka companies. The land area of Moldovan vineyards is 185 thousand ha, more than 6 times of 30 thousand ha of Georgia vineyard area; however, which is only one tenth of Italy. Russia's embargo during 2006-07 was solved, but US \$ 250 million remained unpaid due to lazy importers. Consequently Moldovan wineries fell in money shortage so that the government announced urgent credit at an amount of 500MMMDL (45MMUS\$) with interest rate of 13%. Vineyards are improved through transplanting of new seeds, use of drip-water supply etc⁶.

5.2.1.2 Issues to Be Solved in the Sector

(1) Outlines of the Issues

Owing to fertile land and lower wage, investment to agriculture has been comparatively lower, which is beneficial for exporting of agricultural products and the processed foods at lower prices. MAFI has great expectation on agriculture for the Moldovan development and recognizes that following problems should be solved while the agriculture has potentiality⁷.

- Limitation of market access opportunities
- Underdevelopment of domestic market for products and agricultural machinery and tools
- Underdevelopment of financial services
- Partnership shortage between production farmers and processors of sustainable buyers.
- Non development of standardization and certification system
- Higher transport cost
- Lack of bargaining power or entrepreneur's minds

(2) Instability of Crop Production

Wheat and barley reduced production extremely in 2003 due to cold weather as well as smaller area of cultivation. Summer draught in 2007 hit cereal, vegetables, fruits and husbandry also which means that the agriculture is still under big influence of the weather condition. In stable demand of wheat owing to a small amount of the foreign trade of wheat, wheat harvest per hectare is sluggish due to fertilizer-price increase and insufficient financing to buy it. Decrepit machine and irrigation facilities cause instability of production volume due to no renewal since former Soviet Union era. Though only maize increases production without drop like wheat, however, maize should import good seeds from the neighboring countries. Main crops have been short chronically⁸.

(3) Irrigation

Irrigation has following problems:

⁶ Interview to Moldova-vin on June 30. Drip water supply is of underground water supply for small farms, but not of water supply by sprinklers from the river.

⁷ Sources: Survey report on Assistance for Increase of Food Production (2KR) in 2006, JICA

⁸ Sources: Survey report on Assistance for Increase of Food Production (2KR) in 2006, JICA

1) Shortage of Irrigated Land

After the independence, 100 thousand ha has been irrigated (besides 280 thousand ha during Soviet era). Irrigation is located at the center of the agricultural policy, and there is a plan to expand irrigation another 400 thousand ha by 2020. The area planned by MCC's aid is of 20 thousand ha only; therefore, even with the aid, the rate of irrigation will be still smaller⁹. Existing irrigation number totals 4,000, half of which were built artificially.

2) Water Shortage in Irrigation Ponds

There are plenty of water in east riversides of the Dniester River and west of the Prut River. Ponds can reserve water by digging a pond. However the central area is restricted to use agriculture land due to water shortage in the dry season.

3) Pumping-up Equipment and Hose between Irrigation Pond and Agriculture Land

The government is responsible for irrigation up to reservoir, but water transport from reservoir to agriculture land is a matter of individual farmers. Reservoir usually lies in lowland, farmers have to pump up water to the land, and sometimes need water release with sprinkler in the case of large land. The costs of equipment, hose and fuel will press the management.

(4) Privatization of Farm Land

Ninety-seven percents (97%) of farm lands under the privatization plan has been privatized by corporations or independent farmers (300 thousand households). But donors such as WB and GTZ are considering reintegration of land¹⁰.

(5) Outgrowing to Higher-value Agriculture

WB compiled a report that Moldova shall promote labor intensive agriculture of vegetables, fruits and husbandry, because it cannot compete grain to Ukraine due to scale of flat land and bigger agriculture equipment. According to this report, MCC will promote rehabilitation projects of irrigation. As vegetables, fruits and meat are easy to rot, collection, shipment and transport are important. But there are no such facilities, and training for farmers is necessary.

(6) Organic Plantation and Husbandry Outside Village

EBRD expressed that Moldovan agriculture is vulnerable due to no production capacity of organic fertilizer, pesticide, additives, veterinary medicine and fuel, in case of fluctuation of exchange rate or regulation on import/export. MAFI has realized rich harvest by chemical fertilizer, but now it encourages farmers to use organic fertilizer owing to more demand of organic plantation in EU. As animal waste contaminates drinking water, MAFI considers bringing up small-scaled breeders with 100-200 heads outside village¹¹.

(7) Labor Shortage

The wage of US\$ 150/month in rural area is lower than US\$ 300-500/ month in capital and lowers than US\$ 1,000 in agriculture or construction work in Italy and Spain, or construction works in Russia. As the results, emigrants are increased, including family. Twenty to thirty percents (20-30%)¹² of farmers houses are vacant.

⁹ Interview to MAFI on July 6

¹⁰ Interview to MAFI on July 3

¹¹ Interview to MAFI on July 6

¹² Interview to MoEC, MAFI and Lencauti village mayor.

5.2.2 Administrative Organizations, Bodies and Companies related to the Sector in Moldova

5.2.2.1 Administrative Organizations, Bodies and Companies Regarding Plan, Construction and Completion of Project

(1) Ministry of Agriculture and Food Industry (MAFI)

MAFI is responsible for agriculture, soil management, irrigation, production and incomes in agriculture and promotion of food processing, planning, design and implementation of development plan. By the administration reform in 2007, number of the staffs was reduced half to 80 persons from 160 while FAO office is still there. A MAFI's officer is working for FAO's representative. Though the importance of agriculture does not change, it needs capacity building because MAFI handles large number in the action plans of NDS.

MAFI used to be the most important ministry. Its building is 17 stories, highest in Chisinau, neighboring the presidential office and the parliament building which used to be communist party building.

Due to delayed renovation work of presidential office and parliament damaged by stone throwing at protesting demonstration on election results in April 2009, MAFI provided temporally the parliament staffs with office space.

(2) 2KR

2KR is a part of MAFI administration, which has sold agriculture equipment by installment, and realized 8,800 sales contracts by revolving funds with Japanese assistance. The office is small with 5-6 officers. Two buildings of 2KR are gathering places to provincial farmers for their short-term training, accommodation, parking, restaurant etc¹³.

2KR has a good reputation on great contribution to great spread of agricultural equipment among government and donors. WB, UNDP, SIDA, DFID and KfW are praising the projects as a successful model to be followed. Mr. V.Bumakov, technical adviser of 2KR is so famous in MAFI. Dr. Ion Perju, deputy minister of MAFI trusts him saying that his opinions are credible¹⁴.

5.2.2.2 Administrative Organizations, Bodies and Companies Regarding Operation, Maintenance and Management of Project

(1) Moldova-vin

Moldova-vin is responsible for export inspection, research etc. It was transferred to Presidential office from MAFI at the 2007 administration reform, though the office is located at the MAFI building.

(2) Apele Moldovei

The Agency has duties to develop irrigation policy and maintain the major irrigation and drainage pumping facilities as well as the main pipelines and reservoirs up to the on-farm distribution networks.¹⁵

¹³ Interview to 2KR on June 28

¹⁴ Interview to MAFI on July 6

¹⁵ P27, RISP-II, Additional Financing: http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf

The Agency has a separate department for irrigation management. The Agency has under its subordination several inter-rayon Irrigation Districts (AIPRE) and a Training Center. The AIPREs mostly deals with various water infrastructure construction, operation and maintenance (water reservoirs, dams, dikes, flood protection facilities, irrigation/drainage schemes), and considered as the operational sub-divisions of Apele Moldovei.¹⁶

MCC proposed that ownership of irrigation will be Apele Moldovei, that design and construction will be made by consultants, and that management of irrigation shall be made by rural users composed of chief of village, villagers, NGO, and persons concerned, and the government agreed to this.

(3) Aqua Project Institute (API)

API is a state-owned enterprise for design and management of project implementation under Apele Moldovei. API's scope covers tendering, but the construction will be made by a construction company¹⁷.

API has a strategy of irrigation network, and submits their report to the presidential office through Apele Moldovei¹⁸. Apele Moldovei considers that API's specialty lies in irrigation and water flood measures¹⁹.

5.2.3 Strategy by the Moldovan Side to Develop the Sector

Note: Project lists by each aid organizations are summarized in 5.2.6.5.

(1) Agriculture Strategy

Former "Agriculture Strategy 2006-2015 (17 October 2006 Decision 1199)" was replaced by "Agro-Industrial Complex Sustainable Development 2008-2020" in March 2008, and this is prevailed. Its objectives are as follows²⁰.

- 1) Modernization of agrarian sector
- 2) Scientific reasoning
- 3) Harness of value chain national composition
- 4) Producers' cooperation and integration with processing industry and trade field
- 5) Energy alternative sources' production
- 6) Producers' access to financial sources
- 7) Lifelong professional training of all economic units
- 8) Harmonization of legislative framework with EU standard
- 9) Inspection and certification so as to induce exported products' quality increase
- 10) Promotion of ecologic agro-food products
- 11) Evaluation of implementation risks
- 12) M&E of outcomes

The country-wide irrigation Master Plan is also under finalization and will be presented to the Government by the end of 2008. Both documents are developed by the Aqua Project Institute. The irrigation master plan would stipulate policy, management and technical options for further development of the irrigation sector in Moldova, providing the arguments

¹⁶ P27, RISP-II, Additional Financing: http://www-wds.worldbank.org/external/default/WDSCContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf

¹⁷ Interview to Aqua Project Institute on July 6

¹⁸ Interview to Aqua Project Institute on July 6

¹⁹ Interview to Apele Moldovei on July 7

²⁰ p20, RISP-II, Additional Financing: http://www-wds.worldbank.org/external/default/WDSCContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf

and recommendations to the Government how to deal with modern and sustainable irrigation in the mid and long-term perspectives.²¹

(2) Project Coming Next 2KR

In agriculture sector, Japanese 2KR is so famous among donors and MAFI. MAFI is expecting next Japanese project after 2KR.

(3) Higher Value Agriculture

MAFI intends to realize increase of agriculture incomes and expansion of farming employees through the higher-value agriculture with labor-intensive vegetables, fruits and meat rather than lower-value cereal according to the WB's report. These are expressed at 1) and 3) in the above-mentioned (1).

It needs irrigation and improvement of post harvest, because cultivation transformation of cereal to vegetables requires more water supply and prevention of quality falloff.

5.2.4 Effect by the Global Economic Crisis

(1) Decayed Stocks by Export Reduction

Fruits, vegetables and meat decreased 20-30% in the exports besides while they decreased some in the domestic consumption, which caused stockpiling and decay consequently to burden farmers a considerable loss.

(2) Repayment Problems by the Global Economic Crisis

Due to increase of the interest rate beyond 20%, and shortage of working capital, farmers cannot repay the loan on due date.

(3) Unemployment in Rural Area

Return of the emigrants is slowing after 1st quarter 2009. Basically labor is in shortage in rural area, but excessive labors and unemployment problems appear, temporarily.

5.2.5 Donors' Strategies to Develop the Sector

Because the agriculture is the principal sector in Moldova, many donors are deploying following strategies:

- 1) Survey, analysis and proposals on agriculture policy, market information, biomass, bird influenza, etc.
- 2) Provision of equipment and books for test and analysis
- 3) Overseas training
- 4) Finance to farmers and wine companies
- 5) Measures against the draught in 2007

Further MCC will promote big projects since autumn 2009 to make irrigation construction, administration reform, refinance to farmers, etc. KfW sets the agriculture as one of the three important strategies. KfW would make refinance for SME, regional infrastructure, and EU standardization.

²¹ http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf

FAO, an international cooperation body in the field of agriculture, proposed the following measures for the long-term as the conclusion in the "Special Report FAO/WFP Crop and Food Supply Assessment Mission to Moldova (2007)":²²

- Sustainable strategy for the agricultural sector (Promotion of technology and irrigation for high value add agriculture)
- Agriculture finance (Risk analysis, management analysis of agriculture companies and training of small farmers)
- Agricultural insurance (Improvement of financial access by risk reduction of damage/disaster)

5.2.6 Projects Implemented or Planned in the Sector

5.2.6.1 Progress Status of the National Action Plan

The action plans in NDS are listed as follows.²³ The 14 items determined in 2008 are progressing on schedule as of July 2009.

Table 5.2-4 Action Plans Stipulated in the NDS and Progress Status Thereof

NDS No.	Objects Targeted	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
129	Agriculture land	Improve the management of agriculture lands Administration and methods (Budget in 2009: 5 MMMDL) (0.45MMUS\$)	MAFI	2008 - 2011
130		Create and implement an integral system to augment and reproduce soil fertility Integration for soil fertility (Budget in 2009: : 0.6 MMMDL (0.054MMUS\$))	MAFI	2009 - 2011
131		Renovate irrigation systems MCC will set 400 pump stations and pipelines with 1,100km length (construction will be finalized in September 2009). Water Users Association will manage the irrigation after construction. These will contribute to export ²⁴ . (Budget in 2009: : 109 MMMDL (9.81 MMUS\$))	Agency "Apele Moldovei"	2008 - 2011
132	Mechanization	Develop a system to provide mechanical services Agriculture services for machinery (Budget in 2009: : 20MMMDL (1.8MMUS\$))	MAFI	ongoing
133	Agriculture market	Develop marketing infrastructure in agriculture Improvement of agriculture markets (Budget in 2009: : 31 MMMDL (2.8MMUS\$))	MAFI	ongoing
134	SMEs strengthening	Strengthen capacity of small-size and medium-size enterprises from rural areas to process farming products with high added value (Budget in 2009: : 7MMMDL (0.6MMUS\$)) Capacity building on SMEs in rural area	MAFI	2008 - 2011

²² <http://www.fao.org/docrep/010/ah871e/ah871e00.htm#9>

²³ P56-60, NDS: Republic of Moldova: Poverty Reduction Strategy Paper-National Development Strategy Report for 2008-2011

²⁴ Apele Moldovei (Interview, July 7)

135	Husbandry	Facilitate the creation of small-size and medium-size farms for animal husbandry in villages outside community settlements [Budget in 2009: : 34 MMMDL (3.0MMUS\$)]	MAFI	2009 - 2011
136		Facilitate the creation of a network of slaughter houses in line with EU standards Network on slaughter house to fit to EU standards [(Budget in 2009: : 70 MMMDL (6.3MMUS\$))		
137	Husbandry	Keep up and improve the genetic pool for animal breeding Gene bank for animals breeding [Budget in 2009: : 27MMMDL (2.43MMUS\$)]	MAFI	ongoing
138		Create veterinary legislative and executive frameworks in line with EU standards Veterinary legal system to fit to EU standards EU [Budget in 2009: : 22 MMMDL (2.0MMUS\$)]		
139	Wine	Build capacity of national laboratory and assure the quality of services rendered to beneficiaries by reorganizing and equipping it in line with EU norms; Wine Project Establishment of wine laboratory to fit to EU standard [Budget in 2009: : 2 MMMDL(0.18MMUS\$)]	MAFI	2008 - 2011
140		Improve quality and competitiveness of vine and wine products, by Agro-industrial Agency "Moldova-Vin" Wine improvement on quality and competitiveness by Moldova-Vin [Budget in 2009: : 94 MMMDL (8.5MMUS\$)]		
141	Laboratories /education for agriculture	Strengthen capacity and scale up rural extension network Strengthening rural laboratories [Budget in 2009: : 58 MMMDL (5.22MMUS\$)]	MAFI	ongoing
142		Update higher and professional secondary education in agriculture Modernization of agriculture education [Budget in 2009: : 114 MMMDL (10.3MMUS\$)]		
143		Improve efficiency of use of public funds for agriculture development Efficient agriculture development funds [Budget in 2009: : 66 MMMDL (5.9MMUS\$)]		

5.2.6.2 Change of Long-term Agriculture Policy

"Agriculture Sustainable Development Strategy 2006-2015 (17 October 2006 Decision 1199)" was replaced in March 2008 by "Agro-Industrial Complex Sustainable Development 2008-2020". Refer to 5.2.3.

5.2.6.3 Projects Requested to Japanese Assistance from Moldova

Requested projects are summarized in the following table.

(1) Technical Assistance to MAFI

1.	[Project Objectives and Expected Benefits] With use of Japanese experience, MAFI will promote SMEs, cold chain for higher-valued agriculture, organic agriculture, cattle breeding outside village for environment.
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2.	[Contents of Cooperation] JICA will send an expert for equipment training for packing house operation, for small and medium breeder's outsidess villages, and will receive MAFI officials for the training in Japan.
3.	[Background Information] Higher-valued agriculture is of a trend concept in the agricultural policy. MCC will implement 10 irrigation projects since autumn 2009 in order to use more water for vegetables than wheat. Other donors understand the necessity of the cold chain, but are hesitating due to insufficient money. MAFI is expecting the Yen Loan project described afterwards.
4.	[Planned Area to Implement the Project] Refrigerators will be allocated one in each local administration (at 33 locations). The experts will stay in Chisinau and will be dispatched when needed.
5.	[Facilities or Services Targeted in the Project] Users in the villages will formulate management system of the packing house
6.	[Expected Project Cost] Explained later at the Yen Loan project.
7.	[Expected Schedule to Implement the Project] Scheduled since the halfway of the Yen Loan project
8.	[C/P and Organization to Implement the Project] MAFI, the office would be temporally located at office at 2KR.
9.	[Relation to the Environmental Impact Assessment] Cattle may contaminate drinking water in the village. MAFI tries to bring up 100-200 heads breeders outsidess the village, but the implementation is not sufficient. MAFI understands the bad impacts of chemical fertilizer, and tries to export organic agricultural products to EU.
10.	[References] Refer to the Yen Loan project

The Japanese expert dispatched to MAFI will contribute to efficiency of the Japanese project through technology spread of Japanese experience including agriculture cooperatives. It is pragmatic that the C/P would be of MAFI staffs and will be located at the office of 2KR owing good implementation capability in the initial stage, but the office location may be studied to move to the other departments in future.

(2) Grant Aid 1 (biomass)

1.	[Project Objectives and Expected Benefits] Due to instability of gas supply fro Russia, agriculture residues (estimated at yearly 600 tons of sunflowers, straws, beet etc.) will be used for renewable energy for heating in winter at primary schools, hospitals, communities. Ashes will be used as fertilizer.
2.	[Contents of Cooperation] 1) To conduct F/S; 2) To make procurement, installation and construction of boiler, bailer (binding machine), pipes etc.
3.	[Background Information] Moldovan energy depends on imported natural gas and Moldova promotes installation of gas pipeline in villages, but this gas supply by Russian Gazprom is instable. It is necessary for Moldova to use biomass as alternative energy with sunflowers, straws, beet etc. WEF already made the implementation here. The energy department of MoEC, MENR, and MSIF show strong interests In the project. EU also recommends solar energy. MSIF proposes combination of solar energy and biomass considering the winter season of weak sun light.
4.	[Planned Area to Implement the Project] 100 villages/communities
5.	[Facilities or Services Targeted in the Project] Procurement, installation and construction of equipment such as boilers etc at schools, hospitals, public facilities
6.	[Expected Project Cost] Project cost is estimated at 5MMUS\$ under conditions of US\$ 50 thousand / village and 100 villages/ communities.
7.	[Expected Schedule to Implement the Project] Not determined

8.	[C/P and Organization to Implement the Project] MAIA / MSIF / MENR
9.	[Relation to the Environmental Impact Assessment] Positive evaluation for use of biomass as renewal energy. Ashes will be circulated as fertilizer.
10.	[References] Document copy which sent to Japanese Embassy in Ukraine.

In the biomass project, it is realistic that MAFI will be the C/P up to completion of the project. MAFI can collect and process the raw materials. As the community is related to operation, maintenance and money collection after construction, MSIF or MENR will have interests in the project. During construction period, it will take much time because there is no office of JICA in Moldova. There is another way to set up a committee in the community, instead of the existing administration. Donors intend to establish management entities with villagers, not using the existing authorities, but there is uncertainty on whether sustainability of management or reporting to the government can be expected. It will be important whether the C/P will be of a single ministry or plural ministries in the initial stage of the project implementation. From the view point of preparation and implementation capability, MAFI is suitable as the C/P while the community is necessary in the stage of facility usage. As similar projects are proposed at MENR, it is necessary to discuss selection standards or methods with the promoters of the projects.

(3) Grant Aid 2 (Solar energy for pumping-up of irrigation water)

1.	[Project Objectives and Expected Benefits] Higher-valued agriculture will be realized by irrigation down stream in the central area through pumping-up water from the Dniestr River in the north hereby to flow it into small river.
2.	[Contents of Cooperation] 1) To conduct F/S, 2) To implement the project
3.	[Background Information] In Soviet era, there used to be a big water supply project, which pumping water up by 300kw and 70kw to reservoir for sugar factory located at 150m higher from the Dniestr River at Lencauti village west to Otaci city, and waste water was released to the Cubolta River 2 km downside. This water system used for 30 years since 1965 up to 1995, but this facilities and factories were abandoned since then, but remaining head gate facilities, iron pipes (diameter 30cm and 50cm) and reservoirs are remained and will be useful. Along the sides of the Dniestr River in the east and the Prut River in the west, there is plenty of water and irrigation has been arranged here. However the central area is abandoned from water supply due to water shortage. This project is of a epoch-making idea to revive the old facilities by solar energy and to use water for irrigation. There is broad area to set solar panels, but are two problems to be confirmed: The first is whether it is enough for solar energy to pump up water to 150m high, the second is how the remained facilities are useful in the project.
4.	[Planned Area to Implement the Project] Along the Raut River sides in the central area (Pumped up water flows upstream of the Cubolta River, and this Cubolta River joins other two rivers at the east of Balti into the Raut River, and finalized to join the Dniestr River again at Ustia.)
5.	[Facilities or Services Targeted in the Project] Procurement of equipment/ installation/ construction
6.	[Expected Project Cost] 1) F/S, 2) Equipment (solar panels, pump, battery, water pipes), 3) Construction : US\$ 5.8 million (DD will be necessary to clarify the cost amount. The Moldovan side considers that the existing facilities can be used. Nevertheless the experienced fact of pumping up water at the sugar factory is valuable.)
7.	[Expected Schedule to Implement the Project] Not determined
8.	[C/P and Organization to Implement the Project] MAFI

9.	[Relation to the Environmental Impact Assessment] Plus evaluation owing to usage of solar renewal energy
10.	[Reference] Document copy which was sent to Japanese Embassy in Ukraine.

The solar energy project for the irrigation was proposed by 2KR of MAFI who sent the request to Japanese Embassy in Kiev in July 2009 through the committee at Prime ministers Office. Irrigation will be proposed by Apele Moldovie under the presidential office, but MCC already agreed to the government that irrigation management will be made by Water Users Association as a main user instead of Apele Moldovie, and that Apele Moldovie will keep the ownership of irrigations expelling construction and management by MCC project. The Apele Moldovei has a problem in coordination ability on implementation, administration, development program etc., and especially lower evaluation capability of lacking in specialists in the environmental fields due to the budget limitation, and failed in irrigation projects sometimes in the past.

(4) Yen Loan 1 (Packing House)

1.	[Project Objectives and Expected Benefits] They can promote higher-valued agriculture policy with cold chain system for vegetables, fruits and meat, which will contribute to export promotion through prevention of quality deterioration.
2.	[Contents of Cooperation] 1) F/S, 2) Implementation of project In order to implement Yen loan project effectively, technical cooperation is necessary for operation of equipment and management.
3.	[Background Information] Higher-valued agriculture was proposed by WB. MCC follows this policy, by shifting current grains to labor intensive vegetables, fruits and meat, and clean these products, packing them by grade. MCC will preserve them in refrigerators and transport with refrigerator trucks. As the result, it will contribute to increase agriculture incomes together with expecting prevention of emigrants.
4.	[Planned Area to Implement the Project] 100 sets in a country
5.	[Facilities or Services Targeted in the Project] 1) F/S, 2) Equipment 3) Construction
6.	[Expected Project Cost] House building :US\$ 70MM, refrigerators: US\$ 20MM, track: US\$ 10 MM, total US\$ 100 MM.
7.	[Expected Schedule to Implement the Project] Not determined
8.	[C/P and Organization to Implement the Project] MAFI
9.	[Relation to the Environmental Impact Assessment] It is necessary to treat appropriately waste from packing house. MAFI has to establish management system of packing house after completion of the project, such as cooperative functions on use and cleaning, training of facility management, power cost, usage in winter etc.
10.	[Reference] Document copy which was sent to the Japanese embassy in Kiev

The packing house project by Yen Loan was proposed by 2KR of MAFI. 2KR sent the request to Japanese Embassy in Kiev through committee at Prime ministers Office. It is described at 5.3.5.1(2) that EBRD is providing working capital to warehouse system for agribusiness acceptance among 400-500 agriculture cooperatives. Such warehouse saves cereals or industrial crops (beats, sunflower, and tobacco) for shorter period in a condition of natural wind. In this case, the warehouse investment is comparatively small, and owned by one owner. The cold chain is a base for small farmers to store, process and carry in/out meats, vegetables and fruits. It needs facilities such as air condition, processing of classification & packing, and carry-in/out function for tracks. Eventually, the project has an objective to make a distribution support for regional small farmers, and it is considered proper that it will be managed in a style of

cooperatives or PPP. The study team proposes that this Yen Loan project shall be implemented together with the technology transfer (5.2.6.3. (1)) for its operation under the management by MAFI as the C/P. Since Moldova has not developed logistics, public sector has to implement this as a pilot plan. This will be fundamental policy promotion by MAFI, and MAFI considers that this project comes after the 2KR projects, because 2KR work is daily work. 2KR will be realistic selection as the C/P because they made design activities and have much knowledge on this subject. It is suitable to establish PIU in 2KR employing suitable staffs hereby to manage consultants and to keep tight relations between MAFI and MOF.

The management system including collection of maintenance cost, accumulation of monthly payment for future expenditure etc. will have a problem after completion of the project on whether farmers are enough to the operation or a committee should be composed of representatives of local administration, users, NGOs etc. This subject will be considered concrete during the project implementation period referring to commitment and reliabilities of the above representatives.

(5) Yen Loan 2 (Pilot plant to use grapes residuals behinds winery)

1.	[Project Objectives and Expected Benefits] Wineries dispose 27-30% of grapes as the residuals. If they can be used for foods, cosmetics, and medicines, it will benefit Moldova a lot.
2.	[Contents of Cooperation] 1)F/S, 2)Construction of pilot plant In order to implement Yen loan project effectively, technical cooperation is necessary for operation of equipment and management.
3.	[Background Information] In the National Program of Valorization of Alternative Sources of Energy for the period 2006-2010, there is a program entitled "Processing and Valorization of Winery Wastes and Obtaining of Novel Products". The Academy of Sciences of Moldova (ASM) desires to recover lagging research activities by construction of pilot plant at Izomer, state-owned winery under ASM.
4.	[Planned Area to Implement the Project] Chisinau
5.	[Facilities or Services Targeted in the Project] 1) Plant construction and equipment, 2) Printing, Construction
6.	[Expected Project Cost] Equipment: 2.4 MM EUR(3.43MMUS\$), documents: 0.8 MM EUR (1.14MMUS\$) and plant construction 0.2 MM EUR (0.29MMUS\$) . Total 3.35 MM EUR (4.79MMUS\$)
7.	[Expected Schedule to Implement the Project] Not determined : earlier the better
8.	[C/P and Organization to Implement the Project] The Academy of Sciences of Moldova (ASM)
9.	[Relation to the Environmental Impact Assessment] They have to treat wastes from the plant appropriately.
10.	[Reference] There is a request document to JICA in a personal letter style.

