

# Modernization of local public services in the Republic of Moldova

- Intervention area 1: Local services -



## Extension of the integrated management of solid waste in the localities of the Ciorna river basin

Final report

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## Acronyms and abbreviations

DED	German Development Service
EU	European Union
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GTZ	Agency for Technical Cooperation
ÎM	Municipal enterprise
InWEnt	Training International and Capacity - Building
LPA	Local public authorities
NGO	Non-governmental organization
RAȘ	Municipal enterprise Șoldanești
SIDA	Swedish International Development Agency
SUA	United States of America
SWM	Solid waste management
UNDP	United nations development programme

## **1 Introduction**

Humanity is called upon daily to help reduce the impact of nature caused by human activities. One of the ways is the management of wastes, the volume of which has risen dramatically, increasing also the harmfulness and their time of degradation and integration in the environment. Becomes waste any object, item, component that was introduced in the consumer bin and which being mixed becomes "dirty" and difficult to separate later and introduced in the process of reuse.

At EU level, waste management is considered a specific component of public services, which is given the same importance as other utility services. Waste management planning is an ongoing process that resumes and adapts over time, periodically assessing achievements, to address the most effective and sustainable environmental issues at all levels: local, national and regional.

Waste management is one of the difficult, complex and far from being solved problems in Moldova, according to international standards and restrictions. An increased waste problem, in particular, solid waste is generated by how bad they are now settled in various stages of integrated waste management.

### **1.1 About GIZ**

German Development Cooperation (GIZ), formerly known as the German Agency for Technical Cooperation (GTZ) was founded in 1975. After the foundation works for public sector organizations and is headquartered in Eschborn, Germany. On January 1, 2011 merged three organizations in Germany: German Development Service (DED), Agency for Technical Cooperation (GTZ) and Training International and Capacity - Building (InWEnt), GTZ thus appears under a different name, namely the German Agency for International Cooperation (GIZ).

Services provided by the German Development Cooperation (GIZ) are based on a variety of regional and technical expertise, and innovative management. As a federal organization, GIZ supports German Federal Government objectives of international cooperation for sustainable development.

### **1.2 About project**

At the beginning of 2010 GIZ initiated the project "Modernization of local public services in Moldova". The project is implemented in collaboration with Government structures at local, regional, and central levels and main GIZ partner in this project is the Ministry of Regional Development and Construction. Within the project was founded the National Fund for Regional Development and local authorities are encouraged to submit, through the Regional Development Agencies, project proposals aiming at improvement of key sectors of local public services.

### **About the study**

One of the projects already selected at the moment of initiation of the study is the project „Extension of the integrated management of solid wastes in the localities of the Ciorna river basin”. This project aims to provide waste management services in seven villages and town Șoldănești, an area with about 15.000 inhabitants. Integrated management of solid wastes includes periodic collection, recycling and waste disposal by storage in a DMS warehouse and composting manure.

This study is conducted within the project, with the main objective: Investigation and extensive description of the reference situation in town Şoldăneşti and 7 villages (Parcani, Hlingenii, Mihuleni, Şestaci, Şipca and Olişcani from Şoldăneşti district and Lipceeni village from Rezina district), on the quality of sanitation services.