As for the pilot plant of Grape waste requesting Yen Loan, there is a problem whether this is suitable for the aids, because; 1) the extraction technologies are not established yet; 2) if it is established, private companies will join in this market. The director of Academy of Sciences and Moldova is a member of ODA committee under the prime minister's office

5.2.6.4 Cooperation Made by Japan in last four years²⁵

(1) Grant aids

²⁵ Fact sheet of English version on Moldova support by Japan, March 2009 by Embassy of Japan in Ukraine

a) General Grant Aid

- The Improvement of Equipment of the National Training Center for Agricultural Mechanization (530 million Yen (4.7 MM US\$). E/N signed in November 2007

(2) Assistance for Increase of Food Production (2KR: Second Kennedy Round)

- 300 million Yen (2.7 MM US\$). E/N signed in September 2002. Completed in June 2003. 32 Sampo combine harvesters
- 260 million Yen (2.4 MM US\$). E/N signed in March 2004. Completed in November 2004. 82 Kubota tractors
- 220 million Yen (1.9 MM US\$). E/N signed in March 2006. Completed in August 2006. 100 Belarus tractors
- 230 million Yen (2.07 MM US\$). E/N signed in January 2007. Completed in June 2007. 51 Belarus tractors and 7 Deutz combine harvesters
- 200 million Yen (1.95 MM US\$). E/N signed in March 2008. Completed in August 2008. 71 tractors

(3) Technical Cooperation

Training courses in Japan for Moldovan experts

- From 2003 to January 2008 a total of 114 Moldovan experts participated in the training courses in Japan.
- During the activity of the Japanese expert in Moldova, three country-focused training courses on Productivity Improvement were organized for Moldovan consultants and entrepreneurs. In each 8-10 experts participated in the course.

(4) Assistance to Moldova through International Organizations

a) Japan Social Development Fund (World Bank)

- 2004: Rural Investment & Services Project (1,727,140 US\$)

b) Japan Policy and Human Resource Development Fund (World Bank)

- 2004: Community Forest Development Project (919,900 US\$).
- 2005: Rural Investment and Services Project (RISP) II (660,000 US\$)
Quality Education in the Rural Areas (500,000 US\$)
- 2006: Avian Influenza Control and Human Pandemic Preparedness and Response Project (500,000 US\$)
- 2007: Second Poverty Reduction Support Credit (880,000 US\$)

5.2.6.5 Projects by the Other Country Donors

Table 5.2-5 Projects by the Other-country Donors Planned or Implemented

Classification	Objects Targeted	Donors	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
Agriculture Technology	Bio technology	FAO	FAO Biotechnology Glossary ²⁶	MAFI	2007
			Glossary on useful bio technologies to fit to Moldova		

²⁶ FAO's Country Profiles (Moldova) <http://www.fao.org/countryprofiles/index.asp?lang=en&iso3=MDA&subj=1>

	Agrarian University	FAO	Republican Scientific Agricultural Library of the State Agrarian University, in the Republic of Moldova Procurement of accession books	MoE	2007
Agriculture Technology	Breeding	EU/FAO	Equipment to animal research institute 240,000 US\$	MAFI	2007-08
	Irrigation/administration reform/agriculture credit	MCC	Compact: Transition to High Valued Agriculture		Contracts will be finalized in September 2009
	Agriculture technology	KfW	Establishment of Agro-technical Service Stations ²⁷	MAFI	2007 – 2008
			Setting up technical service station on sugar with provision of equipment	MAFI	
			Refinance to SMEs	MoF	2008-
	Higher value agriculture	MCC	Transition to High Value-added Agriculture Equipment for analysis and technologies	MAFI	November 2008-
	Oversea training	USAID	Farmer-to-Farmer – Agriculture Volunteers Program US farmers train Moldova farmers in USA.	MAFI	September 1999 – June 2009
Irrigation	Irrigation/administration reform/agriculture credit	MCC	Rehabilitation of existing irrigation 70-80 MMUS\$	MAFI	Contracts will be finalized in September 2009
			Administration reform in irrigation 7-8MMUS\$	MAFI	
			TA with USAID 14 MMUS\$	MAFI	
			Refinance 10 MMUS\$	MoF	
Finance	Agriculture finance	WB	Rural Investment & Services Project ²⁸	MoF	March 2003 – June 2010
			Refinance for rural development		
	Credit to private company	EBRD	Efes Vitanta Brewery ²⁹	MAFI	2008
			Loan to a winery company EFES Vitanta in order to expand production facilities and construction of sewage system	MoF	
	Credit	SIDA	Rural Investment & Services Project	MoF	2008-
			Refinance to farmers		
	Finance survey for agriculture and SMEs	USAID	Credit Enhancement Program ³⁰ Improvement of borrowers status in agriculture and SMEs	MOF, MAIA, MoEC	October 2003 – September 2009

²⁷ http://www.kfw-entwicklungsbank.de/EN_Home/Countries_and_Projects/Europe42/Moldova33/index.jsp

²⁸ <http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P090673>

²⁹ <http://www.ebrd.com/projects/psd/psd2008/39400.htm>

³⁰ http://moldova.usaid.gov/moldova_economic.shtml

Survey, Market, Statistics	Improvement of statistics usage	DFID	Improving Social and Agricultural Statistics, their Analysis and Use (ISAS) Analysis and utilization of agriculture statistics	MAFI	2008
	Market information	USAID	Agribusiness Development Project (ADP) ³⁵ Improvement of competitiveness and international trade in agriculture by market information	MAFI	June 2004- June 2009
	Survey agriculture policy	USAID	Agribusiness Policy Project ³⁶ Strengthening MAFI's functions	MAFI	June 2004 — June 2009
Draught	Draught relief	UN • EU • SIDA etc.	Relief and Technical Assistance Response to the Drought in Moldova Project Farmers relief against draught in 2007	MAFI	July 2007 — December 2008
	Draught relief	Austria	Seed provision of hybrid maize 20kg / ha in 23 regions. Total 600 tons	MAFI	2008
Others	Epidemic	WB	Avian Influenza Control & Human Pandemic Preparedness & Response Project ³⁷	MAFI, MoH	June 2006 — December 2009
	Epidemic		Survey/information for prevention of bird influenza		
	Alternative energy	WB	Renewable Energy from Agricultural Waste (Biomass) Survey of biomass by agriculture waste	MAFI	June 20007- October 2009

5.2.7 Moldovan Capability to Cope with the Foreign Cooperation

In the case where JICA will implement the projects named in Table 5-2.6(3), the study team describes some comments on the C/P selection just under the table each.

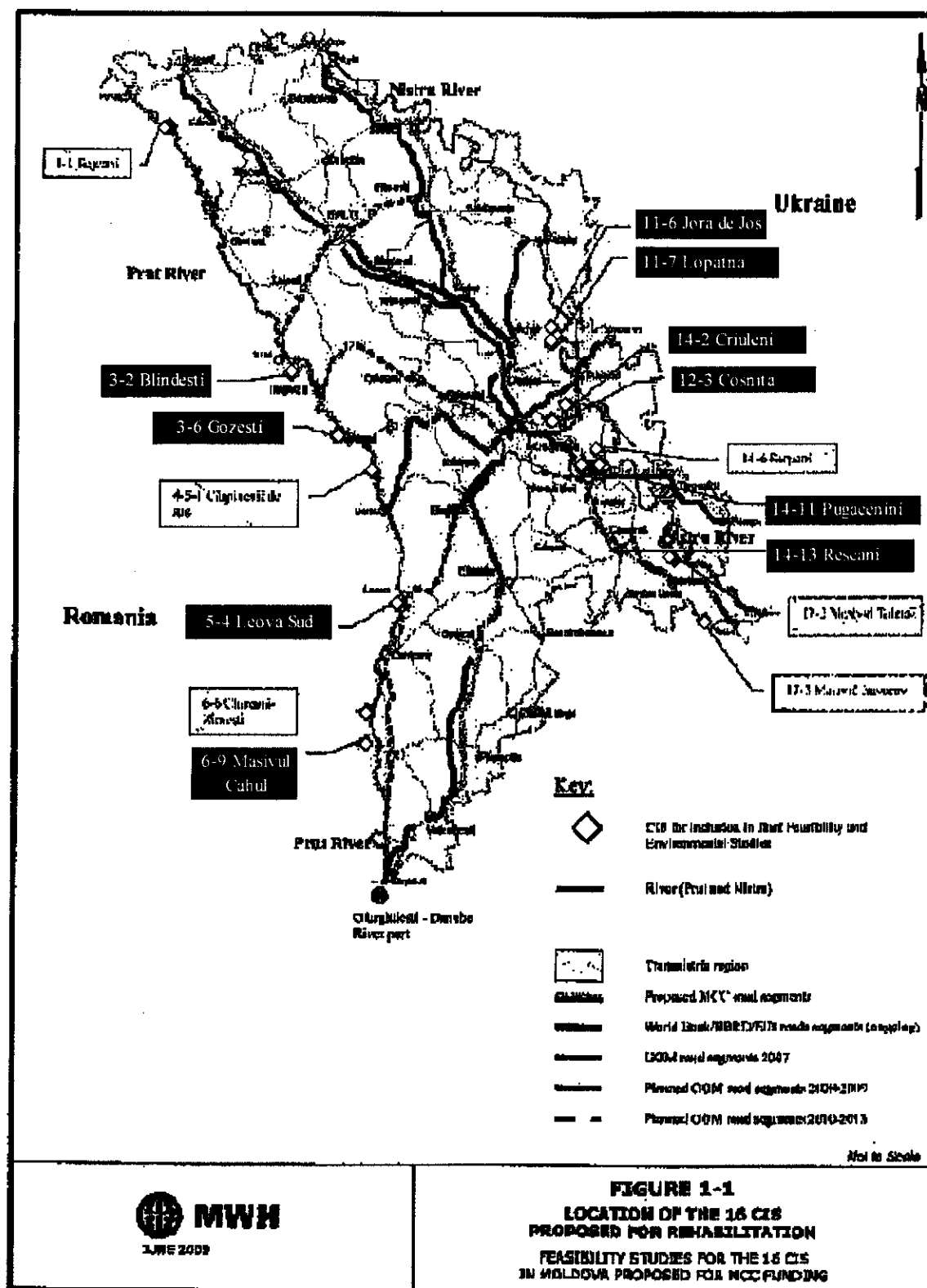
³⁵ http://moldova.usaid.gov/moldova_economic.shtml

³⁶ http://moldova.usaid.gov/moldova_economic.shtml

³⁷ <http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P099841>

Attachment 5.2-1 Irrigation Projects by MCC

MCC conducted F/S of 16 existing irrigation sites, and selected 10, which are superior to economic returns. MCC leave remaining 6 sites for other donors.



5.3 Private Sector

5.3.1 Outlines of the Sector

5.3.1.1 Composition and Outlines of the Sector

(1) Private Sector

Private sector is classified by National Development Strategy (NDS)¹ as follows.

Table 5.3-1 NDS Action Plans in Private Sector

NDS No.	Categories
45~47	Company law, Influence survey by legislation, Revision of legal system such as commerce law.
48~57	Metrology, standard, consumer protection, ISO
63~74	SMEs, Foreign direct investment, cluster, quality
127~128	Industrial Zone, Free Economic Zone (FEZ)
152~161	Statistics of population, household economy, agriculture, industry, construction etc.

Private sector is composed of 1) agriculture, 2) manufacturing, 3) services in construction, transport and tourism. Most of them have been already privatized. State-owned companies are very limited in railway, one commercial bank and construction and management of irrigation. The construction industries have traditional technologies, and streets and factories are very clean². ICT companies and shoemakers are the model for implementation of Japanese "5S", and NC machines are well arranged in other factories. Cleanness in factories is better than in Japanese SMEs.

Table 5.3-2 GDP and Inflation

Year	GDP (MMDL)	Per capita (MDL)	Component ratio (%)										Increase rate of CPI (%)
			Com moditi es	Agricul- ture	Indus- try	Service s	Const- ruction	Whole sale	Transport /Commun- ication	Other s	Financial cost	Tax on commod- ities and import goods	
2005	37,652	10,475	32.2	16.4	15.8	53.8	3.4	10.4	12.2	27.8	-2.0	16.0	10.0
2006	44,754	12,483	29.2	14.5	14.7	56.7	4.0	11.5	11.8	29.4	-2.5	16.6	14.1
2007	53,430	14,937	24.2	10.0	14.3	61.2	4.8	12.6	12.3	31.4	-2.3	16.9	13.1
2008	62,840	17,602	23.4	8.9	14.5	61.3	5.0	13.1	12.2	31.0	-2.3	17.6	7.3

Sources: NBS "Moldova in Figures 2009"

Commodities of agriculture and manufacturing have decreased the weight in the economic activities, and services including construction and transport have decreased. The tax mainly depends on commodity imports. Import increase means increase of budget revenue, which will ease expanding agriculture subsidies in budget expenditure of following table, besides Figure 3.1-25 and Figure 3.1-26³.

¹ "Poverty Reduction Strategy Paper- National Development Strategy Report for 2008-2011" (IM)

² Interview to Shoe maker, Zorile on June 25

³ Interview to MOF on July 8.

Table 5.3-3 Agriculture Subsidies

	Agriculture Subsidies (MMMDL)	% of Total Budget
2001	108.8	1.8
2002	180.3	2.3
2003	299.7	3.3
2004	263.6	2.3
2005	577.3	4.1
2006	681.4	3.8
2007	1,228.3	5.5

Source: MoF

Table 5.3-4 Foreign Trade

(by region)

unit : MMUS\$

	Export				Import			
		CIS	EU	Others		CIS	EU	Others
2005	1,091.3	551.4	443.4	96.5	2,292.3	905.2	1,038.8	348.3
2006	1,051.6	424.1	537.7	89.8	2,693.2	1,020.8	1,218.5	453.9
2007	1,341.7	550.2	679.3	112.2	3,689.5	1,333.7	1,681.0	678.1
2008	1,591.4	623.0	820.1	148.3	4,898.8	1,737.3	2,105.3	1,056.2

(by main commodities)

	Vegetables		Alcohol, foodstuff		Mineral products		Chemicals	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
2005	131.9	65.0	396.0	147.5	20.1	504.7	15.6	232.3
2006	136.4	72.8	276.4	179.8	27.4	663.7	20.8	223.3
2007	162.9	150.3	276.0	237.9	57.1	778.4	27.1	317.6
2008	210.1	166.8	312.1	343.4	63.5	112.6	33.0	416.8

(Continued)

	Plastics, rubber		Textiles		Machinery		Vehicles, transport equipment	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
2005	11.8	139.7	193.9	179.9	46.2	313.0	15.3	130.3
2006	16.0	168.5	228.3	206.5	53.1	379.8	16.3	162.4
2007	33.1	224.9	276.3	249.6	90.7	544.6	18.7	286.1
2008	38.2	276.8	313.9	285.4	167.5	765.5	16.1	390.6

Source: NBS "Moldova in Figures 2009"

Table 5.3-5 Enterprises in Moldova (thousand)

	2005	2006	2007
Large Scale Enterprise	0.5	0.6	0.7
SMEs	32.6	35.5	39.3
Total	33.1	36.1	40.0

Note: Definitions for classification are as follows:

Enterprise	Number of Employee	Annual Income (1,000Lei)
Large	Over 250	Over 50
Medium	50~249	25~50
Small	10~49	3~25
Micro	1~9	0~3

Source: MoEC "State Programme for Supporting Small and Medium Enterprise Development during 2009-2011", February 2009

EU has large share in the imports and is expanding the export share, which means EU standard has become very important. Chemicals, plastics, machinery, transport equipment are

mainly been imported, but import is more than export in alcohol due to Russia's import ban on wine export. Textile export is expanding much more than import.

Generally speaking, it is important to discuss on the direct investment policies or financial policies to evaluate capital shares between foreign companies and the domestic ones, and to classify the sector fields such as manufacturing, transporting, agriculture, etc.; however, such evaluation or classification is not so important in Moldova. NBS publishes statistics on production, export and import every month. Before the global economic crisis, EBRD expressed that the investment climate continued to improve through the structural reforms widespread since publishing of EGPRSP at May 2004, over the previous strategy period but private enterprises in Moldova still operate under less favorable conditions than their peers in neighboring countries⁴, because they still delay in legal arrangement, sector diversification, infrastructure in power, imbalance between the urban area and the rural area. They depend on foreign capital on technology development, market development and finance. A small number of powerful companies borrow money at a comparatively lower interest rate at international financial market.

There is some foundation of ICT in Moldova, why training-computer facilities used to be operated in Chisinau in the former Soviet era. ICT business is multinational now, developing software here by orders from foreign countries. Moldova is following to Rumania, neighbor which is developing so speedy in ICT. They have quite developed software technologies in ICT to get orders on part of banking system from London. When some peoples gather in a group, some of them can understand English, French, Italian, Spanish, besides Rumanian (Moldovan) thanks to their communicational capability on Latin and Russian, which is their strong point. However, they are handicapped on the point where there are no direct flights from Chisinau to EU countries MIEPO and CCIRM emphasize ICT for one of the four important sectors. Computer is widespread in the government. They use computer network on internet or internal information very frequently⁵. In private companies, computerization is within partially used for accounting, NC machine, etc. except banks.

5.3.1.2 Issues to Be Solved in the Sector

Due to chronic underinvestment in the sector, equipment is often worn and technologies obsolete. This in turn increases consumption of energy and raw materials and reduces productivity and competitiveness. Outdated technology also prevents local manufacturers from competing on international markets because they cannot ensure the high production standards and quality consistency required by international clients.⁶

Due to a small country with 4 million population, Moldova cannot be competitive in only targeting at the domestic market. They have increased export by developing the markets through strengthening marketing and utilizing ability of technology, design (textiles etc., market development) and finance from foreign direct investment. Under the advancement of trade liberalization, they have to fit ISO and EU standard by efforts of entrepreneurs.

Essentially main barriers to private sector development are composed of the following three factors:

- 1) Lagging of legalization
- 2) Weak infrastructure

⁴ P14, EBRD's Strategy for Moldova <http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>, September 2007.

⁵ Interview to IT, Endeava on July 8

⁶ P20, EBRD's Strategy for Moldova <http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>, September 2007.

3) Poor access to finance

In the electricity field, Moldova depends on the conflict area, and delays in road rehabilitation. There are 14 commercial banks which operate with a certain margin on the deposit cost with sure collateral. The companies to get a loan from them are limited to those which can provide enough collateral and make payment more than the interest rate at 20%.

5.3.2 Administrative Organizations, Bodies and Companies related to the Sector in Moldova

5.3.2.1 Administrative Organizations, Bodies and Companies Regarding Plan, Construction and Completion of Project

(1) MoEC (Ministry of Economy and Commerce)

The Ministry, which had been the lead agency in drafting the EGPRSP and setting the associated policy agenda, is now the institution responsible for coordinating implementation of the National Development Plan (NDP)⁷. MoEC is involved in formulation of budget on action plans etc. in NDS. The Ministry covers as their scopes many fields of economy, commerce, energy, SMEs, standardization and natural resources.

(2) MOF (Ministry of Finance)

MOF is responsible for taxation, budget expenditure and finance. National Bank of Moldova is responsible for banking operation system such as current works on report and survey, improvement of business practices, audit of banks etc. NBM is a supreme authority. MOF manages matters related to national bond issue and donors resources.

(3) Other related ministries

Please refer followings to Chapter 5.1.2 (1).

- Ministry of Construction and Territorial Development (MCTD)
- Ministry of Local Public Administration (MLPA)

5.3.2.2 Administrative Organizations, Bodies and Companies Regarding Operation, Maintenance and Management of Project

Followings are description on C/P of proposed projects.

(1) MoEC

MoEC is handling very large range of works, composed of 220 staffs in 12 departments and 30 divisions. The minister is also deputy prime minister equal in ranking to the Finance minister⁸. NDS Action plans are stipulated with ISO, EU standards on equipment, test equipment for energy and agriculture, consumer protection, competitiveness of SMEs, incubator, FEZ, statistics at NSB etc⁹.

(2) Agency for Restructuring and Enterprise Assistance (ARIA)

ARIA is a government body of self finance under MoEC. Their responsibilities are as follows¹⁰.

⁷ Interview to MoEC on June29

⁸ Interview to MoEC on June29

⁹ "questionnaire (MoEC)" (Interview July 8)

¹⁰ ARIA Internet-web Site: http://www.aria.md/index_en.htm

- Enterprise advanced restructuring
- Quality and productivity management systems implementation according to the world best practices both at companies and public administration
- Studies and trainings for civil servants as well as company specialists and managers of all levels, including junior managers (National Competitiveness Institute)
- Projects, programs and policies development
- Support and assistance to investors and exporters

ARIA has contributed as follows, playing a role for private sector development.¹¹

- Providing modern business administration technologies to more than 100 companies
- Enabling more than 400 managers from 300 companies to gain experience abroad

In May 2007 ARIA was founded through merging “Competitiveness and Productivity Center” and “Agency for Restructuring and Enterprise Assistance ARIA” which existed in the 7-9 floors in the same building, and then became an organization of self-support accounting system, though it is still a government organization.

The director changed and its works have also been totally changed. At present, the staff is 22 including seven (7) in management technologies, eight (8) in quality & productivity, three (3) in training and the rest in administration.

CCIRM is a competitor to ARIA in the training field. Since there are demands of consulting and training from private companies, ARIA focuses on SMEs for this profit-making business.¹²

WB is conducting a project to support business management consultant, and ARIA is planning to apply for it.

The “Organization for Development of Small Business” is another body to support SMEs. Differently from ARIA, they get subsidies from the government¹³.

(3) NISM (National Institute of Standardization and Metrology) and NBS (National Bureau of Statistics)

NISM is a special body composed of 300 technicians /scientists under the MoEC, for standardization by metrology and ISO. NISM has replacing Russian equipment by new equipment through assistance of WB or GTZ¹⁴.

NBS is a central statistical administration body unitarily under MoEC to collect data; to tabulate the results and make publication except the data of budget revenue and expenditure (MOF), balance of payment (NBM) and health related (MOH). MBS has 600 staffs (107 at headquarters, 435 at regions), and a series of processing of aggregation, checking, tabulation and publication is computerized. Their statistics compilation, publication or work-speed is near those in developed countries and at comparatively high level¹⁵.

(4) Implementation Candidate Banks for Two-step Loan

After one commercial bank bankrupted in early 2009, 15 commercial banks with larger foreign capital share are operating now. Among them the following three will be candidates for implementation body of Japanese two-step loan.

¹¹ Moldova – Pulling Moldovan industry out of crisis:

¹² Interview to ARIA on July 8

¹³ Interview to ARIA on July 8

¹⁴ Interview to NISM on June30

¹⁵ Interview to NBS on July 2

- Societatea pe Actiuni Banca de Economii (Banca de Economii)
- Banca Comerciala "Moldova-Agroindbank" S.A. (B.C. "Moldova-agroindbank" S.A.)
- Banca Comerciala "Comertbank" S.A. (BC "Comertbank" S.A.)

As for Societatea pe Actiuni Banca de Economii, the government holds 56% share, which used to be national saving bank with many branches. The other two are 100% private banks.

WB chooses plural implementation candidate banks through public proposal competition at Credit Line Directorate which is outside body of MOF. WB's person in charge is involved much in the project in the beginning, but later, the person entrusts the banks on operation of revolving fund, and requests them to report regularly. On the other hand, KfW etc. implements projects using a project implementation unit organized by consultants. KfW does not use Credit Line Directorate¹⁶.

5.3.2.3 Others

(1) Chamber of Commerce and Industry of Moldova (CCIRM)

Main duties of CCIRM are as follows according to internet-web site¹⁷.

- To create business communities and better business environment
- To represent members in overseas economic relations or business group with the government or overseas business groups

Activities of CCIRM (11 regional offices with 350 staffs, 1,500 member companies) are to make publication of weekly and monthly report, exhibition (30 times a year), detachment of inspectorate mission (together with MIEPO, 10 times a year), economic seminar in time etc¹⁸. The members are of superior companies¹⁹.

CCIRM set up four promising industrial sectors; a) agriculture & processed foods, b) wine., c) fashionable textile / shoes and d) ICT, and publicize widely the sectors to foreign investors, foreign governments, donors, etc. with use of brochures, internet etc.. MAFI covers the fields of a) and b), MoEC does for c), and MOID does for d).

(2) Moldovan Investment and Export Promotion Organization (MIEPO)

Its mission is to support business development and partnership in Moldova through involvement, communication and promotion. MIEPO experts team is the most suitable to provide professional assistance for identification and exploration investment opportunities in Republic of Moldova.²⁰

With 14 staffs, MIEPO receives contribution from EU beside government subsidies, mainly supplies information to foreigners²¹ as investors in USA, west Europe, middle Europe, CIS etc., foreign governments, donors, etc. Same as CCIRM, it gives greater importance on wine, vegetables, fruits and processed foods, ICT and fashionable textile / shoes²².

5.3.3 Strategy by the Moldovan Side to Develop the Sector

(1) Legalization

¹⁶ Interview to WB on July 9

¹⁷ CCI RM's site of <http://www.chamber.md/index.php?id=285>

¹⁸ Interview to "Chamber of Commerce and Industry" on July 1

¹⁹ Interview to CCIRM on July 1

²⁰ Mission of MIEPO: <http://miepo.md/pageview.php?l=en&idc=67&>

²¹ Interview to MIEPO on June 24

²² Interview to MIEPO on June 24

The Moldovan government has prepared the following legislation as follows.

- 1) The "Guillotine Law"²³ adopted in February 2005
- 2) The Law on Economic Liberalization adopted in April 2007
- 3) The (Draft) Law on Public Private Partnerships

Aiming at making the business doing easier in Moldova, as a part of the Competitiveness Enhancement Project the Government completed a review of relevant legislation and proposed amendments to 80 some laws affecting business operations whose law is named Guillotine II. In addition, a committee was set up as a place for business owners to voice their views on new policies affecting the business environment²⁴. A National Agency for the Protection of Competition (NAPC) was established in February 2007. As for public sector development, related ministries drew up their action plans.

Promotion of export and foreign direct investment are the mainstream of private sector development. MoEC is implementing policies according to Investment Attraction and Export Promotion Strategy 2006-2015.

(2) Free Economic Zone (FEZ) and SMEs

MoEC is promoting two industrial development policies. One is encouraging acceptance of foreign direct investment in six (6) FEZs in compliance with the Law on Free Economic Zones in July 2001. Export-Business-Chisinau, moved in 2002 near the airport from city, operating with customs office under the thirty-year lease contracts with fifty 55 private companies (joint-venture 42, foreign 100% 4, local 100% 9) by the law and the 24 ha territory is fully occupied. Russia is the largest importer from Moldova, but USA, UK, Bulgaria, Romania are the larger investors. Ungheni FEZ located at the border with Romania open in 2003 with 43 companies in 42 ha, but now expanding the land to 351.7 ha including a possible power company. Recently they added two more FEZs. One is located at Marculesti Airport for industrial park for air transport of cargo, and another FEZ is located at Giurgiulesti Port in the south by a private developer. Now eight (8) FEZs are nominated by the government²⁵.

Another is "young business program" with packing privileges of 40% subsidies and 60 % of credit with interest rate of 8.7% for the SMEs promotion by "State Programme for Supporting Small and Medium Enterprises Development during 2009-2011" 110 MMMDL (9.9MMUS\$) (34 MMMDL, FY 2008) was allocated for subsidies in the budget FY 2009 and credit is allocated among 10 commercial banks²⁶.

5.3.4 Effect by Global Economic Crisis to the Sector

The ministries are ordered to cut budget expenditure by 20%, but the budget for infrastructure and SMEs will be increased. The followings are current situation in the private sector.

- (1) In CCIRM, foreign investments and applicants for overseas inspectorate mission (250 participants/year) have decreased to half.
- (2) Except roads, constructions of building and plants are stopped

²³ They call competitiveness related laws for "Gullotine Law" due to too much beaurocratic procedures.

²⁴ News & Broadcast,
<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:22050182~pagePK:34370~piPK:34424~theSitePK:4607,00.html>

²⁵ Interview to FEZ on July 6

²⁶ Interview to SMEs, MoEC on July 3

- (3) Procurement of cargo trucks were stopped due to rising interest rates, and volume of transport (6.1 million ton, 2.0 billion ton-kilo in 2008) decreased by 20-30 %²⁷.
- (4) Increased returning of emigrants since January this year, is slowing down this May.
- (5) Foreign direct investment is decreasing.
- (6) Borrowing interest rate rose up to 25% in 2009 at a time just after the Global Economic Crisis came, and equipment investment stopped, not to finance working capital.
- (7) As drawing back of savings from the bankrupted commercial bank became difficult, people stopped saving money [Outstanding time deposit in commercial banks; 10,148MMMDL(91.3MMUS\$) in December 2008, 7,620MMMDL (686.8MMUS\$) in June 2008] at banks²⁸.

5.3.5 Strategy by the Moldovan Side to Develop the Sector

There are two kinds of cooperation by the donors: institution/policy improvement (MoEC) and finance assistance (MOF)

5.3.5.1 International Aid Organizations

(1) WB

WB is promoting financial support. In technical assistance, the New Country Partnership Strategy (CPS) aims at laying the foundations for inclusive economic growth in Moldova by improving economic competitiveness to support sustainable economic growth.²⁹

(2) EBRD

EBRD will continue to pursue investment opportunities in all enterprise sectors such as food processing, manufacturing, information and communication technology (ICT), retail and property sectors. Well performing companies will be provided with direct financing including through ETC Fund (Early Transition Countries Fund) instruments. EBRD will facilitate foreign investment either by investing alongside foreign strategic investors or by assisting the development of local companies which in due course may attract foreign investment. Working capital may be provided to agribusinesses under the recently established warehouse receipt system. EBRD is providing non-financial support to private enterprises through its Turn Around Management (TAM) and Business Advisory Services (BAS) programs³⁰.

(3) UNDP

Background of UNDP's private sector development is as follows.

- To accelerate sustainable economic growth and poverty reduction through promoting responsible entrepreneurship and developing public private partnerships with potential for both, commercial and developmental returns³¹.
- To increase the capacity of central and local governments to promote, develop and manage public-private partnership projects for infrastructure development and the provision of basic services³²

²⁷ Interview to AITA on June 30)

²⁸ Interview to CCIRM on July 1

²⁹ News & Broadcast,

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:22050182~pagePK:34370~piPK:34424~theSitePK:4607,00.html>

³⁰ STRATEGY FOR MOLDOVA by EBRD <http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>

³¹ <http://www.undp.md/projects/GC.shtml>

³² <http://www.undp.md/projects/PPP.shtml>

5.3.5.2 Bilateral Donors

(1) USAID

USAID put importance on private sector development in “USAID Strategic Plan for Moldova (2001-2006)” and promotes support.

The GOM’s medium-term economic development plan and poverty alleviation plan respond to these challenges by identifying development of the private sector activities in areas where the country has a comparative advantage (agriculture and small/medium enterprises, such as processed food, furniture, textile, wine labels, etc.) as the most likely source of medium-term economic development; discussing the need for improving the macro-economic investment climate; and pointing out the importance of public sector reform (including local government) to growth. The social protection section of the plan also discusses the critical need for a better-targeted social assistance system³³.

USAID does not provide any credit, but it finalized in August 2008 technical knowledge transfer on finance and lease for microfinance, technical knowledge of collateral. It plans to finish technology transfer to Agroindbank and Victoriabank by September 2009, and to Ficombank by August 2010³⁴, high value-added agriculture development in 2009, strengthening competitiveness in ICT/apparel/wine makers in 2010. Administrative reform is currently promoted for smooth implementation of MCC’s projects.

(2) SIDA

SIDA aims at strengthening of competitiveness in rural areas to improve a business climate that promotes rural development through better contacts between enterprises, access to credit and greater integration of domestic markets³⁵.

5.3.6 Projects Implemented or Planned in the Sector

5.3.6.1 Progress Status of the National Action Plan

Action plans of MoEC in NDS³⁶ are as follows.

Table 5.3-6 Action Plans Stipulated in the NDS and Progress Status Thereof

NDS No.	Objects Targeted	Projects and Progress Thereof	Ministries or Agencies	Expected schedule
Common	As of July 2009, the following projects have been progressed on schedule ³⁷ .			
45	Legalization	Ongoing analysis within the working group of legislation to regulate entrepreneurship 80 laws and regulations are under revision [Budget in 2009:3 MMMDL (0.27MMUS\$)]	MoEC	2008 - 2011

³³ p12, USAID Strategic Plan for Moldova (2001-2006)

³⁴ <http://moldova.usaid.gov/arc.shtm3ai>

³⁵ P12, Strategy for Development Cooperation with Moldova,
<http://www.sweden.gov.se/content/1/c6/03/96/44/2303d476.pdf>

³⁶ NDS: Republic of Moldova: Poverty Reduction Strategy Paper—National Development Strategy Report for 2008-2011

³⁷ Interview to MoEC on July 8

46	Regulatory Impact Assessment (RIA)	Implement the Regulatory Impact Assessment (RIA) in drafting official acts To include that related persons can express their opinions at the committee on any policies which influence business environment [Budget in 2009: 3 MMMDL (0.27MMUS\$)]	MoEC	2008 - 2009
47	Domestic trade legal framework	Bring the legal framework in the area of domestic trade in line with the standards and practices of European Union member states To fit to EU standard in domestic trade [Budget in 2009: 0.1MMMDL (0.009MMUS\$)]	Department of Standardization and Metrology / MoEC	2008 - 2011
48	Market oversight	Consolidate the market oversight capacity in line with EU requirements To fit to EU requirements [Budget in 2009: 0.2 MMMDL (0.018MMUS\$)]	Department of Standardization and Metrology / MoEC	2009
49	Metrology and Standardization (weight)	Provide the heavy weights laboratories with equipment and train the staff Weight equipment and training [Budget in 2009: 1 MMMDL (0.09MMUS\$)]	Department of Standardization and Metrology / MoEC	2010
50	Metrology and Standardization (cube)	Provide the volume laboratory with equipment and train the staff equipment and training [Budget in 2009: 0.5 MMMDL (0.045MMUS\$)]	Department of Standardization and Metrology / MoEC	2009
51	Metrology and Standardization (electric)	Provide the power and electronic product testing laboratory with equipment in line with European standards Test equipment to fit power and electricity to EU standard and train [Budget in 2009: 1 MMMDL (0.09MMUS\$)]	Department of Standardization and Metrology / MoEC	2009
52	Metrology and Standardization (agriculture)	Provide the agriculture and food product testing laboratory with equipment for doing tests in line with European standards Testing equipment and train [Budget in 2009: 5 MMMDL (0.45MMUS\$)]	MoEC	2008 - 2011
53	Metrology and Standardization (toys)	Set up a toy testing laboratory and provide it with equipment in line with European standards Test room and equipment to fit to EU standard [Budget in 2009: 2 MMMDL (0.18MMUS\$)]	Department of Standardization and Metrology / MoEC	2009
54	Metrology and Standardization (high speed breakdown intervention)	Develop and update the National Etalons Database (NED) compliant with European Union requirements [Budget in 2009: 32 MMMDL (2.88MMUS\$)] Development of new National Etalons Database (NED) to meet EU standard	Department of Standardization and Metrology / MoEC	2008 - 2011
55	Consumer information and protection	Improve access to consumer information and education Improvement of information and education access [Budget in 2009: 0.5 MMMDL (0.045MMUS\$)]	Department of Standardization and Metrology / MoEC	2009 - 2011

56	Consumer protection	Develop the legal framework in consumer protection	Department of Standardization and Metrology / MoEC	2009 - 2010
		Draft of consumer law[Budget in 2009: 0.5 MMMDL (0.045MMUS\$)]		
57	ISO & EN	Design and carry out a National Program to adopt international standards "ISO" and European "EN" as national standards	Department of Standardization and Metrology / MoEC	2008 - 2011
		Drafting of national plan to adopt international ISO, EU' EN for national standard [Budget in 2009: 2 MMMDL (0.18MMUS\$)]		
63	Finance to SMEs	Develop a pledging system for loans granted to small and medium size enterprises (SMEs)	MoEC	2008 - 2011
		Development of loan system for SMEs [Budget in 2009: 5 MMMDL (0.45MMUS\$)]		
64	Institution of SMEs	Create four branches of the Organization in order to develop the SME out there in regions	MoEC	2009
		Establishment of SMEs institution and 4 branches [Budget in 2009: 2 MMMDL (0.18MMUS\$)]		
65	Institution of SMEs	Prepare and carry out an international forum of SMEs	MoEC	annual
		International conference on SMEs [Budget in 2009: 0.6 MMMDL (0.054MMUS\$)]		
66	Service provider	Develop a network for service providers in business by training them and stimulate demand for consultancy	MoEC	2011
		Training service providers for ICT [Budget in 2009: 1 MMMDL (0.09MMUS\$)]		
67	Business incubator	Create and develop business incubators, 68. Build and develop entrepreneurship capacity and promote in-service professional training	MoEC	ongoing
		Establishment, entrepreneur's capacity, education[Budget in 2009: 6 MMMDL (0.54MMUS\$)]		
68	Entrepreneurs support	Build and develop entrepreneurship capacity and promote in-service professional training	MoEC	ongoing
		Capacity, professional training in-service [Budget in 2009: 3 MMMDL (0.27MMUS\$)]		
69	Competitiveness of SMEs	Design a system of rewards to encourage competitiveness among SMEs	MoEC	2008 - 2011
		Rewards system design		
70	Competitiveness of SMEs	Create a system to evaluate and monitor competitiveness among SMEs by employing indicators used by OECD Investment Compact	MoEC	ongoing
		Monitoring system by OECD investment charter		
72	Foreign direct investment	Develop clusters as a way of stimulating economic growth	MoEC	2008 - 2011
		Development of cluster for growth promotion		

73	Cluster formulation	Consolidate the management capacity in terms of better quality, productivity and competitiveness in the real sector of economy	MoEC	2008 - 2011
		Quality, productivity, competitiveness, management		
74	Quality, productivity, competitiveness	Encourage the implementation of quality management systems and safety assurance systems in SMEs	MoEC	ongoing
		Quality control system in SME		
127	Industrial park	Set up three industrial parks in regional growth poles	MoEC	ongoing
		3 Industrial parks for regional development		
128	FEZ	Establish a regional logistical center of cargo type in the International Free Economic Zone "Airport of Marculesti"	MoEC	2008 - 2011
		Air cargo warehouse at Marculesti airport		
152	Statistics (NBS)	Develop information infrastructure for the National Bureau for Statistics	MoEC	2008 - 2011
		Information infrastructure at NBS		
153	Statistics (classification)	Design national statistical Classifiers aligned to European Union standards	National Bureau of Statistics	2008 - 2011
		Classification by EU standard		
154	Statistics (agriculture)	First General Census in Agriculture	National Bureau of Statistics	2009 - 2011
		1st agriculture census		
155	Statistics (population)	Design a system of analysis and forecast of the number of population in the Republic of Moldova on the basis of creating a demographic database and a package of programs to process information	National Bureau of Statistics	2008 - 2011
		Analysis and forecast		
156	Statistics (Household)	Prepare and conduct new statistical research on households on issues connected to the labor market	National Bureau of Statistics	2009
		Implementation of household survey in relation to labor market		
158	Statistics (consumption)	Improve the methodology for calculating the Consumer Price Index (CPI) by adjusting the influence of quality of products on evolution of prices	National Bureau of Statistics	2008 - 2011
		Improvement of CPI calculation adjusted by quality		
160	Statistics (industry)	Design the methodology for calculation of Industry Production Index	National Bureau of Statistics	2009 - 2010
		Design of calculation method of production index for manufacturing		
161	Statistics (construction)	Design the methodology for calculation of construction price indices	National Bureau of Statistics	2008 - 2009
		Design of construction price index calculation		

Note: 1) MoEC absorbed the former ministry of energy in 2007.

2) MoEC formulated and announced "State Programme for Supporting Small and Medium Enterprise Development during 2009-2011" in February 2009.

5.3.6.2 Projects Requested for Japanese Assistance from Moldova

Requested projects are summarized in following table.

(1) Technical Assistance to ARIA³⁸

1.	[Project Objective and Expected Benefits] Improvement of effectiveness of private companies by upgrading quality, services, productivities etc., and cost reduction.
2.	[Contents of Cooperation] Consulting and training (management, strategy, fund management, marketing)
3.	[Background Information] As Moldova's companies are very weak in investment plan or F/S, ARIA has promoted systematic technology transfer on quality management, restructuring, cost reduction, enhancement of productivity to managers, young entrepreneurs, SMEs etc. ARIA wants to select 10 companies, train and learn Japanese experience, improve their business management systems, and implement pilot examination; finally ARIA can do the above by themselves through adjustment of the results. The first three years, ARIA will bring up 300 persons, following 2-3 years it will do 600 persons. In other words, ARIA will do 100 enterprises first three years, and 300 enterprises following three years by 50 consultants. The target is that current competitive index 3 for modern management will be improved to 5 coming 5-7 years.
4.	[Planned Area to Implement the Project] the whole country
5.	[Facilities or Services Targeted in the Project] 400m ² is available for meeting room (\$45/m ² , month) . More 100m ² can be added, if necessary.
6.	[Expected Project Cost] 4 experts for 4 years (management, strategies, fund management, marketing)
7.	[Expected Schedule to Implement the Project] February 2010 to December 2014
8.	[C/P and Organization to Implement the Project] Director : Mr. Liviu Breahna (practically, deputy director: Mr. Vasile Ionesii) . 8 consultants will join to a team.
9.	[Relation to the Environmental Impact Assessment] Environment aspects will be included management.
10.	[References] Application form or Japan's Technical Cooperation from ARIA (Attachment 5.3-1).

(2) Technical Assistance to NSB

1.	[Project Objective and Expected Benefits] To create correct index of industrial production to fit EU standard to enhance Moldova's credibility.
2.	[Contents of Cooperation] 1) an expert dispatch on monthly and yearly IIP, 2) statistics training of NBS staff in Japan
3.	[Background Information] NSB is a central statistics administration with use of ICT for collection, tabulation publication, but IIP is no reliable. NSB requests sample companies to report each item of $V=P \times Q$, but these figures is not consistent. NSB desires to revise these series of the works to correspond to the GDP figures.
4.	[Planned Area to Implement the Project] The whole country
5.	[Facilities or Services Targeted in the Project] NSB requests Norway to make cooperation for this project that Norway made technical support before. If Norway will not accept their request, NBS will request this to JICA.
6.	[Expected Project Cost] Not determined

³⁸ Interview to MSIF on July 3

7.	[Expected Schedule to Implement the Project] Not determined
8.	[C/P and Organization to Implement the Project] Mr. Oleg Cara: Deputy Director General
9.	[Relation to the Environmental Impact Assessment] No direct relations
10.	[References] Refer to the interview report.

(3) Yen loan Two-step Loan for Private Sector

1.	[Project Objective and Expected Benefits] Multinational companies can be financed at an interest rate of LIBOR+2% in the international financial market, but most of the Moldovan companies are financed in local banks. Such companies have to borrow the loans at a high interest rate of 25% or to delay the repayment. Financial access is so difficult here. Working capital by short-term loan or investment capital by 5-7 years will be great incentives to the private-sector companies.
2.	[Contents of Cooperation] To make two-step loans the companies at which may be targeted in the fields of SMEs, exports and the rural development In order to implement Yen loan project effectively, technical cooperation is necessary to operation of equipment and management.
3.	[Background Information] Financial access is very difficult to private companies or farmers. Companies give up borrowing especially of medium- or long-term loans at present. WB, KfW or IFID have already implemented the two-step loans ³⁹ , however, the amount of which is not enough to the companies. Credit Line Directorate outside MOF can manage selection of commercial banks, credit conditions, revolving funds, but a consultant can be employed for supporting the activities by the determined commercial bank.
4.	[Planned Area to Implement the Project] The whole country
5.	[Facilities or Services Targeted in the Project] A commercial bank will be selected under MOF in order to finance end users.
6.	[Expected Project Cost] Not determined
7.	[Expected Schedule to Implement the Project] The economy is slowing down. Moldova desires to realize the project at an earlier date.
8.	[C/P and Organization to Implement the Project] There are two ways; (i) Credit Line Directorate outside MOF, (ii) Establishment of own PIU for direct management. C/P shall be MOF.
9.	[Relation to the Environmental Impact Assessment] They can include environment conditions. There are environmental items to be solved in agriculture, food, construction, transport etc.
10.	[References] Interview

5.3.6.3 Cooperation Made by Japan

According to "Fact sheet on Moldova support by Japan"⁴⁰, Japan provided three cooperation up to now:

(1) Non-Project Grant Aid (Promotion of Small and Medium Enterprises Sector Program)

- 300 million Yen (2.7 MMUS\$. E/N signed in March 2005)

³⁹ Achievements of the two step loans need to be checked.

⁴⁰ Fact sheet of English version on Moldova support by Japan, March 2009 by Embassy of Japan located in Ukraine

- 400 million Yen (3.5 MMUS\$. E/N signed in March 2006)
- 300 million Yen (2.5 MMUS\$. E/N signed in March 2007)

(2) Technical Assistance

- 1) Training and Consulting on Productivity Improvement (2 experts; 2001-2003, 2003-2005)
- 2) Training courses in Japan for Moldovan experts
From 2003 to January 2008 a total of 114 Moldovan experts participated in the training courses in Japan.
 - During the activity of the Japanese expert in Moldova, three country-focused training courses on Productivity Improvement were organized for Moldovan consultants and entrepreneurs. In each time 8-10 experts participated in the course.
 - Besides the country-oriented course, Moldovan officials were invited to the group training courses in various spheres such as market economy, health and medicine, environmental protection, etc.

(3) Assistance to Moldova through international organizations

- UNDP ICT for Development Thematic Trust Fund
 - Implementation of e-Governance Component of the National Strategy on Information Society Technologies for Development (70,000 US\$ will be extended during three years starting from May 2005).

5.3.6.4 Projects by the Other Country Donors

Table 5.3-7 Projects by the Other-country Donors Planned or Implemented (Technical Cooperation)

Objects targeted	Donors	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
Business environment/finance	WB	Competitiveness Enhancement Project Modification of regulations, quality improvement, finance to SMEs	MoEC	Oct. 2005 – Dec'09
NBS	UNDP	Strengthening the National Statistical System Capacity of NBS	NBS	Aug.2007 – Jul. 10
Entrepreneurship		Growing Sustainable Business & Global Compact Development of PPP	MoEC	Aug. 2008-Jul '09
PPP		Public Private Partnership Development Government capacity including local government for PPP projects on infrastructure, basic services	MoEC	Aug.2009-Jul. '11
Vocational training	SIDA	Support to the Vocational Training Services Vocational Training for Labor Market Revitalization	MOEY	Jan. 2006 – May 2010
Business environment	USAID /USA	Business Regulatory and Tax Administration Reform Project Modification of regulations and taxation	MOF	Sep.2007 – Sep. 2010
Competitiveness		Competitiveness Enhancement & Enterprise Development Marketing and business promotion in ICT, textiles, winery	MoEC	Sep 2005 – Sep 2010

Finance access for agriculture and SMEs		Credit Enhancement Program Farmers and SMEs	MOF, MAIA, MoEC	Oct. 2003 – Sep. 2009
Privatization of SOEs		Western NIS Enterprise Fund Finance, management, marketing	MOF, MoEC	June 1995 -

Table 5.3-8 Projects by the Other-country Donors Planned or Implemented (Refinance)

Objects targeted	Donors	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
Private sector	WB	Private sector development 1(PSD1) Refinance	MOF	1996—
Rural Development		Rural investment service development (RISD) Refinance	MOF	1999—
Export		Export Credit Refinance	MOF	Autumn 2009 —
SMEs		Mobias Banca - Senior Loan SMEs	TD/MF	Sep.2008—
SMEs	EBRD	Moldova Financial Sector Framework SMEs	MOF	Jan.2008—
		Moldova Microlending Framework (MMF) Mobiasbanca · Banca Sociala for SMEs	MOF	Feb.2006—
		ProCredit Moldova Micro-small businesses	MOF	Feb. 2005—
SMEs	KfW/Germany	A Credit Line for Micro-Enterprise Credit (MEC) SMEs	MEC, MOF	N/A

(Note) In the Refinance Project by WB, Credit Line Directorate outside MOF manages the revolving fund.⁴¹

IFS and EBRD make the refinance through their own PIU instead of Credit Line Directorate. KfW makes also refinance to Procredit Bank for the SMEs at an amount of 6 to 8 MM EUR (8.6-11.4MMUS\$).

5.3.7 Moldovan Capability to Cope with the Foreign Cooperation

(1) ARIA

ARIA is a government body of officials by self finance, famous for the proper approach and the credible accounting. ARIA corresponds to the customers, and it reports appropriately. The 22 staffs are enough number to get orders from the outsides. They will assign several certified consultants to JICA experts. The problem lies in obscure request purpose and 4 fields of expertise. JICA should discuss more in details.

(2) Two-step Loan by Japan

JICA has no experience of two-step loan here, but international organizations or bilateral donors have already implemented it including bankers' training. Commercial banks in Moldova have experiences of the refinance for agriculture, rural development, SMEs, and

⁴¹ Interview to MOF on July 10, and interview to Banca De Economi on July 8

management of revolving funds, which means capability of commercial banks is quite high for donors' refinance. JICA can select the following two ways: (i) Credit Line Directorate, outside body of MOF to determine the interest rate by cost accumulation and to select plural banks by their proposals, (ii) setting own credit conditions with use of own PIU like KfW. Needs for the refinance are high. JICA should have the objectives focusing on the credit purpose like export, SMEs, rural development etc.

WB provided 24 MMUS\$ for Private Sector Development I in 1996, and is planning the same amount of 24 MMUS\$ for Export Credit since autumn 2009.

5.4 Transport Sector

5.4.1 Outline of This Sector

5.4.1.1 Composition and Outlines of the Sector

(1) Transport Structure in Moldova

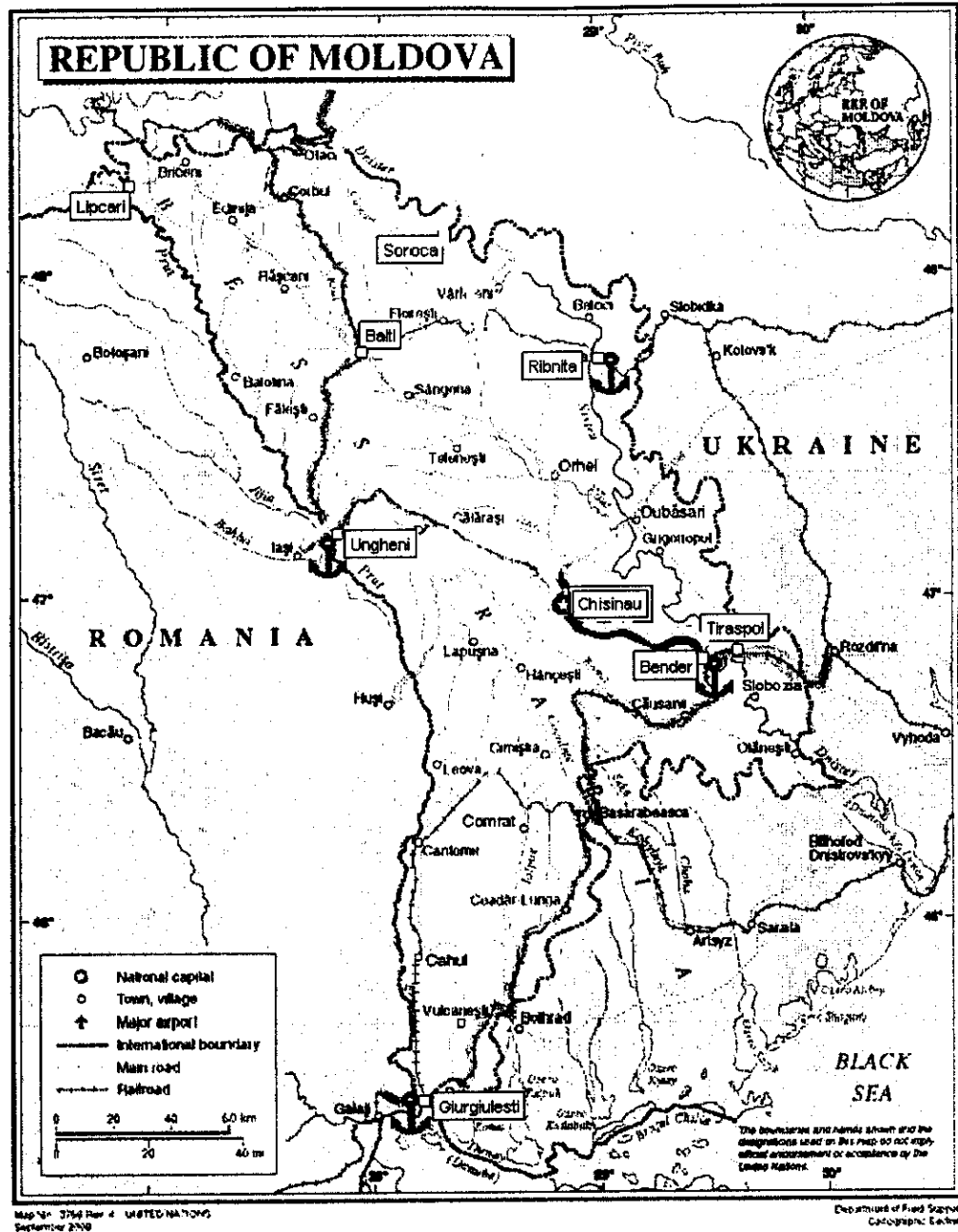


Table 5.4-1 Length of Communication Lines

Unit: km

	Railway	Road	National road	Paved road	Local road	Paved road	Trolley-bus	Waterway
2005	1,139	9,467	3,329	(3,324)	6,137	(5,559)	290	558
2006	1,154	9,467	3,329	(3,324)	6,138	(5,563)	299	558
2007	1,154	9,337	3,329	(3,324)	6,008	(5,467)	306	558
2008	1,157	9,343	3,335	(3,335)	6,008	(5,475)	306	558

Source: NBS "Moldova in Figures 2009"

Table 5.4-2 Transport of Goods

Unit: million tons, million ton-km

	Railway		Road		River		Air		Total	
	mil. ton	mil. ton-km	mil. ton	mil. ton-km	mil. ton	mil. ton-km	mil. ton	mil. ton-km	mil. ton	mil. ton-km
2005	11.7	3,052.9	24.5	2,405.3	0.1	0.4	0.0	1.1	36.4	5459.6
2006	11.1	3,673.2	27.0	2,567.1	0.1	0.6	0.0	1.3	38.3	6242.2
2007	11.8	3,120.2	28.8	2,742.3	0.2	0.6	0.0	1.3	40.8	5864.6
2008	11.0	2,877.6	28.6	2,965.9	0.2	0.8	0.0	1.2	39.8	5840.6

Source: NBS "Moldova in Figures 2009"

Table 5.4-3 Transport of Passengers

Unit: million passengers, million passenger-kms

	Railway		Bus		Taxi		Trolley-bus		River		Air		Total	
	mil. pass.	mil. pass. km	mil. pass.	mil. pass. km	mil. pass.	mil. pass. km	mil. pass.	mil. pass. km	mil. pass.	mil. pass. km	mil. pass.	mil. pass. km	mil. pass.	mil. pass. km
2005	5.0	355.0	105.7	2,058.7	1.0	19.2	204.3	676.0	0.1	0.3	0.4	439.7	316.4	3,548.9
2006	5.3	471.4	109.4	2,206.1	1.1	20.3	201.8	614.8	0.1	0.2	0.4	480.9	318.1	3,793.7
2007	5.6	468.2	103.2	2,475.5	3.4	65.9	206.3	627.7	0.1	0.2	0.4	549.6	319.1	4,187.1
2008	5.8	485.6	109.8	2,594.8	4.8	84.3	205.2	623.2	0.1	0.2	0.5	637.5	325.5	4,425.6

Source: NBS "Moldova in Figures 2009"

Communication lengths have not been expanded in road, railway, trolley bus and river. National road is paved up to 100% which means almost paved though a part remains actually unpaved. The surface of road is not even due to frequent patching of the maintenance. They do not neglect any holes on road, owing to well maintenance practice.