**The study includes the following specific objectives:**

- Determination of the consumers satisfaction degree:
  - Determination of the degree of satisfaction of residents with the quality of waste management services in seven villages (Parcani, Hlingenii, Mihuleni, Şestaci, Şipca, Olişcani, Lipceeni) and town Şoldăneşti;
  - Collecting feedback to evaluate residents' satisfaction on each segment of the existing waste management system, including: procedures for waste collection/ transport, frequency (how often), separation and recycling processes (if any), and charges for waste collection per household and economic agent, etc.;
  - Identification of the level of population awareness regarding the separation, recycling and appropriate disposal of domestic and commercial waste;
  - Determination of the satisfaction degree of the waste management company with the supplied equipment (vehicles, bins, trash urns, etc.);
  - Interview with residents to evaluate their satisfaction with the current general level of waste management (cleaning and maintenance of the centre / periphery / streets and roads in villages and town which they live);
  - Evaluation of the population satisfaction degree, with placement of containers and garbage bins on the sidewalks or streets;
  - Evaluation of the population satisfaction degree about the location of the solid wastes storage and precollection wastes platform;
  - Evaluation of the public opinion regarding perception of environmental and health issues related to wastes;
  - Evaluation of the level of awareness of rights and obligations of consumers and their willingness to contribute to situation improvement;
  - Identification of the roles from private and public sectors;
  - k) Identification of the citizens' opinions on taxes for waste collection, transportation, treatment and disposal (willingness to pay, accessibility);
  - Evaluation of the management capacity of the service provider;
  - Evaluation of the existing system of sanctions and inducements applied in the area, highlighting gaps and causes of its inefficiency;
  - Collection of the feedback from the public regarding the free access of residents to the wastes storage;
  - Identification of the level of consumer sensitization to the economical, technical and environmental requirements of the provided services.
- Identification of the degree of participation of several actors:

- Identification of the level of participation of all actors of civil society in planning, implementation, monitoring and evaluation of public policies in local public services;
- Evaluation of the women's access to local public services;
- Evaluation of the level of cooperation between citizens and public authorities in local public services.
- Intercommunity and inter-sectorial collaboration:
  - Identification of the level of sectorial cooperation of the actors involved in public service delivery at different levels;
  - Identification of the level of inter-cooperation regarding public services in solid wastes management sector;
  - Identification of the level of inter sectorial collaboration in the process of elaboration of local development strategies.
- Local public authorities capacities:
  - Identification of local public administration capacity in planning and management of investments in public services;
  - Identification of management capacities of local authorities for public services;
  - Identification of the of local authorities capacities of public patrimony management;
  - Evaluation of usefulness of the trainings that were offered during the last three years in local public services area;
  - Identification of development needs of local authorities capacities in local public services area.
- Women's access to public services.

### **1.3 The methodology of the study development**

To achieve the objectives sociological investigation was undertaken with the methods of quantitative and qualitative data collection:

- Research and consultation of relevant documents from local and national sources;
- Survey among households;
- Semi-structured interviews with legal entities (public institutions, local authorities, businesses, NGOs);
- Individual interviews (in-depth) with decision makers (managers of the institutions mentioned above).

#### **Quantitative component**

Data was collected on a representative sample for the Ciorna river basin area, which includes town Șoldănești and villages Parcani, Hlingeni, Mihuleni, Șestaci, Șipca and Olișcani from Șoldănești district and Lipceni village from Rezina district.



The total volume of the sample: 1,194 households and 56 local actors, with the default size of the sample in a conventional manner for each locality.

### Stratification

To obtain a sufficient number of interviews to perform analysis at the level of separate locations, it was decided to realize 400 interviews in town Şoldăneşti and 100 interviews within households from each rural locality.

**Table 1-1: Number of interviews**

	Population (Census 2004)	Interviews nr.	
		Households	Actors
Şoldăneşti	6,304	421	18
Şestaci	1,184	108	10
Hlingenii	1,007	120	5
Mihuleni	618	102	5
Parcani	769	114	4
Lipcenii	641	50	2
Şipca	756	100	9
Olişcanii	3,025	179	3
<b>Total</b>	<b>14,304</b>	<b>1,194</b>	<b>56</b>

### Weighting

Subsequently, to obtain indicators for the entire universe of research data weighting has occurred, being calculated probabilistic weights depending on the number of households in each community.

### Randomization stages:

- Location: default localities from the project structure;
- Household: selected by random route method, with a default statistical step as the total number of households on route divided by the number of interviews to be conducted;
- Person: head of household, or person replacing him in his absence for a period longer than the period of data collection.

Representativeness: the sample is representative for the project area, with a maximum error of  $\pm 2.80\%$  for the entire sample,  $\pm 4.80\%$  for town Şoldăneşti and an error close to  $\pm 9.00\%$  for the villages (except Lipcenii village).

Data collection period: 1 – 23 august 2011. Interviews were conducted in respondents' homes.