Cargo transport has not increased in tons base, but increased in ton-km base owing to increase of import and export. Passengers transport is nearly at the same trend, but only trolley-bus has not grown in any base.

(2) Road

Although there are some differences of calculation methods, according to an EBRD report, the road network totals about 10,537km, of which 3,670 km are classified as National Roads³ and the remainder as Local Roads. The road network is structured in a star shape around Chisinau, and the star diagram comprises four large North-South and East-West routes⁴.

¹ NBS :http://www.statistica.md/public/files/serii_de_timp/transporturi/01_Trans_marf_type_2000_2008.xls

² NBS :http://www.statistica.md/public/files/serii_de_timp/transporturi/01_Trans_marf_type_2000_2008.xls

³ P6, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

⁴ MIEPO's Foreign Investment Guide "Why Investment in Moldova?"

There are 360 track companies, and 60 bus companies. There is no parking, restaurant, motel, medical services in any road.

With Romania's accession to the EU, Moldova could become an important gateway between the EU countries and the CIS ones. Moldova concluded the free trade agreements with the CIS countries so that the traditional CIS markets combined with better access to EU markets and this flows make Moldova more attractive for foreign direct investment. It would also increase the importance of its transport networks, particularly of the Pan-European Corridor IX - which crosses Moldova from east to west, linking Romania with Ukraine and Russia - and its north-south road axis⁵.

Pavement rate in 2006 is shown in Table 5.4-4. The pavement rate is higher in the North, the Center, and Chisinau, but it is comparatively lower in the South and Gagauzia Autonomy. Moldova has land space enough to lay roads while villages are located far from the road. The donors did not start rehabilitation works in which it would be possible to expand the road to 4 lines in the project, the detail of which is described in 5.4.6.4.

Table 5.4-4 Pavement Rate (2006)

Note ⁶	unit	North	Center	South	Chisinau	Gagauzia Autonomy	Average
Share of Roads with Rigid Coating within Total Public Roads	%	94	93	84	96	78	91

Source: p93 "Law On approval of the National Development Strategy for 2008-2011", December 2007

(3) Railways

The working network has a length of 1,154km of railway and, with sidings and junctions included, 2,318 km⁷. The freight turnover has increased from the bottom of 1999 to 2007; however, the passenger turnover has been positioned at a level of the bottom of 1999⁸.

The railways transport construction materials such as iron ore and coal to Mital iron mill located in Galati in Romania since the end of June 2009, from Odessa Port in Ukraine passing through Transnistria⁹. It is said that the center of railway transport has moved to Chisinau from the traditional Ungheni¹⁰.

The railways are of a single line at gauge of 1,520mm of the Russian standard, and the train is driven with a diesel locomotive. The locomotives, passenger coaches, and freight carriages are well maintained. Due to not-smooth railways, the railways are operated at average speed of 43km/h. The trains are not used mostly for the commuting, and most of the passengers are traveling internationally with the trains. There are two-time trains per day to go to and come back from Moscow, one-time train per day for Minks, Bucharest and Galati¹¹. Cargo transport by railway is not regular in schedule while many are of international transport.

⁵ P24, EBRD's Strategy for Moldova <http://www.ebrd.com/about/strategy/country/moldova/strategy.pdf>

⁶ The area is referring to 1.1.3.

⁷ MIEPO's Foreign Investment Guide "Why Invest in Moldova?"

⁸ p9, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

⁹ Interview to CFM on June 30

¹⁰ Interview to CFM on June 30

¹¹ Interview to CFM on June 30

(4) Air Transportation

Number of passengers traveling by air has increased at an annual growth rate of 20% during 2004 to 2008¹².

Number of direct-destination operating from Moldova, in the nominated period has increased at an annual growth rate of 25%¹³

There are four airports, but actual operation is made only at Chisinau with runways at a length of 3,600m.

Belti (2,500m) in the north, Malculesti (located 35km east from Balti, specialized for air cargo owing to nomination for FEZ), Cahul (1,800m) in the south are not operated yet due to little passengers. Seven international air companies are operating between Vienna, Bucharest, Istanbul and Rome but no direct lines between main cities in the EU countries.

(5) Water transportation

Moldova is of a landlocked country and water is active owing to Dniester river in the east side and Prut river in the west. Crossing river Prut has been strictly controlled since the pre independence period, but passengers and cargoes are crossed. In the Dniester river in the east, crossing sometimes stopped due to the dispute in Transnistria. Among them, Giurgiulesti Port at a length of 500m in Danube River in the south has been developed by private sector, and is expected to become the center of navigation in future¹⁴. At a moment, a passenger boat is under operation between Istanbul once a week.

In line with Giurgiulesti port construction, the naval transport has made the following qualitative development during the 2004 to 2008¹⁵:

- Moldova obtained gateway to the Black Sea
- An infrastructure was created in order to develop the naval transport
- Moldova initiated and elaborated regulations in naval transport field
- Moldova elaborated the concept of naval transport development
- Moldova has joined several international agreements and conventions¹⁶

Giurgiulesti port located along Danube river is developed by a Dutch private company (Danube Logistics SKL), which has constructed gain storage, oil tanks and served potential companies in FEZ according to the contract with MoEC. This is a case of private sector development of infrastructure.

5.4.1.2 Issues to Be Solved in the Sector

(1) Road

Moldova was independent in September 1990, but Transnistria whose territory is located between Dniester river and border with Ukraine declared the independence. The negotiations are continuing, but Russian army stays after pulling back date also. As a result, passing through Transnistria is of a big barrier to trucks and railways. International trades are conducted passing through Ukraine in the north of Moldova, and passing through Romania in the west of Moldova.

¹² P13, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

¹³ P13, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

¹⁴ Interview to TA, MCTD on July 2.

¹⁵ P11, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

¹⁶ Such as available port, facilities, navigation rules, and actions and compensation at accidents

Moldova's road infrastructure has suffered from years of under-investment and has significantly deteriorated with patched work by several remount of holes. Substantial investment in the infrastructure is urgently needed if Moldova is to prevent further deterioration and to take advantage of its potentially favorable location¹⁷. The donors are concentrating rehabilitation on the current road, and don't care for new investment projects at a moment.

Moldova is not an isolated island but in international transportation system. According to AITA, there are a) e-declaration, b) EORI code given less than three transit countries, c) A lot of visa documents (15- 20 pages), for international transportation to enter EU from CIS, besides Moldovan domestic bureaucratic procedures. AITA is suffered from problems of delay of road rehabilitation and finance much more than official approval and license of transportation business.

The former president instructed that the governmental rehabilitation of road would be the superiority in infrastructure. The donors have paid attention to road, but road projects are easy to be corrupt, due to a large amount of money. WB participated in one project and EBRD did in two. WB has finally cancelled in December 2008, due to higher prices in the bidding after they disqualified an Italian company on the ground of stopping construction works on the way. EBRD also cancelled one of two projects as resulted from the similar problem in January 2009, but they are on the way of bidding for remained one. EIB will start construction of R3 with successful Finland bidder.

Six (6) tons are popular to the upper limit of truck axel weight here (11 tons in EU). Cement transport from Rejina is usually overloaded and the government overlooked this fact, as the result road is destroyed extremely. WB requested to prepare legislation on this aspect. The government prepared the limitation of loading on truck axel weight, but many cases are overlooked. Finally WB requested stopping pass of trucks which loaded more than 6 tons¹⁸.

(2) Railways

The railway cannot connect with EU due to the Russian gauge. It is necessary to reopen diesel-multiple unit train circulation on the route Ungheni - Chisinau on double-track railway, providing the safety and security of train operation, the integrity of rolling stock, as well as the safety of life and health for passengers¹⁹, with the hope for the modernization and the integration to EU

Moldova's rail-network infrastructure has suffered from years of under-investment and has significantly deteriorated. Substantial investment in the infrastructure is urgently needed if Moldova is to prevent further deterioration and take advantage of its potentially favorable location.

5.4.2 Administrative Organizations, Bodies and Companies Related to the Sector in Moldova

5.4.2.1 Administrative Organizations, Bodies and Companies Regarding Plan, Construction and Completion Project

(1) Transport Agency of MCTD (TA)

MCTD is a new ministry to absorb the functions by the former Ministry of Transport and Road Management in 2008. Their responsibilities are legal arrangement, inspection / audit

¹⁷ p6, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

¹⁸ Interview to WB on July 7

¹⁹ Railway of Moldova (July 11, 2008): <http://www.railway.md/en/>

and management of policy implementation for big projects in infrastructure but smaller projects are put in charge to individual project²⁰.

There is Transport Agency in the ministry, responsible for policy and regulation except road. There are following implementation bodies which are highly independent.

- 1) State Road Administration (SRA)
- 2) State Railway Authority of Moldova (CFM)
- 3) State Civil Aviation Administration (CAA)
- 4) Giurgiulesti International Free Port (GIFP)

5.4.2.2 Administrative Organizations, Bodies and Companies Regarding Operation, Maintenance and Management of Project

(1) State Road Administration (SRA)

SRA is responsible for government activities on road. Each Project Implementation Unit (PIU) is established in SRA. SRA also implement rehabilitation of road besides planning, design and construction.

SRA is self financed body. The road fund is composed of taxation of automobile holders, import tax on oil, testing revenue of road materials and road budget. SRA is managing multiple usages covering maintenance expenditure and newly construction one. WB tries to separate this accounting for newly construction and maintenance separately²¹.

(2) State Enterprise of the Railway of Moldova (CFM)

CFM is a monopoly of state-owned railway enterprise. The services by CFM are explained as follows at the internet-web site of CFM²²:

- Freight Transportation
- Passenger Transportation
- Rules for rendering services for passengers, luggage, freight, and cargo-luggage for personal usage
- Register of persons with privileges on transportation information services

CFM is self finance body to procure railway equipment and to repair. The buildings of HQ and Chisinau station are splendid. CFM employs around 12,000 people and has been going through a progressive but extended period of reorganization²³.

Chisinau station was old, constructed in 1848 but renovated recently. This is only for passengers. Cargo station is located in south.

5.4.2.3 Others

(1) State Civil Aviation Administration of Moldova (CAA)

The CAA is responsible for the following²⁴:

- Issuance of the authorizations for execution of the scheduled and non-scheduled flights;
- Drafting and implementation of the international agreements in the field of civil aviation;

²⁰ Interview to MCTD on July 2

²¹ Interview to WB on July 7

²² Railway of Moldova: <http://railway.md/en/>

²³ MIEPO's Foreign Investment Guide "Why Invest in Moldova?"

²⁴ Civil Aviation Administration of Moldova: <http://en.caa.md/responsibilities>

- Control, issuance, validation, suspension and revocation of the Airworthiness certificates of the aircraft and other aeronautical engineering;
- Certification and monitoring of airdromes operation (airports) and of other services, as well as ground systems;
- Performance of the investigations in case of accidents and incidents happened on the territory of the Republic of Moldova (RM) and participation to such investigations in other states, in case the aircraft is registered in the RM;
- Drafting, coordination and implementation of the national aeronautical security program;

(2) Giurgiuesti International Free Port (GIFP)

The following information is disclosed at the web site of GIFP²⁵

- Danube Logistics, the general investor and operator of GIFP, offers its clients, including residents of GIFP's industrial free zone, a wide range of services
- Logistics Services: Transshipment, storage, distribution and other transportation services for oil products, bulk dry cargo, containerized cargo and general cargo
- Port Services: Vessel Services include but are not limited to the supply of potable water and food, agent services, tug boat services, piloting services, communications services and waste removal services, etc.

Danube Logistics SRL which constructs and operates GIFP is a private company of 20% by EBRD and 80 % by EASEUR BV of Netherlands. The Danube Logistics SRL has contracted with MoEC for 25 years on construction and management of GIFP, such as oil tanks (64 thousand m³ of 8 tanks total), cargo terminal (bulk cargo, container pier, general cargo pier, 8 grain silos, and warehouse), and Industrial Free Zone (120 ha). They completed the road, water and electricity in the territory. The Industrial Free Zone is authorized for FEZ (Free Economic Zone) by MoEC, and they are subscribing potential companies in this Zone. The port facilities may delay due to the Global Economic Crisis²⁶, and are under construction of port. The maintenance will happen in future, but this Danube Logistics SRL will, of course be responsible for it through collection of money from users.

5.4.3 Strategy by the Moldovan Side to Develop the Sector

(1) Road

The Opportunities and Objectives of Auto Transport are explained in NDS 2008-11 as follows²⁷:

- Renovation of road infrastructure
- Development of Pan – European corridor and axes
- Renovation of rolling park
- Development of auto station infrastructure
- Construction of goods terminal in free economical zone
- Development of network and infrastructure of technical repair station
- Development of expedition services

(2) Railways

Railway Transport Code of the Republic of Moldova (nr. 309 – XV dated 17.07.2003²⁸)

²⁵ GIFP, Our Services: <http://www.gifp.md/en/services/index.html>

²⁶ Interview to Danube Logistics on July 2.

²⁷ p18, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

²⁸ p16, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf

The Opportunities and Objectives of Railway Transport are explained in NDS 2008-11 as follows²⁹:

- Development of railway network infrastructure
- Electrification with railway gauge modification
- Reorganization of railway structure
- Renovation of the railway park, in order to increase the capacity of transportation
- Construction and modernization of goods terminals
- Development of TRACECA corridors
- Modernization of repair depots of the rolling park
- Development of multimodal transport³⁰

(3) Air transport

“Civil Aviation Development Strategy 2007-2012” was approved by Government Decision nr.987 of 30.08.07³¹

(4) Waterway

The Opportunities and Objectives of Naval Transport are explained in NDS 2008-11 as follows³²:

- Infrastructure development of Giurgiulesti Port
- Modernization of inland river ports
- Increase and modernization of the national fleet³³
- Development of transport network in BSEC region
- Increase of transportation capacity
- Development of multimodal transport

5.4.4 Effect by the Global Economic Crisis to the Sector

The followings are results of interview with AITA, CFM and CCIRM.

(1) Transport Decline and Alternative Effect by Saving

Transport declined by 20-30% between 2008 and 2009. For saving cost, cargoes moved to train from trucks, and passengers use more trains than airplane.

(2) Tight Finance

Truck companies used to borrow money at an interest rate of 10-15% from the banks, but they stopped to buy new trucks due to an interest rate more than 20% in 2009.

(3) Downward Profits

Gross profit ratio for truck companies enjoyed 40%, however it comes down to only 5 %, which is not enough for new investment³⁴.

²⁹ p19, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf
³⁰ Multimodal transport is a linkage system in plural transport agencies of road, air, sea/river and railway for establishment of effective transport system and creation of better transport environment.
³¹ Civil Aviation Development Strategy 2007-2012:
http://en.caa.md/Sites/caa_en/Uploads/CAAStrategy.9FC54907EC6840ED9729735BD48AEC27.pdf
³² p20, CEI's Transportation System of Moldova: http://www.ceinet.org/download/sef_2008/11_CEBOTARI.pdf
³³ National fleet is necessary for border security in river.
³⁴ Interview to AITA on June 30

5.4.5 Donor's Strategies to Develop the Sector

Note: Donors' projects are described in 5.4.6.4.

5.4.5.1 International Aid Organizations

(1) WB

Reduced road transport costs for road users in Moldova by improving the condition and quality of its road network and the way it is managed³⁵.

(2) EBRD/EIB

To enable Moldova to take full advantage of its new EU neighborhood status, the Bank will give priority to infrastructure projects that promote regional integration and interconnection with neighboring countries³⁶.

5.4.5.2 Bilateral Donors

(1) MCC

In order to support economic growth and poverty reduction by reducing operational costs, losses of time, and missed profits in the transport of goods and services. The MCC's project would improve profitability and marketability of goods carried on the roads, improve access to social services among communities serviced by the roads, and improve road safety³⁷.

5.4.6 Projects Implemented or Planned in the Sector

(1) Progress Status of the National Action Plan

The action plans in NDS are as follows³⁸.

Table 5.4-5 Action Plans Related to the Transport Sector and Progress Status Thereof

NDS No.	Objects Targeted	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
common	In June 2009, NAPs are implementing as schedule in 2008 ³⁹ .			
No.81	Railway	Build railway connection Cahul – Giurgiulesti The railway is up to Cahul, they extended up to Giurgiulesti port (July 2008) . However, this new railway does not used yet.	MCTD CFM	2008
No.82	Road	Rehabilitation of road stretches: Balti - Sarateni – Chisinau – Orhei –Chisinau -Hancesti EU, WB and EBRD have promoted road rehabilitation projects in R14 and M2. cancelled its project and one of two projects at the end of 2008, and January 2009.	MCTD SRA	2008-2011

³⁵ p13, World Bank in Moldova, 15 Years of Partnership

³⁶ <http://www.ebrd.com/about/strategy/country/moldova/index.htm>

³⁷ Moldova Update on Progress: <http://www.mcc.gov/mcc/bm.doc/qsr-dev-moldova.pdf>

³⁸ NDS: Republic of Moldova: Poverty Reduction Strategy Paper-National Development Strategy Report for 2008-2011

³⁹ Interview to MoEC on July 8

No.83	Road	Renovate 56,6 km of roads on the stretches: Rezina - Orhei-Calarasi - Chisinau-Cimislia-Vulcanesti-Giurgiulesti on the border with Romania - Ustia - Molodovata - Anenii Noi – Causeni-Stefan Voda on the border with Ukraine SRA will rehabilitate Rezina - Ohhei, EBRD will do Orhei - Chisinau, and EIB, SRA and MCC will do Chisinau - Giurgiulesti. EBRD canceled a part of Orhei - Chisinau, but EIB started construction. MCC will finalize the projects in autumn 2009.	MCTD SRA	200
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5.4.6.2 Projects Requested for Japanese Assistance from Moldova

Requested projects are summarized in following table.

(1) Yen Loan 1) Improvement of Road and Roadside Services for Section 5 of Chisinau Bypass Project

1.	[Project Objective and Expected Benefits] To complete important route to Moscow, Kiev and Romania through rehabilitation of remaining part of east-west corridor IX which promotes export and passengers traffic.
2.	[Contents of Cooperation] This is rehabilitation of a part of M21, but duplicated with MCC's project. If MCC decided to cover this portion, SRA will be prepare alternative rehabilitation project of Balti-Chisinau 114km, 110 MMUS\$ in M14. In order to implement Yen loan project effectively, technical cooperation is necessary to operation of equipment and management.
3.	[Background Information] The former president put the highest priority on road. Moldova requested the eastern 10 km part from Chisinau to JICA, because it is not clear yet whether MCC will pledge or not. The western part from Chisinau and the border with Rumania completed with their own budget. The Ukraine part of this corridor is well arranged look like autobahn in Germany. Completion of this corridor will encourage flow of commodities and passengers.
4.	[Planned Area to Implement the Project] Eastern 10km from Chisinau
5.	[Facilities or Services Targeted in the Project] 1)D/D, 2) rehabilitation SRA is superior in implementation. Many donors join road rehabilitation projects. Only 10km of shorter part of road may make JICA's contribution out of sight.
6.	[Expected Project Cost] US\$27.2MM (JICA already received proposal.)
7.	[Expected Schedule to Implement the Project] not determined yet.
8.	[C/P and Organization to Implement the Project] SRA
9.	[Relation to the Environmental Impact Assessment] Environmental impacts such as noise and vibration will be necessary.
10.	[Reference] Road map (Attachment 5.4-1)

(2) Yen Loan 2) Electrification and EU standard rail gauge with double-rails

1.	[Project Objective and Expected Benefits] They will encourage trade by lower transport cost by modern railway.
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2.	[Contents of Cooperation] 1) F/S, 2) D/D, 3) rails, locomotives, carriages, 4) construction In order to implement Yen loan project effectively, technical cooperation is necessary to operation of equipment and management.
3.	[Background Information] Moldova's gauge is of the Russian standard (1,520mm) transport. Passengers and cargoes are transported to CIS, EU and Vulcan by diesel locomotives on a single railway at an average speed 43km/h. A Czech private consultant submitted proposal of titled contents at a cost of 70MM US\$ in 2007, this project remains nothing due to no positive answer from the Moldovan government to 4MM US\$ payment requested for the photos. This project will contribute Moldova on the EU integration, through enhancement of railway transport of electrification between Chisinau and Ungheni, with use of the EU standard of gauge (1,435mm) and double rails.
4.	[Planned Area to Implement the Project] 90km between Chisinau and Ungheni. Transport Agency desires to extend only electrification up to the border of Ukraine, if possible.
5.	[Facilities or Services Targeted in the Project] 1) F/S, 2) D/D, 3) Rails, locomotives, carriages, 4) Construction Maintenance of carriages and passenger stations is quite well. Recently new railway was constructed by a joint company of CFM and a private company to connect between Cahul and Giurgiuesti International Free Port along the river Danube. Since any donors have not handled this project up to now, this can show JICA's contribution as a symbol for acceleration of Moldova's integration to EU.
6.	[Expected Project Cost] 70MM US\$
7.	[Expected Schedule to Implement the Project] Not determined
8.	[C/P and Organization to Implement the Project] CFM
9.	[Relation to the Environmental Impact Assessment] Environmental impacts such as noise and vibration will be necessary since F/S stage.
10.	[Reference] There is a proposal by Czech consultant at CFM.

5.4.6.3 Cooperation Made by Japan

According to "Fact sheet on Moldova support by Japan, March 2009 by Embassy of Japan in Ukraine"⁴⁰(of English version), Japan provided only one cooperation through Japan Social Development Fund (World Bank) in Assistance to Moldova through international organizations up to now.

- 2007: Second Poverty Reduction Support Credit (880,000 US\$) and Road Sector Program Support Project (725,000 US\$)

5.4.6.4 Projects by the Other Country Donors

Table 5.4-6 Projects by the Other-country Donors Planned or Implemented

Objects targeted	Donors	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
Road	WB (note 1)	Road Sector Program Support Project	SRA	March 2007- June 2006
		Road rehabilitation and strengthening SRA		
	EBRD (note 2)	Moldova Road Rehabilitation Project		April 2007 -
		Road rehabilitation for east-west corridor and north-south line		

⁴⁰ Fact sheet of English version on Moldova support by Japan, March 2009 by Embassy of Japan in Ukraine

Road	EIB (note 3)	Rehabilitation of Trunk Road Network along Main East-west and North-south Routes	SRA	June 2007 -
		Road rehabilitation from Chisinau to border of EU		
	MCC/USA (note 4)	Rehabilitation of the Road Network		November 2008-
		Equipment provision on analysis and technical survey		
		M2 Chisinau-Soroca-(Ukraine)		
		Road rehabilitation 95.8km 50.72MM US\$		
		R9 Soroca-Unguri		
		Road rehabilitation 37.3km 29.0MM US\$		
		M14 Balti-Criva		
		Road rehabilitation 133.0km 178MM US\$		
		M14 Brest-Chisinau-Tripol-Cuciugan		
		Road rehabilitation 72.0km 22.34MM US\$		
		M3 Comrat-Giurgiulesti		
		Road rehabilitation 122.0km 35.39MM US\$		
		M21 Chisinau-Dubasari		
		Road rehabilitation 31.0km 19.33MM US\$		
		Modernization of road section of the IXth Corridor on Chisinau bypass		
		Request road rehabilitation M21 to MCC and JICA		Autumn 2009-
Airport	EBRD/EIB	Chisinau Airport Modernization Project	CAA	June 2007-
		Modernization of Chisinau air terminal Reconstruction of terminal in December 2008[10MMEUR (14.3MMUS\$)]. Runway, apron and taxiway concluded the contract with EIB/EBRD and start construction since may 2010 (45 MMEUR) . At a moment Moldova in under review of its D/D ⁴¹ .		

Note1: WB planned to open tender for 45.7km of Singerei-Sarateni (estimated price for contract: 32.5MMUS\$) but canceled in December 2008 in the stage of bidding due to higher prices of three companies of one Australian company and other two, after disqualifying Italian company which had stopped work before due to problems of sub-contractors.

WB sent a specialist to SRA for road maintenance. They are working on the annual budget of 30MM US\$. 2009 year budget for road rehabilitation is 16MMUS\$, and the disbursement up to July is only 5MMUS\$ due to cancellation of 11MMUS\$ road rehabilitation work.

Note 2: EBRD also cancelled to open tender for 10km length of Chisinau—Orhei in M2, one of the road rehabilitation projects on the similar reason of WB, but they will open tender for the northern project.

Note 3: A Finland company won a bid in January 2009 for EIB road rehabilitation project of 10km length of Chisinau-Hincesti in R3.

Note 4: MCC selected 5 routes for road rehabilitation, and will specify intervals and distances in the mid of August 2009 when new government will start after election. The amount of grant for

⁴¹ Interview to CAA on July 1

these five projects will become more than 500MMUS\$, so that MCC are calling for other donors to participate in.

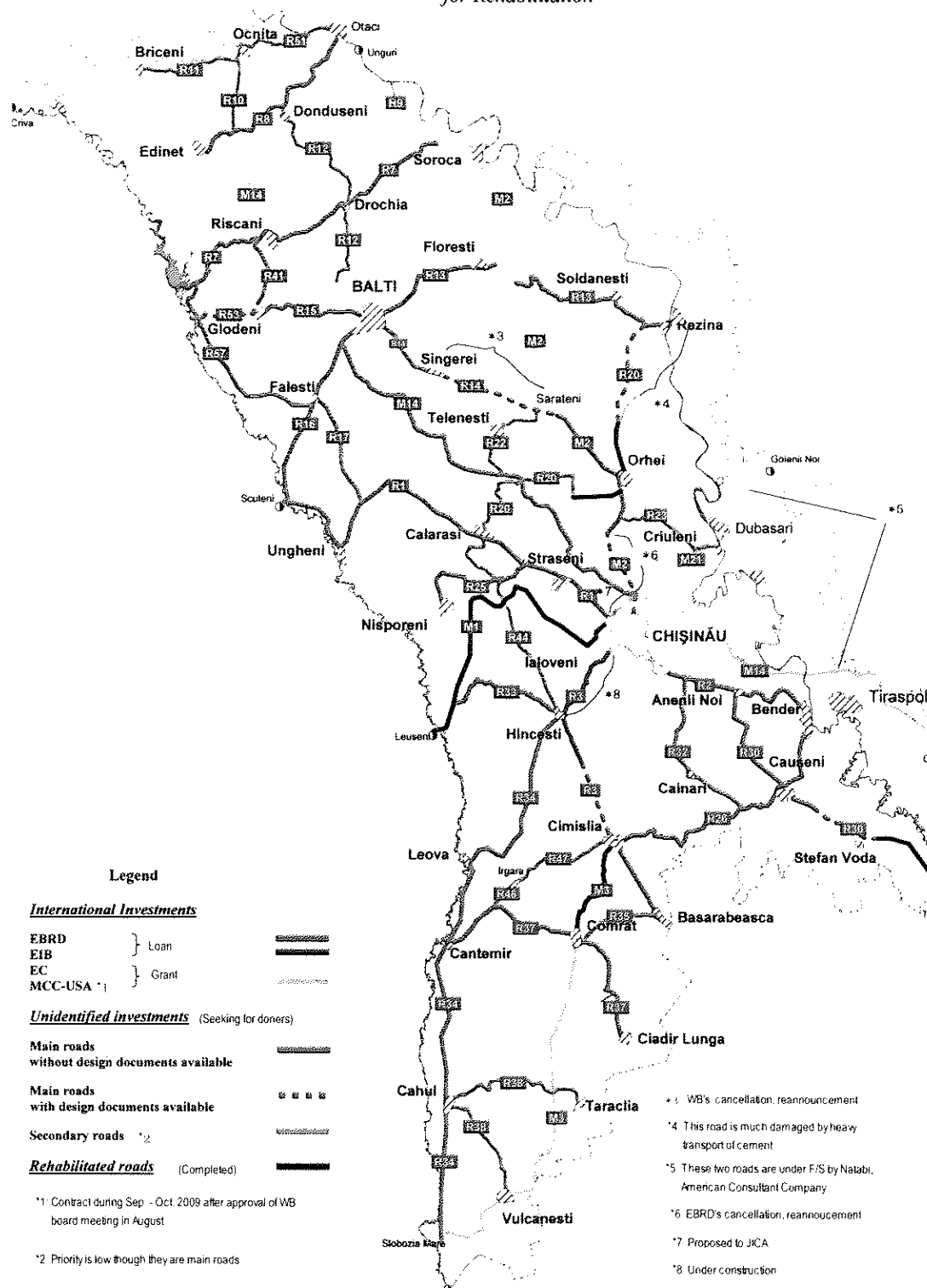
Note 5: The following is proposed by private consultant besides above road rehabilitation.

Objects Targeted	Projects and contents	Ministries
Railway	Rehabilitation and Electrification of a 211 km railway line the border with Ukraine – Bender –Chisinau – Ungheni – the border with Romania (Corridor IX and CE-95 main line on the territory of Moldova)”	MCTD CFM
	Czech consultant proposed in 2007. But there is no donor for this project.	

5.4.7 Moldovan Capability to Cope with the Foreign Cooperation

- (1) JICA has not experienced transport projects here. They need to have a meeting with MCTD, SRA and CFM beforehand more in detail.
- (2) SRA is a self finance body without any political intervention. They have a capability to expand or rehabilitate road in large scale, but limitation of fund. They have rehabilitated road quite well. The human resources are reliable according to WB. WB is also sending a technician in a scheme of technical assistance.
CFM is also self finance body but under restructuring of labors. They cannot invest for extension of railways in large scale, but they renovated stations with their own budget. WB recognizes they have to support in the railway, but at a moment they are concentrated in road now under the budget restriction. At a moment there is no donor to support railway.
- (3) In the implementation of any projects, MCTD and MLPA desire capacity building due to insufficient number of staffs.

National Roads for Rehabilitation



⁴² Source: MCTD "Programs for Road Rehabilitation Extract from the Land Transport Infrastructure Strategy for 2008-2017"

Attachment 5.4-2

National Roads for Rehabilitation

Nr.	Road No.	Road Name	From km	To km	Length, km	Cost of works, million USD
1	2	3	4	5	6	7
I. Unidentified Investments						
Main Roads						
1	M2	Chişinău - Soroca - border with Ukraine (Chişinău - Păreşeni section km 5.7 - 26.2)	5.7	26.2	20.5	15.70
2	R3	Chişinău-Hînceşti-Cimişlia-Basarabesca km 41-66 (Hînceşti-Cimişlia section)	41.0	69.0	28.0	23.40
3	R14	Bălţi - Sărăreni, km 21 - 65.7	21.0	66.7	45.7	32.50
4	R20	Rezina-Orhei-Călăraşi km. 0-29 (Rezina-Orhei section)	0.0	29.0	29.0	32.70
5	R30	Anenii Noi-Căuşeni-Ştefan Vodă-border with Ukraine km. 47-66	47.0	66.0	19.0	13.70
6	R34	Glodeni-Cosaci-R57	0.0	22.8	22.8	22.20
7	M14	Brest-Briceni-Chişinău-Tiraspol-Odesa (Bălţi - Chişinău section)	24.0	838.0	114.0	38.85
8	R1	Chişinău-Ungheni-Suljeni - border with Romania	9.0	127.0	118.0	53.01
9	R2	Chişinău-Bender	17.0	59.0	42.0	24.56
10	R3	Chişinău-Hînceşti-Cimişlia-Basarabesca (Cimişlia-Basarabesca section)	64.0	95.0	31.0	11.58
11	R7	Soroca-Drochia-Cosloşti - border with Romania	0.0	102.0	102.0	34.26
12	R8	Otuc-Edreţ	0.0	53.0	53.0	15.15
13	R13	Bălţi-Şoldăneşti-Rîbnita	0.0	102.0	83.0	29.50
14	R15	Jălt-Glăci	0.0	35.0	33.0	8.69
15	R10	Bălţi-Făleşti-Suljeni	0.0	60.0	60.0	18.29
16	R25	Bucova-Nisporeni-Bărboieni (Bucova-Nisporeni section)	0.0	37.0	37.0	13.76
17	R26	Tiraspol-Căuşeni-Cimişlia (Căuşeni-Cimişlia section)	0.0	79.0	79.0	32.72
18	R30	Anenii Noi-Căuşeni-Ştefan Vodă - border with Ukraine (Anenii Noi-Căuşeni section)	0.0	34.0	34.0	11.48
19	R33	Hînceşti-Lăpuşna-M1	0.0	37.0	37.0	13.05
20	R34	Hînceşti-Leova-Cahul-Stobizia Mare	0.0	167.0	167.0	51.96
21	R37	Coada-Lunga-Comrat-Cantemir	0.0	82.0	82.0	22.55
Total					1237.0	521.87
Secondary Roads						
1	R12	Ocnita-Iasen	0.0	20.0	20.0	6.67
2	R11	Ocnita-Hînceşti	0.0	35.0	35.0	12.85
3	R12	Dancușeni-Drochia-Pelina-M14	0.0	85.0	55.0	19.32
4	R17	I Aliești-Mrîtița	0.0	32.0	32.0	11.73
5	R20	Rezina-Orhei-M14 Arși (Valea - Călărași section)	67.0	112.0	45.0	14.23
6	R22	M14-Telenești-Româș	0.0	29.0	29.0	9.30
7	R23	Chișinău-Urănești-Ivanca	0.0	32.0	32.0	10.49
8	R32	K2-Puhoci-Căinari-Sălcuța	0.0	52.0	63.0	14.26
9	R35	Basarabesca-Comrat	0.0	26.0	25.0	7.86
10	R39	Vulcănești-Cahul-Taracița	0.0	82.0	82.0	24.73
11	R41	R7-Lupăr-Glăci	0.0	19.0	19.0	6.53
12	R44	Călărași-Lozova-Hîncești	0.0	84.0	84.0	23.55
13	R46	Ploștea-Iargara	0.0	10.0	10.0	3.57
14	R47	Cimișlia-Iargara-Sărata Nouă (Cimișlia-Iargara section)	0.0	32.0	32.0	11.16
15	R51	Orhei-Ornița	0.0	26.0	26.0	8.92
16	R57	R7-Branșto-Călinești-Făleşti	0.0	56.0	56.0	17.10
Total					626.0	202.30
TOTAL I					1863.0	724.17
II. Foreign Investments						
European Bank for Reconstruction and Development						
1	M2	Chişinău - Soroca - border with Ukraine (Păreşeni - Sărăreni section)	23.2	71.2	48.0	21.78
European Investment Bank						
2	R3	Chişinău-Hînceşti-Cimişlia-Basarabesca	22.0	40.0	18.0	23.93
European Commission (Neighbourhood Investment Facility grant)						
3	R14	Bălţi - Sărăreni	10.0	21.0	10.0	13.22
Millennium Challenge Corporation (USA)						
4	M2	Chişinău - Soroca - border with Ukraine (Sărăreni - Soroca section)	71.2	187.0	55.8	60.72
5	R9	Soroca-Anenii Noi-Mochniș-Pogodisli (Soroca - Ungheni section)	0.0	37.3	27.3	29.00
6	M14	Brest-Briceni-Chişinău-Tiraspol-Odesa (Chişinău - Bălţi section)	501.0	724.0	123.0	48.80
7	M21	Chişinău - Dubăsari - border with Ukraine	0.0	37.0	31.0	18.30
8	M5	Chişinău-Cimişlia-Vulcănești-Gurgiulești-border with Romania (Comrat - Gurgiulești section)	99.0	220.0	122.0	35.35
9	M14	Brest-Briceni-Chişinău-Tiraspol-Odesa (M2 section - Cluj-Bucur)	838.0	910.0	72.0	22.34
TOTAL II					564.3	262.19

Note:

5.5 Waterworks Sector

5.5.1 Outlines of the Sector

5.5.1.1 Composition and Outlines of the Sector

The waterworks sector is composed as follows: (i) water supply, (ii) wastewater treatment, (iii) irrigation. The irrigation sub-sector is described in the section 5.2.

(1) Diffusion of Waterworks in Moldova

The development status of water supply system and sewerage system (Waterworks) in Moldova in 2006 are presented in the National Development Strategy (NDS)¹ as illustrated in the Table 5.5-1. The development rates of the water supply system and the sewerage system are 94% and 89%, respectively, higher much than those of the rural areas at a rate of 21 to 28% in the water supply system and 14% to 28% in the sewerage system. The north region and the south one have many residents who can not access to the systems, which accounts for about 59% out of the total residents in Moldova.

Table 5.5-1 Development of Waterworks by Region in Moldova

		Unit	North	Central	South	Chisinau	TAU Gagauzia	Total
Residential population	(A)	1,000	1,023	1,070	548	780	160	3,581
Water Supply Systems								
Share of Dwellings with Water Supply System (Regional Average)	(B)	%	20.7	20.5	26.1	94.0	27.8	37.8
Residents of Available for Water Supply System	(C) = (A) x (B)	1,000	212	219	143	733	44	1,351
Residents of Not Available for Water Supply System	(D) = (A) - (C)	1,000	811	851	405	47	116	2,230
Share of Residents of Not Available for Water Supply System, to Total	(F) = (E) + 3,581	%	22.6	23.8	11.3	1.3	3.2	62.2
Sewerage Systems								
Share of Dwellings with Sewerage Systems (Regional Average)	(G)	%	19.7	14.4	21.2	88.9	27.5	33.8
Residents of Available for Sewerage System	(H) = (A) x (G)	1,000	202	154	116	693	44	1,209
Residents of Not Available for Sewerage System	(I) = (A) - (H)	1,000	821	916	432	87	116	2,372
Residents of Not Available for Sewerage System, to Total	(J) = (I) + 3,581	%	22.9	25.6	12.1	2.4	3.2	66.2

Source: "National Development Strategy for 2008-2011, No.295-XVI, December, 2007"

The above-mentioned regions are classified in the NDS as shown in Figure 1.1-1.

1) Water Supply System

Water supply system has developed in Chisinau by CWSC² as follows:³

¹ P93, National Development Strategy for 2008-2011, No.295-XVI, December 2007

² Chisinau Water Service Company ("Apa Canal Chisinau", CWSC)

- a) CWSC supplies water at an annual rate of 50 to 51MMm³, 37MMm³ and 37MMm³ of which are used for the residents and the industry / emergency economic measures, respectively. The water supply network covers currently 800,000 residents out of 1,000,000 ones in Chisinau. Inside Chisinau city it is estimated that about 95 to 96 % of the residents are covered by the network.
- b) As for the residence under construction in the suburb area of Chisinau these years, the residents should construct the water supply and sewerage network by themselves, because CWSC does not do.

The water supply network has developed in Chisinau as described above; however, the network has not developed in the rural area, in which MSIF has constructed the water networks in 115 villages, 8% of the whole ones in Moldova⁴.

2) Wastewater Treatment

The state of wastewater treatment (WWT) in Chisinau is as follows⁵:

- a) The annual volume of WWT is estimated at 6MM m³.
- b) The WWT facilities covers 84 to 85% of the residents in Chisinau.
- c) CWSC owns the following WWT facilities: (i) Old facility at a capacity of 45MM m³; (ii) New facility at a capacity of 1.2MM m³
- d) The old facility has an issue of giving off a bad smell because it is of an open system.
- e) CWSC concluded an agreement with the Netherlands government on the machinery supply of the new WWT facility in July 2009 in cooperation of a grant and a loan, which uses the new technology explained in the Attachment 5.5.2.

In the rural area it is estimated that only 20% of the whole villages make treatment by a central WWT in Moldova⁶.

(2) Water Quality

1) Water Supply Quality

The government recommends to prevent pollution of ground water in the rural area; however, it is difficult to make completely such prevention because toilets are of private properties in the rural area. The legislation stipulates generally that the open wells should be located far 25m and more from a toilet. The pollution caused by agricultural chemicals is confirmed yet; however, the pollution rate has reduced to a half⁷. As for the open well in the rural area, 60% of the wells has water including nitrogen components more than the stipulated in the standard; therefore, it should be improved⁸.

The quality of the water supply services was surveyed in 2005 with the Health Survey on Water Supply and Sources. UNCEF made the Survey on the Quality of Water Sources for Use by School. The Monitoring of Quality of Water Sources in Districts has been made

³ Interview to CWSC on July 7, 2009

⁴ Interview to MSIF on July 3, 2009 It is necessary to make survey on whether each water pipeline has been laid attached to each house or as a common water-supply pipeline.

⁵ Interview to CWSC on July 7, 2009.

⁶ Interview to MENR on July 6, 2009

⁷ Interview to MENR on July 6, 2009

⁸ Interview to NCPM on July 6, 2009

these three years. It is considered that the monitoring covers about 60% of the schools in Moldova⁹.

As for the sterilizing chemical to be used for the water supply, CWSC has studied use of sodium hypo chlorine as an substitute of chlorine¹⁰. (See the Attachment 5.5.2)

2) Quality of Waste Water

The current water-emission standard is so strict to apply it to urban wastewater-treatment facilities that the obeying the standard requires a large amount of money and plenty of time. MCTD and MENR are now drawing up a draft of the governmental decision to moderate the standard to the EU level¹¹.

It is necessary to assign experts to monitor the wastewater quality, and NCPM and MENR are conducting the monitoring with common use of the information¹².

(3) The Tariff for Water Supply and Sewerage

The following example of Chisinau explains the water tariff.

The water tariff is composed of those for the water supply and the sewerage. The water tariff per unit volume is calculated with use of the costs required for the operation and the maintenance, at 9.68 MDL/m³ (0.87US\$/m³) in 2008 by totaling of 6.76 MDL/m³ (0.6US\$/m³) for the water supply and 2.92 MDL/m³ (0.26US\$/m³) for the sewerage. However, the collected bill is at 8.31 MDL/m³ (0.74US\$/m³) composed of 5.68MDL/m³ (0.51US\$/m³) for the water supply and 2.6 MDL/m³ (0.23US\$/m³) for the sewerage, which is lower than the calculated cost of 9.68 MDL/m³, by 1.37 MDL/m³ (0.12US\$/m³) (14% of the 9.68 MDL/m³)¹³. CWSC is run only with collection of the water bill; therefore, CWSC has a considerable amount of accumulated loss, which is an issue to be solved¹⁴.

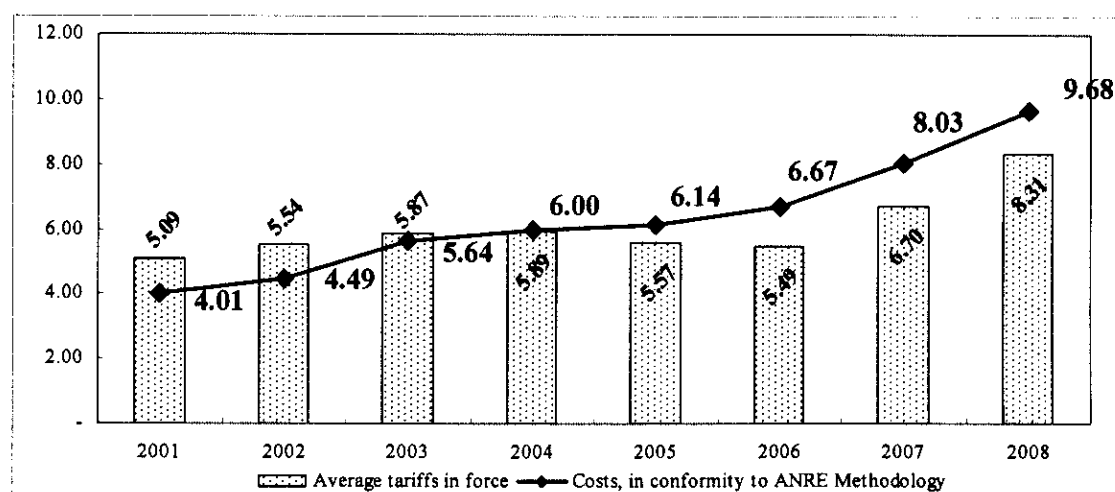


Figure 5.5-1 Water Tariff by CWSC (MDL/m³)¹⁵

⁹ Interview to NCPM on July 6, 2009

¹⁰ Interview to CWSC on July 7, 2009

¹¹ Web Site of OECD

¹² Interview to NCPM on July 6, 2009

¹³ Data given from CWSC

¹⁴ Interview to CWSC on July 7, 2009

¹⁵ Interview to CWSC on July 7, 2009

Other hands, As for the water tariff by the local administrations other than Chisinau, the tariffs by Balti and Orhei are set at rates of 199% and 282% of Chisinau, respectively¹⁶. Some donors recognize that local municipalities have similar issues on setting the tariff to Chisinau and are vulnerable much more than Chisinau¹⁷, which can be solved through setting the tariff at a cost-recovery base¹⁸.

5.5.1.2 Issues to Be Solved in the Sector

In the northern region in Moldova a considerable amount of chemical fertilizers and pesticide had been used. As the results, the ground water used as the drinking water had been polluted to have a bad influence of the resident health. JICA located a priority on improving of the water quality and on developing of new water resources, and then conducted the Study on Water Supply Systems for the Northern Region at 2002 to draw up a master plan to improve the water-supply facilities and to conduct the feasibility study for selecting the priority projects. In the study the following are pointed out as an issue to be solved.

Issues Described in the Study on Water Supply Systems for the Northern Region in Moldova¹⁹

- The administrative structures at both the national level and the local level are markedly inadequate to make permission and monitoring of a water-supply project.
- The organization structure of project-implementation bodies is so complicated as well as premature that it is difficult to run efficiently the bodies.
- Water-supply network and facilities have leakage and loss in addition to the low-level services in the available quantity, the supply pressure and the water quality.
- The implementation bodies have financial issues resulted from the following: (i) a low tariff rate; (ii) a low rate to collect; etc.
- The legislation relating to the water supply is incomplete in the approval and permission, the monitoring, the water-quality control and the body-administration.

The study team confirmed the following through the site survey:

(1) Infrastructure in the Rural Area

The rural area has not developed comparing with Chisinau, in which many facilities and networks are old. Therefore, it can be recognized that the waterworks infrastructure is poor especially in the rural area²⁰. The quality of the water supply at schools in the area should be improved²¹.

In the case where Japan makes cooperation for the waterworks, the projects should be located at the north region or the central one as illustrated in the Table 5.5-1.

(2) Issues Related to the Water Tariff

CWSC has the following problems²².

- 1) According to the ANRE's cost-recovery methodology to calculate the tariff, the tariff should be more than 10.30MDL/m³ (0.93US\$ m³) in order to make the cost recovery; however, CWSC collected the bill at a rate of 8.45MDL/m³ (0.76US\$/m³), which resulted in the accumulated loss to amount 1.58MMMDL (0.14MMUS\$).

¹⁶ Data given from CWSC

¹⁷ Interview to EBRD on July 7, 2009

¹⁸ Interview to EBRD on July 7, 2009

¹⁹ Prepared by JICA in 2003

²⁰ Interview to UNICEF on June 25, 2009

²¹ Interview to NCPM on July 6, 2009

²² Interview to CWSC on July 7, 2009

- 2) The tariffs calculated with the water-use volume metered at a building entrance exceed much the amount that totals the payments made by all the building residents, on which CWSC started to make a study.
- 3) As for the non-payer problem, because the meters set at the person's dwelling are not owned by CWSC, CWSC cannot stop the water supply to the building even though CWSC set the meter at the building entrance.

The local municipalities are recognized that they have worse financial state than Chisinau with a large amount of the accumulated loss explained above^{23, 24}.

In the case where JICA tackles with waterworks projects, the water tariff should be set with the ANRE's methodology at the cost-recovery base.

(3) Technical Discussion on the Wastewater Treatment

WB has a plan to construct a wastewater-treatment (WWT) facility in Soroca in the north region, in which the following three technologies were compared to be adopted: (i) the conventional technology; (ii) Russian technology using oxygen, (iii) European technology of a natural treatment to be located at wet land. Out of three technologies, the method of (ii) is the most expensive at a cost, and the project costs of (i) and (iii) are almost same; however, the operating cost of (iii) is estimated at about one tenth of the cost (i)²⁵. The European donors have recommended to apply the (iii) for the project. Other hand, the Moldovan side takes the (i) from the fear view where such wet system may be frozen in the coldest winter while the region has a population of 43,000 that is not small number²⁶.

JICA should start the WWT project after the above-mentioned discussion is settled, which may take a long time.

5.5.2 Administrative Organizations, Bodies and Companies Related to the Sector in Moldova

5.5.2.1 Administrative Organizations, Bodies and Companies Regarding Plan, Construction and Completion of Project

A project has a procedure as follows: (i) To discuss the project policy among donor candidates at an international level; (ii) To select the donor, (iii) To select the counter-part (C/P) organization to implement the project; (iv) To select the local public administration²⁷.

(1) Apele Moldovei

Apele Moldovei (Agency) is located just under the cabinet²⁸. The Agency is currently developing new national water strategy based on river basin management²⁹. The Agency has a separate department for general water resources management³⁰. Due to budget constraints,

²³ Interview to CWSC on July 7, 2009

²⁴ Interview to EBRD on July 7, 2009

²⁵ Interview to PIU of WB on July 1, 2009

²⁶ Interview to MENR on July 6, 2009

²⁷ Interview to MLPA on June 30, 2009

²⁸ Interview to CWSC on July 7, 2009

²⁹ [http://www-](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf)

[wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf)

³⁰ P27, RISP-II, Additional Financing: [http://www-](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf)

[wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf)

the Agency has limited capacity to implement, oversee or coordinate development programs and to assess their individual and aggregate environmental impact³¹.

(2) Ministry of Environment and Natural Resources (MENR)

The Ministry is the main authority responsible for environmental policy and the management of all environmental issues. In the project MENR assess the project collecting the data for the EIA hereby to inspect, analyze and monitor the environmental state. MENR would start a study on the urban wastewater; then draw up the norms and regulation to implement the administration regarding to natural bodies³².

The National Environmental Fund by the Moldovan government was prepared at 10MMUS\$ in the last year; however, the amount may be short because number of the MENR staffs increased³³.

(3) Aqua Project Institute (API)

API is a state-owned company that makes design and project management under Apele Moldovei in a project regarding waterworks and irrigations. As for the construction in the project, API makes the tendering works and a constructing company would handle the construction³⁴.

API has a principal function to draw up the following strategies:

- Strategies to develop water-supply networks;
- Strategies to develop waste-water reservoirs³⁵

The drafts of the strategies would be presented to the president house via review by Apele Moldovei.

Apele Moldovei considers that Aqua Project Institute has expertise on irrigations and flooding measures³⁶.

(4) Iprocom

Iprocom is another state-owned company that makes design and project management under Apele Moldovei in a project regarding waterworks and irrigations. Apele Moldovei considers that Iprocom has expertise on waterworks³⁷.

(5) Other Ministries and Agencies

As for the following ministries and agencies, please refer to the paragraph 5.1.2.1.

- Ministry of Construction and Territorial Development (MCTD)
- Ministry of Local Public Administration (MLPA)
- Ministry of Economy and Commerce (MoEC)

³¹ P27, RISP-II, Additional Financing: http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2008/04/03/000334955_20080403073237/Rendered/PDF/E18540EA0P11041tional0Financing0SER.pdf

³² Interview to MENR on July 6, 2009

³³ Interview to MENR on July 6, 2009

³⁴ Interview to Aqua Project Institute on July 6, 2009

³⁵ Interview to Aqua Project Institute on July 6, 2009

³⁶ Interview to Apele Moldovei on July 7, 2009

³⁷ Interview to Apele Moldovei on July 7, 2009

- Moldova Social Investment Fund (MSIF)

5.5.2.2 Administrative Organizations, Bodies and Companies Regarding Operation, Maintenance and Management of Project

The Government transferred ownership in the regional state-owned water supply and sewerage companies (apa-canal) to the municipalities in 2000. This restructuring led to formation of municipal sector enterprises³⁸. Following a reorganization of responsibilities in May 1999, Moldova now has two tiers of local government: municipal government (i.e. villages and towns) and Zhudets (or regional) government. Monitoring and control of environmental regulations is vested with the local environmental inspectorates at Zhudets level³⁹.

Provision of environmental services such as drinking water supply and wastewater collection and treatment is the responsibility of the municipalities⁴⁰.

(1) CWSC (Chisinau Water Service Company "Apa Canal Chisinau")

The CWSC is to be established as a joint state and local government owned joint-stock company, which will be responsible for providing water supply and waste-water utility services to the city of Chisinau⁴¹. The water-supply service and the sewerage service cover 95 to 96% and 84 to 85%, respectively of the residents in Chisinau and the neighborhood⁴².

CWSC is run only with a water bill collected whose tariff should be set more than 10.30MDL/m³ (0.9US\$/m³) according to the ANRE's estimation, but CWSC could collect the bill only at 8.45MDL/m³ (0.76US\$/m³), which results in reaching 1.58MMMDL (0.14MMUS\$) at the accumulated loss⁴³.

5.5.3 Strategy by the Moldovan Side to Develop the Sector

5.5.3.1 Water works Sector

The Government approved the Program of Water Supply and Sewerage in Communities of Moldova until 2015 (Government Decision No. 1406 of December 30, 2005) that envisaged the necessity of urgent rehabilitation, technical renewal, and development of municipal water supply and sewerage systems towards meeting the targets of the Millennium Development Goals by 2015. Subsequently, through its Decree No. 662 of June 13, 2007 the Government updated its strategy through the document "On approval of the Strategy for water supply and sewerage of the localities of the Republic of Moldova"⁴⁴. Apele Moldovei focuses currently on improvement of the water-supply quality in the rural area (See Attachment 5.5-4)

5.5.3.2 Wastewater Quality

The water code of 1993 has been the main piece of legislation in the field of water quality, while legislation was recently adopted on preservation of biological water resources. The ambient water quality standards seem generally stringent, but legal compliance is not enforced in practice. A series of legislative instruments cover the issue of waste management. It remains

³⁸ p18, WATER STRATEGY REGIONAL APPROACH FOR SOUTH EASTERN EUROPE, http://74.125.153.132/search?q=cache:yoQUMQdLcTsJ:www.seerecon.org/infrastructure/documents/ebrd_water_strategy.pdf+water+strategy+moldova&cd=7&hl=ja&ct=clnk&gl=jp

³⁹ Questionnaire to MENR

⁴⁰ Interview to Apa Canal Straseni on July 10, 2009

⁴¹ Chisinau Water Services Rehabilitation Project: <http://www.ebrd.com/projects/psd/psd1997/2831.htm>

⁴² Interview to CWSC on July 7, 2009

⁴³ Interview to CWSC on July 7, 2009

⁴⁴ P2, PID of National Water Supply and Sanitary Project

however a significant challenge, including prevention, collection, treatment, recovery and final disposal. The current definitions and classification of waste require attention⁴⁵.