### Qualitative component

Various aspects of current practices, problems and future approaches to waste management were discussed during individual interviews with community representatives. Were conducted 4 interviews with mayors, 2 with SME managers, 4 with managers of educational institutions and 2 interviews with other categories (priest and manager of the state enterprise).

**Table 1-2: Interviews for local leaders**

	<b>Mayor</b>	<b>SME manager</b>	<b>Educational institution manager</b>	<b>Other category</b>
Șoldănești				1
Șestaci	1			
Hlingeni				
Mihuleni				
Parcani	1		2	
Lipcenii				
Șipca	1	1	1	1
Olișcani	1	1	1	
<b>Total</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>2</b>

### **Data collection tools**

Data were collected using the instruments elaborated within the study:

- Questionnaire for households (annex 1);
- Questionnaire for local leaders (annex 2);
- Individual interview guide (annex 3).

## 2 The community situation – population satisfaction degree

### 2.1 Area description

Study area was a group of localities located in Ciorna river basin including town Soldănești, crossed by the river, and seven villages, located near town. The placement of the area is very compact, the largest distance to the town Șoldănești, being Lipceni vil-lage (the only locality that is not part of the district with the same name) – 15.00 km. This makes it very attractive for large infrastructure projects, including several localities.



Șoldănești district, which includes 7 of the 8 localities included in the study, is one of the most deprived territorial administrative units of the Republic of Moldova, ranking 21 (of 35) by multiple deprivation index of small areas (2009). But in particular, the district is on the last places by deprivation of living conditions, with an index of 221 points (rank 32 of 35).

The area included in the study is lived by 13,500 persons, the number of households in 2009 being of 5,010. High degree of deprivation of living conditions is determined by the absence in the area of the utilities.

According to the Ministry of Economy, in 2009 only 958 houses from the mentioned area were connected to water supply, which is 19.10% from households. In fact we can speak of the presence of centralized water supply services only in town Șoldănești, while in rural areas this is lacking.

A similar situation in dealing with centralized sewer service coverage. Such services are available only in town Șoldănești, where 47.60% from households are connected to

the sewerage network. In rural areas these services are lacking, so that in the entire area the level of coverage is of 17.40% from households.

Localities gasification is carried out, metaphorically speaking, only half. Only 48.60% from houses in the area are connected to the gas network, being gasified at a large scale the town Şoldăneşti and Mihuleni and Şipca villages.

Central heating exists only in Şestaci, Mihuleni and Parcani, where covers an insignificant number of households. Throughout entire area, the number of the houses centralized heated reported to the total number of households, indicates a level of 2.90%.

In 2009, 12.90% of households were in possession of personal computers, connected to Internet only 1.00%.

**Table 2-1: Area of study: data on the presence of public utilities**

	Town Sol-danesti	v. Lipceni	v. Hligeni	v. Mihuleni	v. Oliscani	v. Parcani	v. Sestaci	v. Sipca	Total
Present population - total, persons	6,088	590	954	582	2,690	784	1,128	695	<b>13,511</b>
Population, absent more than 1 year - persons	754	2	25	23	64	24	21	22	<b>935</b>
Nr. of households	1,817	226	416	234	1,170	306	531	310	<b>5,010</b>
Nr. of houses, apartments having water supply	948	0	0	0	0	10	0	0	<b>958</b>
Percentage of households	52.20%	0.00%	0.00%	0.00%	0.00%	3.30%	0.00%	0.00%	<b>19.10%</b>
Nr. of houses, apartments having sewerage	864	0	0	0	0	10	0	0	<b>874</b>
Percentage of households	47.60%	0.00%	0.00%	0.00%	0.00%	3.30%	0.00%	0.00%	<b>17.40%</b>
Nr. of houses, apartments having centralized gasification	1,949	0	10	198	101	13	0	165	<b>2,436</b>
Percentage of households		0.00%	2.40%	84.60%	8.60%	4.20%	0.00%	53.20%	<b>48.60%</b>
Nr. of houses, apartments having centralized heating	0	0	0	57	0	9	77	0	<b>143</b>
Percentage of households	0.00%	0.00%	0.00%	24.40%	0.00%	2.90%	14.50%	0.00%	<b>2.90%</b>
Nr. of houses, apartments having per-	557	12	5	16	15	11	17	11	<b>644</b>