5.5.4 Effect by the Global Economic Crisis to the Sector

The study team made interviews to the following ministries / agencies hereby to obtain their opinions on the effect:

5.5.4.1 CWSC⁴⁶

The water consumption reduced by 360,000 m³ in May comparing from 2008 to 2009.

It is anticipated that the expenditure for investment of 17MMMDL (1.53MMUS\$) in 2008 will be largely decreased.

The salary / wage will be reduced in addition that number of employees were decreased by 196 staffs to reach 2,052 ones at present; furthermore to 2,000 ones in the coming September.

5.5.4.2 MENR⁴⁷

Out of the projects related to MENR, the Water & Sanitation Program by the Czech government stopped. The reduced amount of the expenditures for MENR is not clear; however, some subsidies were cut.

5.5.4.3 Effects on the Public Project

Private sectors represented by the governmental projects have received largely the effect; however, the public sectors have not⁴⁸.

5.5.5 Donors' Strategies to Develop the Sector

The paragraph 5.5.6.4 illustrates the projects made by the other donors.

5.5.5.1 International Aid Organizations

(1) WB

WB is supporting Moldova as it increases connectivity to water and improves the quality⁴⁹.

5.5.5.2 European Aid Organizations

(1) EU/EC

1) Activity Directions by EU for the Sector

EC shows the assistance priorities on activities linked to water quality improvement, for example through the relevant component of the EU Water Initiative as well as other regional initiatives intended to protect the Danube and the Black Sea⁵⁰.

As for the river-water quality EU aims at reduction of the pollution amount and at prevention of eutrophication by EU's TACS program, which became GEF Project. The

⁴⁵ P27, National Indicative Program 2007-2010,
http://ec.europa.eu/world/enp/pdf/country/enpi_nip_moldova_en.pdf

⁴⁶ Interview to CWSC on July 7, 2009

⁴⁷ Interview to MENR on July 6, 2009

⁴⁸ Interview to EBRD on July 7, 2009

⁴⁹ <http://devex.com/projects/health-services-and-social-assistance-project-hssap-in-moldova?lang=ja>

⁵⁰ P16, ENP's Country Strategy Paper 2007-2013:
http://ec.europa.eu/world/enp/pdf/country/enpi_csp_moldova_en.pdf

prevention intends to control the pollution of the river by farm-animal excreta in the agriculture⁵¹.

5.5.5.3 Other Country Donors

(1) Australian Development Agency (ADA)

An efficient infrastructure is a prerequisite for economic development and higher quality of life. ADA rehabilitates outdated facilities and assists in building modern networks of water supply as well as sanitation⁵².

ADA recognizes that the rural area requires the development⁵³. ADA has a policy to develop the waterworks by themselves restricting only in the southern region or the south-western region⁵⁴. In addition, ADA conducted waterworks projects together with SDC.

(2) Swiss Agency for Development and Cooperation (SDC) Office

SDC makes cooperation to increase the access to safe drinking water and sanitation in the rural areas of Moldova and, hence, improve the public health and quality of life⁵⁵.

5.5.6 Projects Implemented or Planed in the Sector

5.5.6.1 Progress Status of the National Action Plan

The action plans stipulated in the NDS⁵⁶ are shown as follows: Only designing of a strategy on waste management is included in the NDS; however, any hardware such as waterworks is not included in them.

Table 5.5-2 Action Plans Stipulated in the NDS and Progress Status Thereof

NDS No.	Objects Targeted	Projects and Progress Thereof ⁵⁷	Ministries or Agencies (Note)	Expected Schedule
150	Waste-water Management	Design a Strategy on Waste Management, by Ministry of Environment and Natural Resources MENR is requesting EU to conduct the Waste Governance Program as a part of ENEP. [Budget in 2009: 0.6 MMMDL (0.054MMUS\$)]	MENR	2009 - 2010

5.5.6.2 Projects Requested for Japanese Assistance from Moldova

The following tables show the projects requiring for the Japanese cooperation from the Moldovan side:

⁵¹ Interview to MENR on July 6, 2009

⁵² Austrian Cooperation with Eastern Europe:
http://www.entwicklung.at/uploads/media/folder_ostzusammenarbeit_englisch_08_2005.pdf

⁵³ Interview to ADA on July 7, 2009

⁵⁴ Interview to ADA on July 7, 2009

⁵⁵ http://www.sdc.md/en/Home/Programmes/Water_and_Sanitation

⁵⁶ NDS: Republic of Moldova: Poverty Reduction Strategy Paper—National Development Strategy Report for 2008-2011

⁵⁷ Interview to MENR on July 6, 2009.

(1) Construction of Straseni Water Pipe Line Project

This project was requested to JICA as the “Construction of Chisinau-Straseni-Calarasi Water Pipe Line Project”⁵⁸ from the Moldovan side beforehand (Refer to the following column of “reference”). The study team make an interview to the related institutions such as Apele Moldovei and to Apa Canal Straseni to be a C/P candidate hereby to summarize and revise the contents⁵⁹ in the following tables. Attachment 5.5.1 should be referred as a reference material to the former request of “Construction of Chisinau-Straseni-Calarasi Water Pipe Line Project”.

1.	[Project Objectives and Expected Benefits] To construct a water-supply network in Straseni City hereby to ensure stable supply of water in the city and the neighboring areas, and to contribute toward improvement of services in the field of waterworks and sanitary.
2.	[Contents of Cooperation] (i) To conduct F/S; (ii) To implement the Project (Yen Loan)
3.	[Background Information] Water-intake facilities at Micauti and the pipeline became too old for work so that rehabilitation is required; however, the fund is not enough to make the rehabilitation.
4.	[Planned Area to Implement the Project] Straseni City and the neighboring area. The water volume from the source is estimated at 2,500m ³ /day, which is used for 23,000 residents to which 5,000 residents would be added in the future. It is not planned to lay the pipeline from Chisinau to Straseni.
5.	[Facilities or Services Targeted in the Project] (i) To Rehabilitate the pump stations on Micauti, by replacing of pumps and motors; (ii) To rehabilitate the NaCl – treatment facilities in Micauti; (iii) To rehabilitate the pipeline at a length of 6 km from the pump station, a part of which was finished to rehabilitate; (iv) To install water reservoirs at the highest point at altitude of 180m; (v) To lay the water-supply pipeline in six villages near Straseni city.
6.	[Expected Project Cost] (i) Pipeline cost is estimated at 6MMMDL(0.54MMUS\$) at a rate of 1MMMDL/1km; (ii) Machinery and equipment are estimated at 4MMMDL(0.36MMUS\$); (iii) Cost to develop the water-supply network in the six villages.
7.	[Expected Schedule to Implement the Project] Construction period may be of 6 months at the longest.
8.	[C/P and Organization to Implement the Project] Operation, maintenance and control of the network would be made by Apa Canal Strasheni. At present the tariff by Straseni is set at 19MDL/m ³ (1.71US\$/m ³) while that by Chisinau is set at 5 to 10MDL/m ³ . Apa Canal Strasheni would consult to the Regional council on setting the tariff.
9.	[Relation to the Environmental Impact Analysis] Water treatment method in the water production is now studied by CWSC to use a substitute for chlorine. ⁶⁰ (Refer to Attachment 5.5.2.)
10.	[References] Refer to Figure 5.5-2 “Outline of Straseni Water Pipe Line Project” and to Attachment 5.5.1.

⁵⁸ Project List by JICA, June 2009

⁵⁹ Interview to Apa Canal Straseni on July 10, 2009

⁶⁰ Interview to CWSC on July 7, 2009

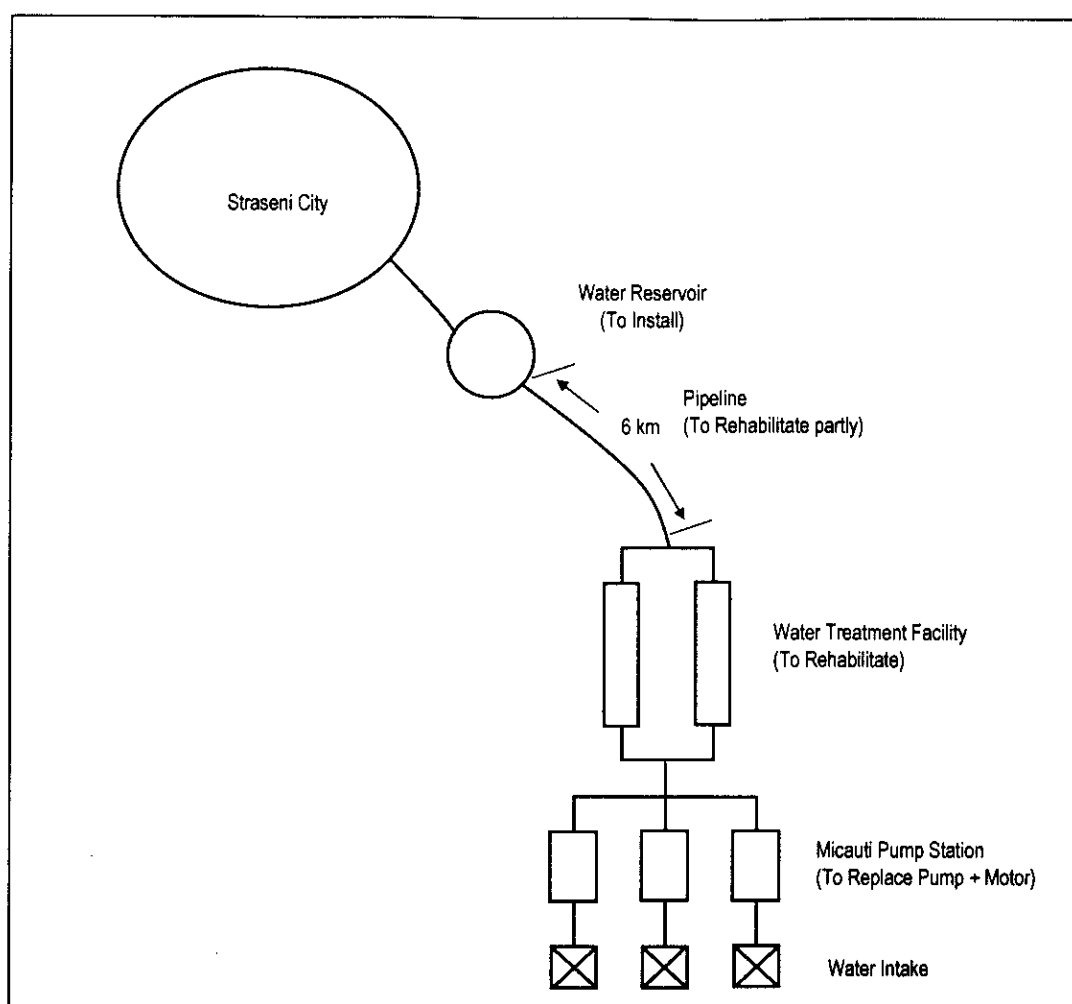


Figure 5.5-2 Outline of Straseni Water Pipe Line Project

[Reference] "Construction of Chisinau-Straseni-Calarasi Water Pipe Line Project" requested beforehand by the Moldovan side to JICA⁶¹

1.	[Project Objectives and Expected Benefits] The project has an objective to provide Chisinau City, Straseni City, Calarasi City and the neighboring areas with stable water supply through constructing the water-supply networks connecting them, hereby to contribute toward improvement of services in the field of waterworks and sanitary in Moldova.
2.	[Contents of Cooperation] (i) To conduct F/S; (ii) To implement the Project (Yen Loan) (Quiet Government made the credit at a amount of 6.5 MMUS\$ for conducting the F/S ⁶² .)
3.	[Background Information] It is necessary to make water-supply to Straseni City and Calarasi City.
4.	[Planned Area to Implement the Project] Chisinau City, Straseni City, Calarasi City and the neighboring areas

⁶¹ Project List by JICA, June 2009

⁶² Interview to Apele Moldovei on July 7, 2009

5.	[Facilities or Services Targeted in the Project] (i) To lay a water pipeline starting at Chisinau Apa Canal; (ii) To construct and rehabilitate pump stations along the pipeline; (iii) To make consulting services.
6.	[Expected Project Cost] 9.5 MMEUR (13.6MMUS\$) (The project is described in the OECD document ⁶³ and estimated at 9.0MM EUR (12.9MMUS\$) .)
7.	[Expected Schedule to Implement the Project] N/A (The Preliminary Survey is finished ⁶⁴ .)
8.	[C/P and Organization to Implement the Project] Operation, maintenance and control of the network would be made by Apa Canal Strasheni and Apa Canal Calarasi. ⁶⁵ The design works of the project would be made by Iprocom under Apele Moldovei ⁶⁶ .
9.	[Relation to the Environmental Impact Assessment] Water treatment method in the water production is now studied by CWSC to use a substitute for chlorine ⁶⁷ . (Refer to Attachment 5.5.2.)
10.	[References] Refer to Attachment 5.5.1.

(2) Water Supply Project made as a development study by former JICA⁶⁸

1.	[Project Objectives and Expected Benefits] Based on the Study on Water Supply Systems for the Northern Region in Moldova (Former Study), to construct facilities and pipeline hereby to provide the northern cities targeted stably with safe water.
2.	[Contents of Cooperation] (i) To review and improve the study results of the Former Study, (ii) To conduct the project based on the results from the review and improvement.
3.	[Background Information] The necessity and appropriateness of the project was confirmed in the Former Project. The Project has not been realized because of the fund shortage. Though the Polish government offered the loan to Moldova, the Moldovan government declined it because the offer was of a tied loan. The water quantity required was estimated at 50,000 to 70,000m ³ /day in the Former Study; however it should be revised considering the population reduction in the rural area.
4.	[Planned Area to Implement the Project] The population of the targeted area including Soroca City and Balti City is estimated at 300,000 to 500,000 persons (Note by the study team: the targeted area should be revised considering the population reduction).
5.	[Facilities or Services Targeted in the Project] Water-supply facilities composed with pumps, water-treatment facilities, water-reservoir ponds or tanks, and water-distribution networks.
6.	[Expected Project Cost] It was estimated at 25 MMUS\$ in the Former Study. ⁶⁹ (In the interview made in the site survey, the Moldovan side claimed 10 MMUS\$ of a grant ⁷⁰ .)

⁶³ Table 2, p6, MOBILISING FINANCE FOR ENVIRONMENTAL INVESTMENT PROJECTS IN EECCA AND SOUTH-EASTERN EUROPE, Sept 2006, <http://www.oecd.org/dataoecd/32/1/37393385.pdf>

⁶⁴ Interview to Apele Moldovei on July 7, 2009

⁶⁵ Project List by JICA, June 2009

⁶⁶ Interview to Apele Moldovei on July 7, 2009

⁶⁷ Interview to CWSC on July 7, 2009

⁶⁸ Interview to Apele Moldovei on July 7, 2009

⁶⁹ p3, Final Report of the Study on Water Supply Systems for the Northern Region in Moldova, by former JICA, January, 2003

⁷⁰ Interview to Apele Moldovei on July 7, 2009

7.	[Expected Schedule to Implement the Project] Four years scheduled in the Former Study.
8.	[C/P and Organization to Implement the Project] Apele Moldovei would draw up the project direction and plans, Aqua Project Institute would make the design, and construction companies would make construction ⁷¹ . After the construction Aqua Nord may make the operation and the maintenance. Distribution of the water in the targeted area would be made by LPA (Local Public Administration). Independent NGO would participate in the operation and the maintenance. As for the water tariff, the tariff set in the electric field should be referred ⁷² .
9.	[Relation to the Environmental Impact Assessment] Water treatment method in the water production is now studied by CWSC to use a substitute for chlorine ⁷³ . (Refer to Attachment 5.5.2.)
10.	[References] Final Report of the Study on Water Supply Systems for the Northern Region in Moldova ⁷⁴

(3) Capacity Building of MENR Regarding to Waste Management⁷⁵

1.	[Project Objectives and Expected Benefits] To strengthen the MENR's function to manage the wastes, hereby to strengthen the waste-management in Moldova.
2.	[Contents of Cooperation] (i) To make technical cooperation; namely, to dispatch experts in the field related to project implementation and to receive the Moldovan ones to provide them with training in Japan; (ii) To make a grant cooperation through providing MENR with monitoring machinery.
3.	[Background Information] (ii) Moldova has necessity to develop and draw up the Waste Management Strategy mentioned above; however, the organization of MENR should be strengthened because it has a manpower shortage; (ii) It is necessary to purchase the monitoring machinery for the environmental preservation. MENR is making an application to EU for their cooperation of Waste Governance Program as a part of ENPI.
4.	[Planned Area to Implement the Project] Ministry Building of MENR in Chisinau
5.	[Facilities or Services Targeted in the Project] Capacity Building of Waste Management Division in MENR
6.	[Expected Project Cost] N/A
7.	[Expected Schedule to Implement the Project] The action plan is scheduled to carry out from 2009 to 2010.
8.	[C/P and Organization to Implement the Project] Waste Management Division of MENR
9.	[Relation to the Environmental Impact Assessment] The project strengthens the environmental Impact Assessment made in Moldova.
10.	[References] Refer to Attachment 5.5.3.

5.5.6.3 Cooperation Made by Japan

According to the Fact Sheet Relating to Japan and Moldova⁷⁶, Japan has not experience on cooperation in the waterworks field.

⁷¹ Interview to Aqua Project Institute on July 6, 2009

⁷² Interview to Apele Moldovei on July 7, 2009

⁷³ Interview to CWSC on July 7, 2009

⁷⁴ by former JICA, January, 2003

⁷⁵ Interview to MENR on July 7, 2009

⁷⁶ Japanese Embassy located in Ukraine prepared the document in March 2009

5.5.6.4 Projects by the Other Country Donors

Table 5.5-3 Projects by the Other-country Donors Planned or Implemented

Objects Targeted	Donors	Projects and Progress Thereof	Ministries or Agencies	Expected Schedule
Water-works	WB	National Water Supply and Sanitation Program WB conducts a pilot project targeting at Soroca City, Balti City, Orhei City, etc. Project compositions are as follows: (i) To make financing; (ii) To make capacity building of the Apa Canals; (iii) To make technical cooperation. The tariff rate was set low before; however, it is now aimed to set based on the normal cost-recovery ⁷⁷ . Expected loan amount by WB: 14 MMUS\$	MCTD	May 2008 to June 2013
River	WB	Environmental Infrastructure Project (i) To improve the wastewater quality at Soroca City; (ii) To reduce the waste amount flowing into Nistru River from the Soroca area; (iii) Prevention of eutrophication in the rivers and the Black Sea ⁷⁸ . Expected loan amount by WB: 4.6 MMUS\$ ⁷⁹	MENR	May 2007 To November 2011
Water-works	EBRD	Chisinau Water Services Rehabilitation Project ⁸⁰ EBRD recognizes that the tariff is low at a rate of 55% of the proper rate. In ENEP by EU, a F/S is conducted at a project cost of 3 MMEUR(4.3MMUS\$) of a grant cooperation. EIB, EU and KfW participate in the project. EBRD understands that the tariff-setting issue could be solved with use of the methodology applied in the electric sector ⁸¹ . EBRD makes cooperation for F/S in the fund, in which drawing up of the TOR and preliminary design of the F/S are included as the scope. It is currently studied. ⁸² Expected loan amount by WB: 30 MMUS\$ ⁸³	CWSC	From 1997

⁷⁷ Interview to PIU of WB on July 1, 2009

⁷⁸ Environmental Infrastructure Project :
<http://web.worldbank.org/external/projects/main?pagePK=64312881&piPK=64302848&theSitePK=40941&Projectid=P074139>

⁷⁹ http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2007/02/28/000104615_20070301103756/Oriiginal/Project0InformInt010Appraisal0Stage.doc

⁸⁰ Chisinau Water Services Rehabilitation Project: <http://www.ebrd.com/projects/psd/psd1997/2831.htm>

⁸¹ Interview to EBRD on July 7, 2009

⁸² Interview to CWSC on July 7, 2009 CWSC

⁸³ <http://www.ebrd.com/projects/psd/psd1997/2831.htm>.

Water-works	EBRD, ADA	Water & Sanitation Project The project is conducted at Soroca, etc. at a cost amount of 30MMEUR(42.9MMUS\$) which is composed of loans at a amount of 10MMEUR(14.3MMUS\$) by EBRD and EIB, respectively, and of a grant at 10MMEUR by EU. The projects by a small-region municipality may have a problem. EBRD / ADA would make a F/S targeting at 3 to 5 municipalities with use of consulting companies by the end of 2009 ⁸⁴ .	Local Public Administration	On going
Water Supply	ADA	Water & Sanitation Project ADA conducted, separately from SDC, a program to provide a water-supply network in Cantemir and Neporeni in the south-western area in Moldova. The project includes construction of new pump stations and water-supply networks. ⁸⁵	Local Public Administration	From 2004
Water Supply	SDC	Water Supply Project SDC completed the project at 19 villages with a population of 30,000, in which the water supply got a success with no stoppage. The project is composed of construction of catchments and pump stations, and of making technical cooperation. ⁸⁶ Annual Budget : 15MM MDL (1.35 MMUS\$) ⁸⁷ .	Local Public Administration	From 2001
Sewerage	SDC	SCAT Foundation the Water Program SDC are now installing 26 septic tanks as a toilet in the rural area. SDC proved that a method without use of water is realistic from the view point where it would not pollute the ground water and the soil. ⁸⁸	Local Public Administration	From 2009~
Water Supply	WB	Moldovan Social Investment Fund (MSIF) MSIF has laid water-supply taps at 115 villages corresponding to 8% of the whole ones in Moldova. Averaged amount of expenditure per project: about 60,000US\$. ⁸⁹	Local Public Administration	From 1999

(1) Activities by EU

As for the river-water quality EU aims at reduction of the pollution amount and at prevention of eutrophication by EU's TACIS program, which became GEF Project. The prevention intends to control the pollution of the river by farm-animal excreta in the agriculture⁹⁰.

5.5.7 Moldovan Capability to Cope with the Foreign Cooperation

The Moldovan government would not approve the waterworks project; however, a government at a district level would approve it.⁹¹ Therefore the C/P would be a community of local municipalities such as a city, a town and a village.

⁸⁴ Interview to EBRD on July 7, 2009

⁸⁵ Interview to ADA on July 7, 2009

⁸⁶ Interview to SDC on June 26, 2009

⁸⁷ Interview to SDC on June 26, 2009

⁸⁸ Interview to SDC on June 26, 2009

⁸⁹ Interview to MSIF on July 3, 2009

⁹⁰ Interview to MENR on July 6, 2009

5.5.7.1 Institutional Issues of the Sector

The issues of the Moldovan institutions are summarized as follows⁹²:

- The non adapted legislation, old technical norms and standards.
- Limited number of reliable contractors.
- Lack of cooperation from the state authorities.
- Difficulties in assurance of sustainability of the already built systems (management, maintenance, financing, etc.).
- Willingness of the state authorities to implement only sophisticated systems which do not consider the availability of maintenance capacities and financial possibilities⁹³.
- Lack of young engineers in the engineering society.

5.5.7.2 Selection of Communities Targeted in the Project

It is vital to select properly the community targeted in the project, and SDC has the following criteria in the assessment:

- The community should have a considerable magnitude on the population.
- The community should have a leader owing leadership.
- Two thirds and more of the community residents can make access to the water-supply network planned in the project

EBRD has the following criteria in selection of the project communities⁹⁴:

- The project should be expandable on its activities.;
- The tariff policy can be easily changed.

5.5.7.3 Moldovan Ministries or Agencies Related to the Project

ADA considers that the local municipalities should be named as a C/P and the participation by Apele Moldovei, MCTD, and MLPA is important to the Project⁹⁵.

From a view point of drawing up of the waterworks strategy, the participation of Apele Moldovei is necessary to the Project⁹⁶; the donors assess that Apele Moldovei may be weak in assigning staffs and making budget⁹⁷, and sometimes be political⁹⁸.

⁹¹ Interview to SDC on June 26, 2009

⁹² Interview to SDC on June 26, 2009

⁹³ The case of Apa Canal Chisinau (CWSC) is mentioned as the example which has a water tariff as a big issue to be solved, referring to the description in 5.5.1.2 (2)

⁹⁴ Interview to EBRD on July 7, 2009

⁹⁵ Interview to Austrian Embassy Technical Cooperation on July 7, 2009

⁹⁶ Interview to Austrian Embassy Technical Cooperation on July 7, 2009

⁹⁷ Interview to SDC on June 26, 2009

⁹⁸ Interview to PIU of WB on July 1, 2009

5.6 Health and Sanitary Sector

5.6.1 Outlines of the Sector

5.6.1.1 Composition and Outlines of the Sector

The sector has many fields to be handled. The action plans of NDS related to the sector are classified as follows:

Table 5.6-1 NDS Action Plans in Health and Sanitary Sector

NDS No.	Objectives of the Project	Ministries or Agencies
99	Strengthening of health-care facilities in staffs in rural areas	MoH
100~107	Primary / secondary health care, PPP, staff training, quality management, mother and children, and youth-friendly health services	MoH
108~109	Communicable Diseases, HIV/AIDS, TB and public health	MoH
110	Mental health services	MoH
111・157	Health insurance, and health survey	MoH・NHIC

Note: MoH=Ministry of Health, NHIC=National Health Insurance Company

Considering the finding out of new projects in this study¹, the projects to be handled are classified as follows:

- (1) Health Care
 - 1) Prime, Secondary and Tertiary Health Care
 - 2) Mother and Child Health Care
 - 3) Communicable diseases such as TB, HIV/AIDS, etc.
 - 4) Emergency Care
 - 5) Hematological Care such as Blood Transfusion
- (2) Health Insurance
- (3) Sanitary

Statistical Data related to the health and sanitary sectors in Moldova are listed as follows:

Table 5.6-2 Statistical Data Related to the Health and Sanitary Sector in Moldova²

Items of the Health and Sanitary	Statistical Data	Sources
Total population (2005)	4,206,000	United Nations Population Division
% under 15 (2005)	18	United Nations Population Division
Population distribution % rural (2005)	54	United Nations Population Division
Life expectancy at birth (2004)	67	World Health Report 2006
Under-5 mortality rate per 1000 (2004)	28	World Health Report 2006
Maternal mortality ratio per 100 000 live births (2000)	36	World Health Report 2005
Total expenditure on health as % of GDP (2004)	7.5	WHO data on National Health Accounts
General government expenditure on health as % of general government expenditure (2004)	11.3	Human Development Report 2005

¹ P172, Report of Survey on Finding Project in the field of SME development and Health, by JICA, July 2003

² The descriptions are by "WHO, Country Cooperation Strategy at Glance, Moldova". As for the detailed data, please refer to the web site of http://www.unicef.org/infobycountry/moldova_statistics.html

Human Development Index Rank, out of 177 countries (2003)	115	Human Development Report 2005
Gross National Income (GNI) per capita US\$ (2002)	710	World Development Indicators 2005 (World Bank)
Adult (15+) literacy rate (2003)	96.2	Human Development Report 2005
% population with access to improved drinking water source (2002)	92	Human Development Report 2005
% population with improved access to sanitation (2002)	68	Human Development Report 2005

The population reduction characterizes Moldova, which may be resulted from that the birth rate is decreasing year by year, and that emigration continues³.

Table 5.6-3 Change of Population in Moldova

Year	2003	2004	2005	2006	2007	2008
Population (Thousand)	4,440	4,455	4,455	4,467	4,320	4,324

Source: CIA World Factbook

Table 5.6-4 Birth-rate Changes in Moldova

Year	2003	2004	2005	2006	2007	2008
Birth Rate (Note 1)	11.01	10.88	15.7	15.27	14.81	14.31
World Rank	#178	#178	#140	#149	#152	#159

Note1: The average annual number of births during a year per 1,000 persons in the population at midyear

Source: People Statistics by National Master Com⁴

Number of beds of acute care hospitals are 506 per 100,000 population in 2006 (Table 5.6.3), which is higher than the EU average at 410; however, below the average of the CSI countries at an average of 797. As one of policies to reform the health care in Moldova, the health care has partially shifted from the hospital care to the home care, consequently to reduce number of beds, to reduce health care costs and to propel the care-efficiency improvement⁵. Other hands the health care system has issues in poor quality where the equipment / machinery are outdated and medicines are short⁶.

Table 5.6-5 Health-care Sources per 100,000 Population (2006)

	Doctors	Nurses	Acute Care Hospital Beds
Moldova	311.1	702.7	506.3
Armenia	345.6	418.2	385.5
Romania	192.1	397.4	505.2
Russia	430.9	805.9	930.9
Ukraine	308.4	783.4	711.9
CIS Countries (Average)	377.4	794.9	797.1
EU Countries (Average)	315.0	741.6	410.2

Source: p5, HiT Profile in Brief: Moldova 2008

³ Refer to the Section 3.1.1.

⁴ http://www.nationmaster.com/time.php?stat=peo_bir_rat-people-birth-rate&country=md-moldova

⁵ Report of Survey on Finding Project in the field of SME development and Health, by JICA, July 2003

⁶ HiT profile in brief: Moldova 2008

Causes of death are illustrated in Table 5.6-6. Currently new data on the causes are not available, in which this report refers to “Moldova, 10 Health questions”⁷ that was issued in 2006, using the data as of 2002.⁸

Table 5.6-6 Cause Total Death (%)

Cause	(%)
1. Ischaemic heart disease	39%
2. Cerebrovascular disease	16%
3. Cirrhosis of the liver	8%
4. Chronic obstructive pulmonary disease: COPD	4%
5. Tracheal, bronchial, lung cancer	2%
6. Lower respiratory infections	2%
7. Self-inflicted injury	2%
8. Tuberculosis: TB	1%
9. Colon and rectal cancer	1%
10. Road traffic accidents	1%

Source: P108, “Republic of Moldova, 10 Health Questions”, By MOH, 2006

(1) Primary, Secondary and Tertiary Health Care

The donors have recognized as follows:

The health care system has been approaching to the average level of the EU countries⁹, in which primary health care has been functioned well comparing with the countries earning similar revenue¹⁰¹¹.

The primary-health-care institutions could be separated from the secondary ones.

Therefore, in the case where JICA makes the cooperation to Moldova in the health sector, the secondary or tertiary health care institutions should be targeted for finding of a project.

(2) Mother and Child Health Care

MoH recognizes the mother and child health care important in the following fields: (i) Family Planning, (ii) Risk-free Maternity, (iii) Teenager sexual Abuse, (iv) Pregnancy Disease, which correspond to the MDG¹².

The child mortality rate is improved at 14 per 1000 people comparing with the countries earning similar revenue¹³.

(3) Communicable Diseases

Communicable diseases are major causes of morbidity and mortality. There is insufficient capacity to detect and respond to outbreaks. Tuberculosis remains an important public health concern with increasing notification rates (new cases and relapses). The incidence of sexually

⁷ P108, “Republic of Moldova, 10 Health Questions”, By MOH, 2006:
http://www.euro.who.int/Document/E88202_Moldova.pdf

⁸ “Death and Daly Estimates by Cause, 2002”, p2:
http://www.who.int/whosis/mort/profiles/mort_euro_mda_moldova.pdf

⁹ Interview to EU on June 26, 2009

¹⁰ Interview to WHO on June 23, 2009

¹¹ Interview to UNICEF on June 25, 2009

¹² Interview to MOH on June 26, 2009

¹³ Interview to UNICEF on June 25, 2009; http://www.unicef.org/infobycountry/moldova_statistics.html

transmitted infections, particularly syphilis and HIV/AIDS, are also increasing. Viral hepatitis B, C and delta account for a significant morbidity and mortality burden¹⁴.

(4) Non-communicable Diseases¹⁵

Non-communicable diseases are increasing. The main reported causes of adult mortality are diseases of the circulatory system, particularly high blood pressure related conditions, followed by cancer, digestive system-related pathology (the country has the highest rate of mortality related to diseases of the digestive system) and poisoning from polluted water sources.

(5) Emergency Care¹⁶

According to the interview to Chisinau EMS Training Center, accidental death is ranked at the fifth in the cause of death that accounts for 7 to 8%. Moldova has about 750 traffic accidents per year, in which 240 people are killed¹⁷. Table 5.6-7 shows rates of deaths from injuries and rates of injuries resulted from road traffic accidents comparing with the EU countries in which the death rate is higher while the injury rate is lower than the EU countries.

Table 5.6-7 Injuries and Road Traffic Accidents in Moldova

		Moldova	Average of 25 Countries in EU
Injuries	Per 100,000	111	45
Road Traffic Accidents	Per 100,000	65	297

Source: p107, "Republic of Moldova, 10 Health Questions"

(6) Blood Matters¹⁸

Though blood demands have not apparently come to the surface in the past, the demands are increasing while the population in Moldova decreases. Blood is vital in a surgical operation. The blood need per capita is smaller than the EU countries; however, similar to the CIS countries.

Number of the blood donors increases. The donors are composed the following groups: (i) Paid volunteers (specially immunized persons against payment), (ii) Relatives to the patient, (iii) Volunteer donors. As for the group (i), the governmental budget makes up the payment; however, the counter-measures are necessary because a volume of the provision by the (i) is unstable. The volume provided from the group (iii) has smoothly increased, in which the collection blood volume especially from the youth at Regional centers has remarkably increased. The number of the donors has reached already 9,000 up to the first half in 2009 while 13, 624 in 2008.

(7) Health Insurance

The purchasers of the health services are separated from the providers and the mandatory insurance package is applied. The donor side recognized that the basic package has gained success¹⁹. NHIC was founded and are self-sufficient to conclude contracts to provide the health care²⁰.

¹⁴ WHO, Country Cooperation Strategy at Glance, Moldova

¹⁵ WHO, Country Cooperation Strategy at Glance, Moldova

¹⁶ Interview to Chisinau EMS Training Center on July 8, 2009

¹⁷ Interview to Chisinau EMS Training Center on July 8, 2009

¹⁸ Interview to NBTC on July 8, 2009

¹⁹ Interview to WHO on June 23, 2009

²⁰ Interview to EU on June 26, 2009

(8) Sanitation

Sanitation in schools, toxic materials, chemical materials, safety control of foodstuff, vaccine, etc. are handled by National Center for Preventive Medicine (NCPM)²¹.

5.6.1.2 Issues to Be Solved in the Sector

In Moldova, even if people can access the health-care system and cover the care with the national health insurance, they do not like to make additional payment for the care and to go to a doctor²².

WHO summarizes the challenge items versus the opportunities as follows,²³ which the study team recognizes as the issues to be solved:

- 1) Despite constant structural changes the MOH remains institutionally weak.
- 2) Unavailability of medicines and obsolete equipment limit the quality of healthcare services.
- 3) Inadequate health financing system despite the introduction of NHIC.
- 4) Poor use of the health information system for stewardship and decision making.
- 5) Effective immunization program hindered by vaccine shortages and lack of equipment.

5.6.2 Administrative Organizations, Bodies and Companies Related to the Sector in Moldova

5.6.2.1 Administrative Organizations, Bodies and Companies Regarding Plan, Construction and Completion of Project

(1) Ministry of Health (MoH)

The MOH has overall responsibility for the population's health, but the financing of most services has been recentralized to the NHIC. Tertiary services, highly specialized hospitals and public health institutes are the responsibility of the MOH²⁴.

5.6.2.2 Administrative Organizations, Bodies and Companies Regarding Operation, Maintenance and Management of Project

The organization of primary and secondary care is now devolved to the rayon/municipal level. Only public health institutes and the blood service are funded directly from the MoH budget²⁵

1) Republic Clinical Hospital (RCH)²⁶

The hospital is the largest one in Moldova composed of 18 clinical departments as a tertiary hospital, having 11 surgical departments and 9 care departments, being available in 10 diagnosis services including X-rays and MRI. The number of the hospital staffs is 1,500, out of which 225 persons are doctors and 530 ones are nurses.

The number of patients totals 25,000 per year. About 65,000 people visit the hospital for the consulting, and the number of consulting reaches 150,000 for a year. About 70% of the patients are for the surgery care and 96% of the work load of the hospital are classified as the surgery.

²¹ Interview to NCPM on July 6, 2009

²² UNICEF Moldova : http://www.unicef.org/infobycountry/moldova_background.html

²³ WHO, Country Cooperation Strategy at Glance, Moldova

²⁴ p21, Health Systems in Transition, Moldova: Health System Review, 2008

²⁵ p21, Health Systems in Transition, Moldova: Health System Review, 2008

²⁶ Interview to RCH on July 10, 2009

The hospital has a university function to make training of students and doctors as the job training, having 14 university departments.

Chisinau EMS Training Center (CEMSTC) has a different function to make mainly care of mental trauma while RCH handles the surgery.

2) National Blood Transfusion Center (NBTC)²⁷

NBTC has an objective to develop a blood-related (hematological) methodology and to establish the system and organization in Moldova. NBTC draws up the hematological policies and implements them in cooperation with MoH.

NBTC makes hematological consulting and monitoring and provides hematological products.

NTBC makes direction on collection, production, testing, transport, storage of blood. There exist special vehicles to transport blood. The above-mentioned handling requires observation of EU and international standards. As for the handled blood, trace-ability should be secured.

Blood production includes production of blood and blood components, and NTBC makes such production. As a transfusion institution in Moldova, there exist 23 district centers and 45 blood banks.

3) Chisinau EMS Training Center (CEMSTC)

CEMSTC is the highest institution providing the emergency services in Moldova²⁸.

CEMSTC has many critical departments to provide care for trauma, microsurgery, maxilla-facial surgery, gynecology, etc. CEMTC should be called a scientific practical center, and has a position at the top of a pyramid composed of five local centers and emergency centers²⁹

- a) North Emergency Station to serve 11 districts at a population of 1,360 thousands.
- b) Central Emergency Station to serve 17 districts with 1,300 thousand-population..
- c) Chisinau Municipality Emergency Station to serve Chisinau with 780 thousand-population
- d) NTA Gagauzia Station to serve the Autonomic District with 159 thousand-population
- e) South Emergency Station to serve 4 districts with 375 thousand-population.

CEMSTC is also of a college to make education of all the related doctors for three years with use of the emergency medical fund³⁰.

Starting with 2005 Emergency Center from the RM in collaboration with North - West Teams organized centers in all 5 regions of Moldova, called "Basic Life Support" According to this project they trained personnel from different medical spheres and also including policemen, firemen, the personnel that deals with fast aid, fast response. In the past police men and fire fighters were not responsible for the emergency care. In order to correspond to the care system it is necessary to revise the legislation related to the system and to provide new equipment to the system. With cooperation by the Medical Teams International, the North-West Team has the academy of police in the team. After 1993, CEMSTC trained 800 doctors per year.³¹

²⁷ Interview to NBTC on July 8, 2009

²⁸ Interview to Chisinau EMS Training Center on July 8, 2009

²⁹ Interview to Chisinau EMS Training Center on July 8, 2009

³⁰ Interview to Chisinau EMS Training Center on July 8, 2009

³¹ <http://www.medicalteams.org/sf/LearnAboutUs/ourwork/eurasia/moldova.aspx>

4) National Health Insurance Company (NHIC)³²

NHIC is the sole operator of the health insurance in the health care system in Moldova. NHIC is a state-owned agency; however, NHIC can make directions at its own discretion. NHIC was founded aiming at introducing of a mandatory health insurance to Moldova in 2001. Provision of the health services is made with discussion with MoH. NHIC has seven departments and 280 staffs including ones arranged at the local area.³³

Revenue of NHIC are composed as follows; (i) National budget (Children Health Insurance and Old-person Health Insurance): 55%, (ii) Employees: 41.7%(3.5% collected from the companies and 3.5% from individuals), (iii) Individuals (Physical Persons): 1.4%, (iv) Others (Interest revenue, etc.)

5) National Center for Preventive Medicine (NCPM)³⁴

NCPM has two branches and makes monitoring of the public health in Moldova.

NCPM handles the following items: public health, occupational health, hygiene of primary / junior-high / high schools,, radiation protection, toxicology, chemical materials, food safety, vaccine, HIDS/AIDS, prevention of infectious diseases and dangerous diseases.

In 2009 the New Law on Public Health No. 10 was enforced to renew regulations on the public health including of coping with non-communicable diseases, which NCPM make activities in compliance with. NCPM recognizes that the law covers about 90% of the activities by NCPM.

As for the food safety, NCPM are working to obtain the registration by EU, for example, NCPM makes monitoring on chemical contents and microbiological ones for drinking water.

NCPM runs with the following funds: (i) Outside payments for the NCPM researches; (ii) MoH payment for the NCPM monitoring activities; (iii) Income by the laboratory from the Academy of Science for Development of Research³⁵.

5.6.3 Strategy by the Moldovan Side to Develop the Sector

Legislation supports as follows major health care reforms and policy measures³⁶:

- 1) Government Decision on the Health System Development Strategy for the period 2007–2016
- 2) National Health Policy 2007–2021, approved by Government Decision No. 886

The primary objectives are as follows:

- 1) To improve access to and the quality of health services,
- 2) To use financial resources more efficiently,
- 3) To guarantee the implementation of compulsory health insurance and;
- 4) To develop primary and emergency care³⁷.

³² Interview to NHIC on June 29, 2009

³³ Moldova Health system review <http://www.euro.who.int/Document/E91756.pdf>

³⁴ Interview to NCPM on July 6, 2009

³⁵ As for the organization and activities thereof, please refer to the following internet site:
http://www.asm.md/?go=despre&new_language=1

³⁶ Moldova Health System Review: <http://www.euro.who.int/Document/E91756.pdf>

³⁷ WHO's 10 health questions about the new EU neighbors (Moldova)
http://www.euro.who.int/Document/E88202_Moldova.pdf

The national program for development of the blood service is updated on a 5 year basis (2002-2006, 2007-2011) to better respond to national quality and safety needs³⁸.

In the emergency care of the national strategy, the crisis situation was studied and in 2008 WHO made proposal of the Evaluation of Security in Sanitary and Capacity of Management of Crisis Situation³⁹.

The strategy on the health insurance aims at de-centralizing the health system so that primary health care is separated from the hospital care⁴⁰.

5.6.4 Effect by the Global Economic Crisis to the Sector

The donors have a prospect in which the effects would come out in the near future, and they recognize that the effects should be confirmed with use of the figures by the National Health Accounts⁴¹.

(1) MoH⁴²

MoH would reduce their expenditures by 20%, which would be accomplished by compressing maintenance costs and the salary / wages and by stopping or postponing new projects. MoH would review or revise in 2010 the implementation of contracts which were enforced.

(2) NBTC⁴³

Forty-six percents (46%) of the NBTC budget are come from the government budget; therefore, NBTC has anxiety on whether such contribution from the budget at 2010 can be ensured or not.

(3) Chisinau EMS Training Center⁴⁴

The center has a possibility where the machinery may not be repaired and new one can not be procured.

(4) NCPM⁴⁵

NCPM should reduce the budget by 21% due to the Global Economic Crisis. In order to satisfy the reduction NCPM would reduce equipment maintenance and procurement, in addition to stoppage of new-equipment procurement. NCPM has to decrease the asset cost.

(5) NHIC⁴⁶

The national budget for NHIC has been cut by 24%; therefore, to 76%.

5.6.5 Donors' Strategies to Develop the Sector

The paragraph 5.6.6.4 illustrates the projects made by the other donors.

³⁸ p100, Blood services in south-eastern Europe: <http://www.who.it/Document/E90300.pdf>

³⁹ Chisinau EMS Training Center on July 8, 2009

⁴⁰ p3, Public Health Reform Project by EU: <http://www.epos.md/healthreform/PDF/Newsletter0307En.pdf>

⁴¹ Interview to WHO on June 23, 2009

⁴² Interview to MoH on June 29, 2009

⁴³ Interview to NBTC on July 8, 2009

⁴⁴ Interview to Chisinau EMS Training Center on July 8, 2009

⁴⁵ Interview to NCPM on July 6, 2009

⁴⁶ Interview to NHIC on June 29, 2009

5.6.5.1 International Aid Organizations

(1) UNICEF⁴⁷

UNICEF makes cooperation recognizing the current status as follows: Poverty remains widespread in Moldova, especially in rural areas. But Parliament's adoption of a new national development plan (a continuation of the economic growth and poverty-reduction program) demonstrates a serious commitment to improving conditions for women and children.

(2) WHO

WHO places priorities on the following fields for collaboration in Moldova for 2008 – 2013⁴⁸: (i) Strengthening of Health System (ii) Strengthening of Surveillance and Control of Communicable Diseases; (iii) Prevention and Control of Major Non-communicable Diseases and Reduction of Health Risk Factors (Tobacco, Alcohol, and Drugs and Food Safety); (iv) Strengthening of Mother and Child and Reproductive Health⁴⁹; (v) Fostering the Environmental Safety and Health Systems Preparedness to Disasters.

WHO is conducting two-year programs with three phases (= 2 years X 3 phases = 6 years), and is making a study of the second phase starting at 2010⁵⁰.

WHO is calling to donors for participation or co-financing to the project at the donors' meeting; unfortunately, the co-financing has not been realized⁵¹.

(3) WB

WB propels cooperation to health care and social support. WB recognized that it is necessary to identify the cooperation fields and to make the technical cooperation in order to make the project more transparent⁵².

WB supports the Moldovan government program increase access to quality, efficient and effective health and social assistance services in line with the MTEF⁵³.

5.6.5.2 Other Country Donors

(1) SDC (Swiss Agency for Development and Cooperation)⁵⁴

In the public health sector in Moldova, SDC contributes to promoting sustainable development in the selected fields of the Moldovan public health sector - mother and child care, mental health and professional training.

5.6.6 Projects Implemented or Planned in the Sector

5.6.6.1 Progress Status of the National Action Plan

A considerable part of the NDS action plans have a priorities on the health care, which include cares for HIV/AIDS and TB, in addition to strengthening of health insurance. The action plans are handled by MoH or NHIC.

⁴⁷ UNICEF's internet site : http://www.unicef.org/infobycountry/moldova_background.html

⁴⁸ Document from WHO entitled "Medium-term Priorities for Collaboration for 2008-2013"

⁴⁹ Reproductive Health (Sexual and Reproductive Health). Reproductive health means women's state of complete physical, mental and social well-being, and not merely the absence of reproductive disease or infirmity.

⁵⁰ Interview to WHO on June 23, 2009

⁵¹ Interview to WHO on June 23, 2009

⁵² Interview to WB on June 25, 2009

⁵³ p17, "World Bank in Moldova, 15 Years of Partnership"

⁵⁴ http://www.sdc.md/en/Home/Programmes/Public_Health

The progress of the national action plans have been affected by the Global Economic Crisis. MoH would reduce their expenditures by 20% to reach 3,382MM MDL(304MMUS\$) of a whole budget amount, which would be realized by compressing maintenance costs and the salary / wages and by stopping or postponing new projects. MoH would review or revise in 2010 the implementation of contracts which were enforced⁵⁵.

Table 5.6-8 Action Plans Stipulated in the NDS and Progress Status Thereof

NDS No.	Objects Targeted	Projects and Progress Thereof	Ministries or Agencies (Note)	Expected Schedule
99	Health-care Facilities	Provide health care facilities with staff specifically in rural areas[Budget @2009: 15 MMMDL(1.35MMUS\$)]	MOH	2008 - 2011
100	Medical and Pharmaceutical Education	Improve policy for staff training in medical and pharmaceutical education [Budget @2009: 4 MM MDL (0.36 MMUS\$)]	MOH	2008 - 2011
101	Primary Health Care	Develop primary health care and community-based health care, home care and palliative care [Budget @2009: 10MMMDL (0.9MMUS\$)]	MOH	On Going
102	Secondary and Tertiary Health Care	Improve efficiency of secondary and tertiary health care system through its upgrade and creation of Centers of Excellence [Budget @2009: 88MMMDL(7.92MMUS\$)]	MOH	2008 - 2011
103	Health Care Services (PPP)	Increase the role of private sector in providing health care services, including by promotion of private-public partnership and optional health insurance options [Budget @2009: 0.1 MMMDL(0.009MMUS\$)]	MOH	On Going
104	Health Care and Training of Staffs	Improve the quality of health care and of the training of medical staff through the upgrade of material and technical assets of public health facilities and health education facilities [Budget @2009: 1,155 MMMDL (103.9 MM US\$)]	MOH	On Going
105	Quality Management	Design and implement a quality management system in health care [Budget @2009: 9MMMDL(0.81MMUS\$)]	MOH	2008 - 2011
106	Maternal and Child Health Care	Strengthen maternal and child health care services [Budget @2009: 11 MMMDL(0.99MMUS\$)]	MOH	On Going
107	Youth-friendly Health Services	Scale up youth-friendly health services and ensure access to information, education and communication in youth related issues [Budget @2009: 0.05 MMMDL (0.0045 MM US\$)]	MOH, NHIC	On Going
108	Control over Communicable Diseases (HIV/AIDS)	Strengthen control over communicable diseases, specifically, TB, HIV/AIDS and STDs [Budget @2009: 123 MMMDL (11.07MMUS\$)]	MOH	On Going
109	Public Health	Strengthen public health by reducing the burden of non-communicable diseases [Budget @2009: 4 MM MDL (0.36 MM US\$)]	MOH	On Going
110	Mental Health Services	Develop mental health services (Budget @2009: 2MMMDL 0.18 MMUS\$)]	MOH	On Going
111	Health Insurance	Improve equity and transparency within mandatory health insurance and financial protection of people facing health issues (Budget @2009: 0.6 MM MDL (0.054 MM US\$)]	MOH, NHIC	On Going
157	Health Survey	Carry out a population health survey[Budget @2009: 0.4	MOH,	2009 -

⁵⁵ Interview to MoH on June 29, 2009

NDS No.	Objects Targeted	Projects and Progress Thereof	Ministries or Agencies (Note)	Expected Schedule
		MM MDL (0.036 MMUS\$)	NHIC	2010

Note: MoH=Ministry of Health, NHIC=National Health Insurance Company

As for the action plans related to the “Healthcare System Development Strategy 2008 – 2017”, refer to the attachment 5.6.1. The related authorities have propelled fulfilling of the statistical data and constructing of electronic health system in which patients can make access easily to doctors⁵⁶.

5.6.6.2 Projects Requested for Japanese Assistance from Moldova

(1) Modernization of Hospital System and Renovation of Republic Clinical Hospital (RCH) Project⁵⁷

1.	<p>[Project Objectives and Expected Benefits]</p> <p>The project aims at establishing the medical care system partly of Moldova, through modernization of RCH.</p> <p>The project expects the following benefits: (i) To reduce the consultation hours at RCH; (ii) To increase number of the annual patients to RCH from 25,000 to 35,000. (iii) To reduce overlap of the functions between RCH and the municipality-level hospital.</p>
2.	<p>[Contents of Cooperation]</p> <p>(i) To make Yean loan (ii) To supply medical equipment (iii) To conduct consulting services to utilize equipment provided.</p>
3.	<p>[Background Information]</p> <p>RCH started operation in 1977 and becomes so old for work. Moldova experienced big earthquakes three times for the 30 years; therefore, it is desired to strengthen the structure of RCH to resist earthquakes.</p> <p>This project is a part of the Health Services and Social Assistance Project (HSSAP) that is conducted by WB.</p> <p>National Strategy for Clinical Services on Hospital was already drawn up.</p>
4.	<p>[Planned Area to Implement the Project]</p> <p>Chisinau</p>
5.	<p>[Facilities or Services Targeted in the Project]</p> <p>(i) To separate the existing part of the Intensive Care Services from the fourteenth story and to move it to the new location planned at the backyard⁵⁸. (ii) To rehabilitate the existing hospital facilities.</p>
6.	<p>[Expected Project Cost]</p> <p>The project cost is estimated at 25 MMUS\$ for the design phase and 50 to 55 MMUS\$ for the construction.</p> <p>The costs would be financed as follows⁵⁹:</p> <p>Loan from WB: 3MMUS\$、 Loan from EBRD: 9MMEUR (12.9MMUS\$)、 Grant from EU: 3 MMEUR(4.3MMUS\$)、 Others with use of ENEP</p>

⁵⁶ Interview to NHIC on June 29, 2009

⁵⁷ Interview to RCH on July 10, 2009

⁵⁸ Interview to RCH on July 10, 2009

⁵⁹ Interview to RCH on July 10, 2009

7.	[Expected Schedule to Implement the Project] The construction period is estimated at 60 months starting at September 2010. The F/S for the rehabilitation was completed at 2006. Currently WB makes international bidding for the design with use of TOR prepared. The design documentation would finish by the end of 2010 and WB desires to start the construction in 2011 after selection of the constructing company.
8.	[C/P and Organization to Implement the Project] Implementation Unit of Health Services and Social Assistance Project (HSSAP) of WB
9.	[Relation to the Environmental Impact Assessment] Not known
10.	[References] " Feasibility Analysis for Restructuring the Republican Clinical Hospital", 2008, MoH ⁶⁰

(2) Grant Aid to the Mother and Child Hospital⁶¹

1.	[Project Objectives and Expected Benefits] Through provide the hospital with the equipment with the grant scheme, to construct and establish the health care system for mothers and children.
2.	[Contents of Cooperation] To provide the hospital with the newest equipment.
3.	[Background Information] MoH recognizes the mother and child health care important in the following fields: (i) Family Planning, (ii) Risk-free Maternity, (iii) Teenager sexual Abuse, (iv) Pregnancy Disease At present the hospital is looking for the possible donors to make such grant cooperation ⁶² .
4.	[Planned Area to Implement the Project] Mother and Child Hospital, Chisinau
5.	[Facilities or Services Targeted in the Project] (i) To provide the equipment with the grant scheme (ii) To conduct the consulting services
6.	[Expected Project Cost] —
7.	[Expected Schedule to Implement the Project] One year
8.	[C/P and Organization to Implement the Project] Mother and Child Hospital , MoH
9.	[Relation to the Environmental Impact Assessment] —
10.	[References] p23-25, "Ensuring a Healthy Start in Life", "National Health Policy, Moldova, 2007 - 2021" ⁶³

(3) Grant Aid to NBTC⁶⁴

1.	[Project Objectives and Expected Benefits] Through rehabilitation of NBTC, o develop a blood-related (hematological) methodology and to establish the system and organization in Moldova
2.	[Contents of Cooperation] (i) To provide or construct the research facilities in the grant scheme. (ii) To make consulting services to utilize facilities provided.

⁶⁰ The reference material will be submitted to JICA separately from this study report.

⁶¹ Interview to MoH on June 29, 2009

⁶² Interview to MoH on June 29, 2009

⁶³ The reference material will be submitted to JICA separately from this study report

⁶⁴ Interview to NBTC on July 9, 2009

3.	[Background Information] Out of the blood compositions, cryoprecipitate component (factor 8) is short by 40%. The component production requires special equipment and technology. In the case where the component is separated from blood, most of the blood should be abandoned; therefore, it is necessary to rehabilitate the existing facilities. The project of the Security of hemo-transfusion in Moldova is financed as follows: (i) Loan from EBRD: 82.2%, (ii) Loan from WB: 12%, (iii) Global Fund for Blood Transfusion: 5% ⁶⁵
4.	[Planned Area to Implement the Project] NBTC, Chisinau
5.	[Facilities or Services Targeted in the Project] laboratory of NBTC
6.	[Expected Project Cost] —
7.	[Expected Schedule to Implement the Project] One year
8.	[C/P and Organization to Implement the Project] NBTC and MoH
9.	[Relation to the Environmental Impact Assessment] —
10.	[References] National Program “Transfusion Security and self-supply of blood products, during 2007-2011” ⁶⁶

(4) Grant Aid to CEMSTC⁶⁷

1.	[Project Objectives and Expected Benefits] To provide the laboratory facilities and ambulance cars to CEMSTC, hereby to improve the level of the emergency care to the EU level.
2.	[Contents of Cooperation] (i) To provide or construct the laboratory facilities and ambulance cars in the grant scheme. (ii) To make consulting services to utilize equipment provided.
3.	[Background Information] In compliance with the norm (an international guidance), one ambulance car is necessary per 10,000 resident; therefore, Chisinau should have 67 cars; however, have 47 ones. In addition, only 55% of the cars obey the Technical International Medical Standard.
4.	[Planned Area to Implement the Project] CEMSTC, Chisinau
5.	[Facilities or Services Targeted in the Project] Laboratory facilities and ambulance cars
6.	[Expected Project Cost] —
7.	[Expected Schedule to Implement the Project] One year
8.	[C/P and Organization to Implement the Project] CEMSTC, MoH
9.	[Relation to the Environmental Impact Assessment] —
10.	[References] Action Plan on the Development of the Emergency Health Care Service for 2006 - 2010

(5) Capacity Building of NHIC⁶⁸

1.	[Project Objectives and Expected Benefits] To make capacity building of NHIC, hereby to establish the health insurance system in Moldova.
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⁶⁵ Interview to NBTC on July 8, 2009

⁶⁶ The reference material will be submitted to JICA separately from this study report

⁶⁷ Interview to Chisinau EMS Training Center on July 8, 2009

⁶⁸ Interview to NHIC on June 29, 2009

2.	[Contents of Cooperation] (i) To dispatch experts relating to implementation of the health insurance. (ii) To receive the NHIC staffs for training in Japan.
3.	[Background Information] NHIC has shortage in professional manpower of economic and legislative fields; therefore, NHIC desires the Japanese government to make capacity building by dispatching the experts to NHIC. At present NHIC requires the following fields targeted by the technical cooperation: (i) To make guidance on the health procurement and the medical-service compensation, (ii) To make support of IT development.
4.	[Planned Area to Implement the Project] NHIC in Chisinau
5.	[Facilities or Services Targeted in the Project] Capacity building of the NHIC staffs
6.	[Expected Project Cost] NHIC names three persons as a candidate for sending for training in Japan. ⁶⁹
7.	[Expected Schedule to Implement the Project] Ditto
8.	[C/P and Organization to Implement the Project] NHIC and MoH
9.	[Relation to the Environmental Impact Assessment] —
10.	[References] Attachment 5.6.2: Requesting letter from NHIC

(6) Grant Aid to NCPM⁷⁰

1.	[Project Objectives and Expected Benefits] To rehabilitate the NCPM laboratory facilities, hereby to establish the public health in Moldova.
2.	[Contents of Cooperation] (i) To provide the laboratory facilities in a scheme of grant cooperation. (ii) To conduct the consulting services to utilize facilities provided.
3.	[Background Information] Health centers are restricted in a budget to procure medicines in addition to develop capability. At present NCPM receives cooperation from the donors, which is not enough to run. It is necessary to induce a new technology to make monitoring the water quality. The district centers should be rehabilitated because there remain equipment and organization made by the former Soviet.
4.	[Planned Area to Implement the Project] NCPM in Chisinau
5.	[Facilities or Services Targeted in the Project] The laboratories and health centers under management of NCPM total 44 institutions in the eastern area.
6.	[Expected Project Cost] —
7.	[Expected Schedule to Implement the Project] One year
8.	[C/P and Organization to Implement the Project] NCPM and MoH
9.	[Relation to the Environmental Impact Assessment] —
10.	[References] Under prepration by NCPM ⁷¹

5.6.6.3 Cooperation Made by Japan

Cooperation made by the Japanese government are as follows⁷²:

⁶⁹ Interview to NHIC, Requesting Letter dated July 9 3009 from NHIC

⁷⁰ Interview to NCPM on July 6, 2009

⁷¹ The reference material has not been received within the study period.

Table 5.6-9 Projects Implemented by Japan in the Sector

Classification	Projects and contents	Amounts Provided	Schedule
General Grant Aid	Project for improvement of medical equipment for Mother and Child Republican Hospital	MMUS\$5.7	1999 - 2000
General Grant Aid	Project for improvement of maternal and child health care system in the second level hospitals in the Republic of Moldova	MMUS\$8.0	2001 - 2002
Grant Assistance for Grass-roots Human Security Projects (KUSANONE)	Project for Improvement of Rehabilitation Equipment in Institute of Neurology and Neurosurgery of Moldova	US\$88,450	In 2008
Technical Cooperation by Sending Experts	Expert in a field of hospital administration	—	In 2004

5.6.6.4 Projects by the Other Country Donors

Projects by the Other-country Donors Planned or Implemented

Table 5.6-10 Projects Implemented or Planned by the Other Donors in the Sector

Objects Targeted	Donors	Projects and Outline Thereof	Ministries or Agencies	Expected Schedule
Health Care (i) Health System	WHO	Performance assessment for the health system ⁷³ Strengthening of the health system	MoH	On going
Health Care (ii) Mother & Child	WHO	Making Pregnancy Safer initiative, linked to the national reproductive health strategy ⁷⁴ Strengthening of mother and child health care and reproductive health	MoH	On going
Health Care (ii) Mother & Child	UNICEF	Training Project for hundreds of health care workers in immunization, child health, and prevention of mother-to-child transmission of infectious diseases ⁷⁵ Training of health-related staffs	MoH	On going

⁷² Japanese Embassy located in Ukraine prepared the document of English version in March 2009.

⁷³ WHO's 10 health questions about the new EU neighbors (Moldova)
http://www.euro.who.int/Document/E88202_Moldova.pdf

⁷⁴ WHO's 10 health questions about the new EU neighbors (Moldova)
http://www.euro.who.int/Document/E88202_Moldova.pdf

⁷⁵ UNICEF's Portal Site: http://www.unicef.org/infobycountry/moldova_background.html

Health Care (iii) Avian Influenza	WB	Avian Influenza Control & Human Pandemic Preparedness & Response Project Providing of Information and Survey on Avian Influenza, 10.6 MMUS\$ ⁷⁶	MAFI, MoH	June 2006 to December 2009
Health Care (iii) Avian Influenza	WHO UNICEF	Strengthening of the national system for reporting and surveillance of HIV/AIDS ⁷⁷ Strengthening of system to report and survey HIV/AIDS, 435,000 US\$ ⁷⁸	MoH	On going
Health Care (iii) HIV/AIDS	UNDP	HIV/AIDS in the Uniformed Services of Moldova Educating and publicizing for HIV/ AIDS prevention	MoH	November 2005 to June 2009
Health Care (iii) HIV/AIDS	USAID	Preventing HIV/AIDS and Hepatitis B & C in Moldova Making cooperation to prevent HIV/AIDS and Hepatitis, 6.2 MM US\$ ⁷⁹	MoH	June 2006 to June 2009
Others	EU	Budgetary Support Program ⁸⁰ Capacity Building of budgetary control by MoH, Budget as the grant aid for providing equipment: 4 MM EUR (5.5 MM US\$)	MoH	2008

5.6.7 Moldovan Capability to Cope with the Foreign Cooperation

5.6.7.1 Weakness of the Sector in Moldova

According to the interview to WHO, the proposal to improve the sector is as follows⁸¹:

- 1) Skilled human resources are short. It is necessary to improve a curriculum at a university, a college, public health schools, etc. hereby to make new approach and to strengthen the training.
- 2) To improve the budgetary and financial systems such as the national health accounts is necessary.
- 3) To collaborate with the private sector with use of the public-private partnership (PPP) is necessary.
- 4) To strengthen the surveillance system is necessary.

5.6.7.2 Project for Construction of a Large-scaled Hospital

In a large-scaled hospital project, it is necessary to study and manage how to make administration. In addition it is vital to provide the project with equipment and training of the staffs⁸².

⁷⁶ <http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P099841>

⁷⁷ WHO's 10 health questions about the new EU neighbors (Moldova)
http://www.euro.who.int/Document/E88202_Moldova.pdf

⁷⁸ <http://www.undp.md/projects/HIV.shtml>

⁷⁹ p1, http://pdf.usaid.gov/pdf_docs/PDADM900.pdf

⁸⁰ Interview to EU on June 26, 2009

⁸¹ Interview to WHO on June 23, 2009

⁸² Interview to British Embassy on July 9, 2009

5.6.7.3 Assessment to MoH

PIU of WB makes the following assessment to MoH in the Health Services and Social Assistance Project (HSSAP) ⁸³:

- 1) Reporting to WB was made properly and timely.
- 2) MoH responded properly to the request from the donors.
- 3) MoH had manpower enough to conduct the project.
- 4) MoH had a budget enough to conduct the project so that they can manage properly the local administration such as Chisinau.

PIU does not consider any problem on planning by MoH and their financing, judging from the fact where the MoH's department in charge has reasonably made the project plans⁸⁴..

⁸³ Interview to PIU of WB on July 2, 2009

⁸⁴ Interview to PIU of WB on July 2, 2009

**Attachment 5.6.1: Action Plan for the Implementation of the Healthcare System Development
Strategy
for the Period of 2008 – 2017**

	Specific Objectives	Schedule	Indicators
Section 1.	Improve the management/stewardship of the healthcare system in order to ensure the necessary conditions for the implementation of the objectives provided in the National Health Policy		
1.1	Improve the capacity of the Ministry of Health to develop and implement healthcare policies and strategic planning	2008-2011	Ministry of Health is functional according to its duties
1.2	Strengthen the capacity of the health authorities to monitor and evaluate the healthcare system	2008-2010	A monitoring and evaluation system in place according to the agreed standards
1.3	Improve the communication mechanisms	2008-2009	Equity and transparency in the process of management/stewardship
1.4	Strengthen the inter-sector partnership in healthcare decision making	2008-2017	Inter-sectoral partners involved in taking decisions of common interest
1.5	Increase the involvement of population, civil and professional society in decision making on healthcare issues	2009-2017	Professional associations, population and social partners involved in decision-making Transparency in decision-making increased
1.6	Bring the national healthcare legislation in line with the European standards		National Legislation brought in line with the European Laws according to established stages and timeframes
Section 2.	Improve the funding and mechanisms of payment for healthcare services		
2.1	Improve the healthcare system funding	2008-2011	Increase the expenditures for healthcare up to 9% of the GDP by 2017
2.2	Improve the mechanisms of payment and contracting of services	2008-2011	Payment and contracting mechanisms adjusted to system's financing and operational needs
2.3	Enhance equity and transparency in allocation of resources and financial protection of citizens	2010-2011	Increased access of population to healthcare services adequate to their needs; periodic evaluation
Section 3.	Organize and provide the healthcare services, including in the electronic form, in line with the requirements and tailored to people's needs		
3.1	Promote an integrated healthcare and ensure the continuity of the healthcare services for solving healthcare problems of the population	2008-2017	Population provided with continuous and integrated healthcare based on the identified needs

3.2	Develop priority sectors of the healthcare system with impact on the public health and of strategic importance	2008-2017	Priority areas in public health covered with financing and services based on the estimated needs
3.3	Improve the quality of the healthcare services and increase the patient's satisfaction	2008-2017	Provision of healthcare services to population according to standards approved Satisfaction of patients increased and periodically assessed
Section 4.	Generate and ensure the necessary resources for the healthcare system		
4.1	Management of the human resources through rational use of existent staff, adequate and diversified training and formation of highly skilled staff for the healthcare system	2008-2017	Adequate coverage with staff (according to categories and number of staff, diversified and specialized training, distribution), based on the estimated needs and approved normative acts
4.2	Strengthen the technical and material base of the institutions/facilities from the healthcare system	2008-2010	Technical and material basis adequate to the estimated needs estimate and approved normative acts
4.4	Rational management of drugs	2008-2017	Rules for base practices implemented Adequate access of population to drugs

5.7 Financial Sector

5.7.1 Outlines of the Sector and Administrative Organisations, Bodies and Companies Related to the Sector in Moldova

National Bank of Moldova (NBM) is a supervisory authority in Moldova.

There is the Banks Association of Moldova (BAM) as banking group's association. The BAM was established on 1993 as non-governmental organization and Mr. Dumitru URSU is an chairman at present. According to the BAM, There are mainly five activities as follows: (i) "Integration" (the BAM represents the entire banking community, no matter the market share each bank holds at present) ; (ii) "Accumulation" (the BAM identifies the consolidated problems faced by the entire banking industry) ; (iii) "Generating function" (the BAM creates and promotes ideas and suggestions regarding identified problems); (iv) "Intermediation" (the Moldavian banks' Association ensures a permanent dialogue between the banking community and the society, between the commercial banks and its regulators); and (v) "Representation" (the BAM ensures both bilateral and multilateral banking collaboration within some specialized institutions at the international level.)

There are presently fifteen banks, which is also the members of the BAM, under the supervision of the NBM as follows:

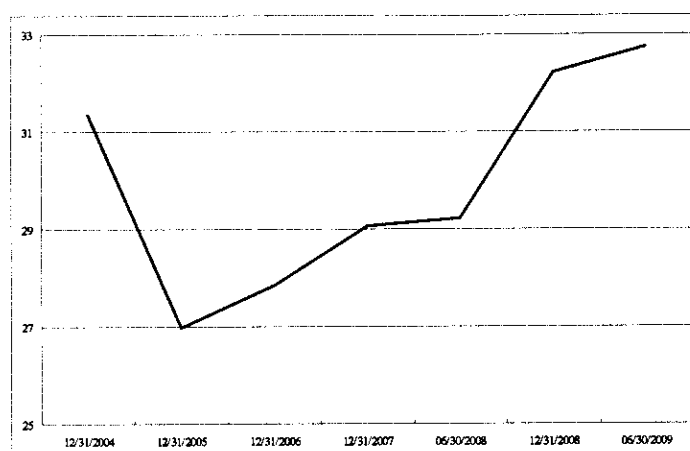
Table 5.7-1 List of Authorized Banks in Moldova

Name of Banks	Representatives	Date of establishment	Website
Banca Comerciala "COMERTBANK" S.A. (BC "COMERTBANK" S.A.)	Marina Kaliseeva	11.09.1991	http://www.comertbank.md
BANCA COMERCIALA "BANCA SOCIALA" S.A. (BC "BANCA SOCIALA" S.A.)	Vladimir Suetnov	11.09.1991	http://www.socbank.md
Banca Comerciala "VICTORIABANK" S.A. (B.C. "VICTORIABANK" S.A.)	Natalia Politov-Cangas	12.09.1991	http://www.victoriabank.md
Banca Comerciala "MOLDOVA - AGROINDBANK" S.A. (BC "MOLDOVA - AGROINDBANK" S.A.)	Natalia Vrabie	12.09.1991	http://www.maib.md
Banca Comerciala "Moldindconbank" S.A. (BC "Moldindconbank" S.A.)	Svetlana Banari	15.11.1991	http://www.moldindconbank.com/
Societatea pe Actiuni Banca de Economii (Banca de Economii S.A.)	Grigore Gacikevici	08.04.1992	http://www.bem.md/
Banca Comerciala "EuroCreditBank" S.A. (BC "EuroCreditBank" S.A.)	Aureliu Cincilei	30.09.1992	http://www.ecb.md
Banca Comerciala "UNIBANK" S.A. (B.C. "UNIBANK" S.A.)	Dumitru Tugulschi	19.01.1993	http://www.unibank.md
"Banca de Finante si Comert" S.A. ("FinComBank" S.A.)	Victor Hovorostovschii	01.07.1993	http://www.fincombank.com/
Banca Comerciala "Universalbank" S.A. (B.C. "Universalbank" S.A.)	Irina Drozd	10.11.1994	http://www.universalbank.md
Banca Comerciala "ENERGBANK" S.A. (B.C. "ENERGBANK" S.A.)	Iurii Vasilachi	16.01.1997	http://www.energbank.com
Banca Comerciala "ProCredit Bank" S.A. (B.C. "ProCredit Bank" S.A.)	Ilinca Rosetti	17.12.2007	http://www.procreditbank.md
Banca Comerciala Romana Chisinau S.A. (BCR Chisinau S.A.)	Sorin Andrei	22.10.1998	http://www.bcr.md
Joint Stock Commercial Bank "EXIMBANK - Gruppo Veneto Banca" (JSCB "EXIMBANK - Gruppo Veneto Banca")	Marcel Chirca	29.04.1994	http://www.eximbank.com/
Commercial Bank "MOBIASBANCA - Groupe Societe Generale" S.A. (CB "MOBIASBANCA - Groupe Societe Generale" S.A.)	Jean-Francois Myard	12.09.1991	http://www.mobiasbanca.md

Source: National Bank of Moldova (NBM)

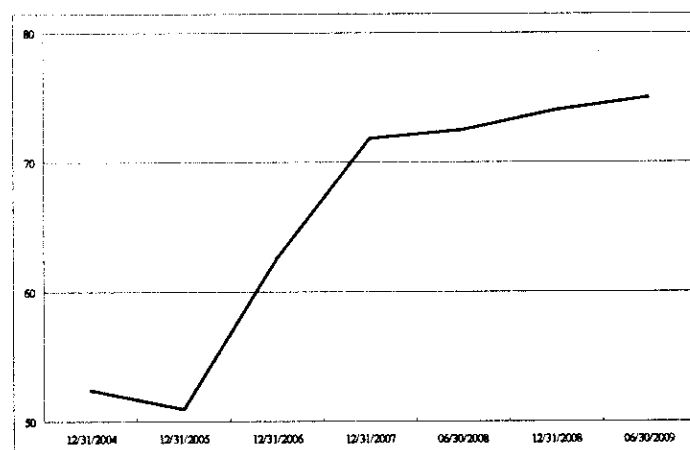
The capital adequacy ratio of financial sectors in Moldova for last five years is that the ratio is continuously increased to 32.8% at the end of June in 2009 although the ratio was declined approximately to 27% at the end of 2005. In addition, the ratios of foreign capitals in financial sectors have been increasing and the rate is 75.0% at the end of June on 2009. The number of employees in the financial sector is 10.845 at the end of June on 2009, which faced little number of declining as peaked of 11,319 at the end of 2008.

Figure 5.7-1 Trends of Capital Adequacy Ratio (%)



Source: National Bank of Moldova. Financial Indicators on the Banking System of the Republic of Moldova(Each Edition)

Figure 5.7-2 Ratios of Foreign Capitals in Financial Sectors (%)¹

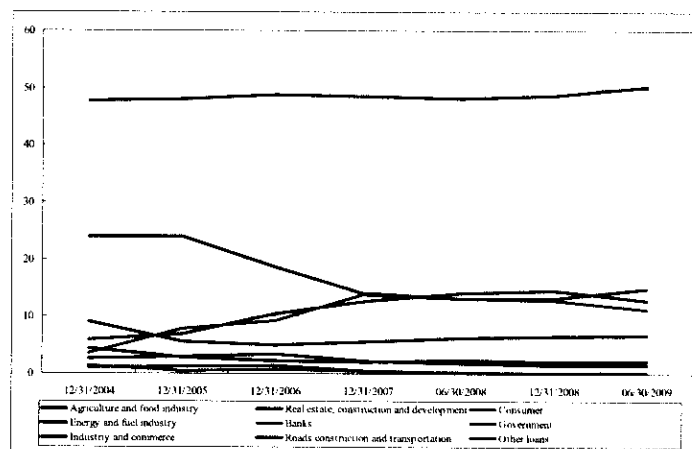


Source: National Bank of Moldova. Financial Indicators on the Banking System of the Republic of Moldova(Each Edition)

The major sectors of loans by fifteen banks in Moldova is “industry and commerce” (50.2%), followed by “agriculture and food industry” (15.0%), “real estate construction and development” (12.8%) and “consumer” (11.3%) at the end of June on 2009.

¹ It is difficult to make a survey on what nationalities do the foreign capitals have.

Figure 5.7-3 Structure of Loans



Source: National Bank of Moldova. Financial Indicators on the Banking System of the Republic of Moldova (Each Edition)

5.7.2 Effect by the Global Economic Crisis to the Sector

The banks in Moldova have been increasing ratio of total non-performing loans by total loans from mid-2008 and the ratio is 10.5% at the end of June on 2009, which is more than double compared with that (5.2%) at the end of 2008. Therefore, allowance for non-performing loans might be accumulated and ratio of allowance for non-performing loans by total loans is 6.6% at the end of June on 2009 and it is much larger than that (4.3%) in one year before (June, 2008).

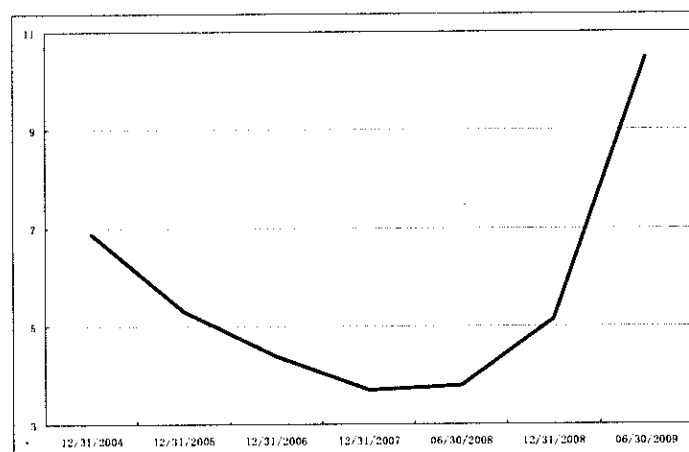
For both of lenders as well as borrowers, future prospects of macroeconomic performance is very sensitive and new loans is to be rapidly declined (although there is a indication that certain bank is to be recovered from the bottom). Therefore, major banks are rich in liquidity and, however, are very much careful in new lending.

On the other hand, financial institutions have an fully understanding of relatively high levels of interest rates on loans². This is because there is a background that IMF has been highly paying attention to stabilizing levels of inflation in this country after market-oriented economic reform. For private enterprises, this is critical issues. Therefore, some enterprises are found to have branch offices in Romania, which interest rate is relatively lower than that in Moldova, and to collect financial resources in the country as a last-ditch measure.

²

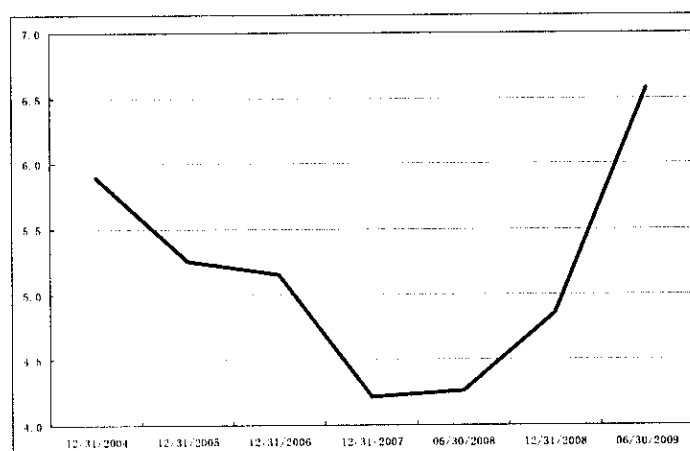
From a standpoint of private financial institutions, there are some indications that money supply has not responded to real economic situation. In this point, however, it can be said that this is common situation in the former republics of the Soviet Union. According to the World Development Indicators by the World Bank, money supply (M2) to GDP in Moldova on 2006 was 40.1%. The data were almost same as the following countries: Ukraine (42.1%); Lithuania (40.3%); and Macedonia (39.5%).

Figure 5.7-4 Ratio of Total Non-performing Loans by Total Loans (%)



Source: National Bank of Moldova. Financial Indicators on the Banking System of the Republic of Moldova (Each edition)

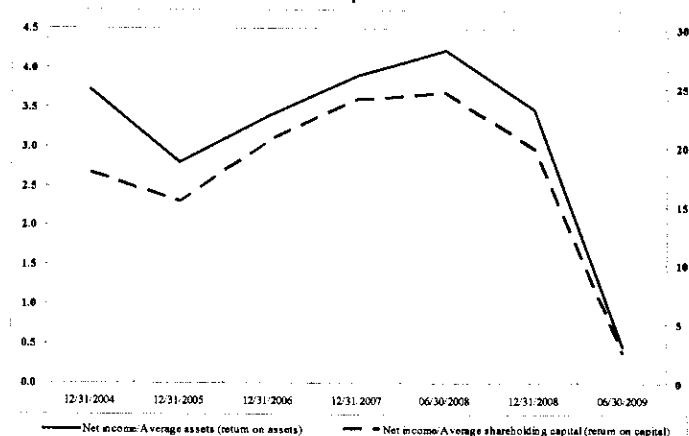
Figure 5.7-5 Ratio of Allowance for Non-performing Loans by Total Loans (%)



Source: National Bank of Moldova. Financial Indicators on the Banking System of the Republic of Moldova (Each edition)

At all events, accumulation of allowance for non-performing loans made net income to average assets (return on assets) and net income to average shareholding capital (return on capital) much lower, which are 0.5% and 2.5%, respectively. These rates have been much lower than those in one year before (at the end of June on 2008), which were 4.2% and 24.6%, respectively.

Figure 5.7-6 Net Income to Average Assets and Net Income to Average Shareholding Capital



Source: National Bank of Moldova. Financial Indicators on the Banking System of the Republic of Moldova (Each Edition).

5.7.3 Projects implemented or Planned in the Sector

There is no project to support financial sector directly. However, the World Bank is now formulating “Competitiveness Enhancement Project” by involving financial sector and by setting Ministry of Economy and Trade (MET) as a counterpart. This project is organized by attracting US\$4.9 million from IDA as loans, US\$4.9 million from IDA as grant and US\$4.5 million from Japanese government. This project promotes strengthening of competitiveness in exporting in the private enterprises by improvements of business environments and management of standards, inspections and qualities. Especially in Moldova, because relatively higher rates of loans became business disincentive especially for MSMEs, low interest loans are planned through major banks.

5.7.4 Moldovan Capacity to Cope with the Foreign Cooperation

In order to implement above-mentioned “5.7.3 Projects implemented or Planned in the Sector”, the World Bank is now in the process of selecting five to six appropriate banks to conduct this project. According to the local office of the World Bank, selection is now in the final stages by consulting firms located in Washington, D.C. At the same time, the representative of the World Bank asked possibility to conduct this projects jointly with Japan.