	Town Sol-danești	v. Lipceni	v. Hligeni	v. Mihuleni	v. Oliscani	v. Parcani	v. Sestaci	v. Sipca	Total
sonal computers Percentage of households	30.70%	5.30%	1.20%	6.80%	1.30%	3.60%	3.20%	3.50%	12.90%
Nr. of houses, apartments having access to Internet Percentage of households	0 0.00%	0 0.00%	0 0.00%	16 6.80%	15 1.30%	11 3.60%	5 0.90%	4 1.30%	51 1.00%
Distace to the town Șoldănești, km	0.00	15.00	7.00	4.00	6.00	3.00	10.00	4.00	

Source: Ministry of Economy, the index of deprivation, year 2009.

## 2.2 The current situation on waste management

At the moment, the waste management services in the area are underdeveloped one. At centralized and systematic level this service exists only in town Șoldănești and Parcani village, being provided by communal company Regia Apă Șoldănești.

### Regia Apă Șoldănești

The company was created in 2007, to provide communal services in town Șoldănești and in the surroundings.

#### Company statute provides the following services:

- Water collection, treatment and distribution;
- Elimination of waste and waste water;
- Drainage, sanitation and similar activities.

#### Salubrity services of RAȘ include:

- Manual sweeping of streets, roads and pavements;
- Emptying and maintenance of trash baskets;
- Collection of street waste;
- Storage and spreading sand on the streets in winter.

On June 1, 2011 the company provides waste collection services to 1,182 client, of which 22 economic agents and 1,830 individuals. Degree of coverage of this service is estimated at 66.30% of population in the area of activity of the company.

After the implementation of the project „Modernization of sanitation services from town Șoldănești” in year 2009 were placed on the area that covers 2/3 from the surface of town Șoldănești and 1/3 from Parcani village, 27 platforms equipped with 4-5 trash bins, a box for plastic and 3 ECO boxes for solid waste collection by sorting them.

Currently in an early stage is the implementation of selective waste collection.

Source: „Diagnostic analysis of municipal company „Regia Apă Șoldănești”, 2011, elaborated by Pro-Consulting Company.

In other communities in the area centralized waste management services are absent, and Local Public Authorities take management measures, but in a systematic and insufficient way. Thus, according to the study „Diagnostic Analysis of Municipal Company „Regia Apă Șoldănești”:

- Parcani village hall allocates about 20,000 lei annually, however in the village there are 10 unauthorized dumps, some of which are located near the Ciorna river basin;
- Șipca village hall allocates approximately 3,000 lei annually, and it has 2 authorized dumps and 2 unauthorized dumps, and the necessary cost of recultivation of unauthorized dump is of 5,000 lei;
- Olișcani village hall allocates 8,000 lei annually for territory planning, from this amount being recultivated the unauthorized dumps, and in the locality there are 3 unauthorized dumps and an authorized one;
- Lipceni village hall allocates approximately 5,000 lei annually for territory planning, and in locality there is an authorized dump and there are 7 unauthorized dumps;
- Șestaci village hall allocates approximately 4,000 lei annually for waste collection, and in the locality there are 6 unauthorized dumps and an authorized one;
- Mihuleni village hall allocates approximately 6,500 lei annually for waste collection, and in the locality there is only one authorized dump.

Totally, in the area covered by study there are about 30 massive unauthorized dumps, being widespread also places where stored unauthorized waste in smaller quantities are.

In reference situation in the given area in the field of waste management is also provided by people from the communities from which were interviewed. Further, respondents' words in the individual interviews are presented indicating the function, without indicating the respondent's locality, from considerations of confidentiality.

Therefore, the situation in the area is considered by respondents as a rather deplorable one. Practically all respondents set the problem of unauthorized dumps, even if they are around the town:

- „Most of them have carriages, but don't take away the waste to the authorized dump, but throw in the ditch, on the edge of the road and other unauthorized places” (business unit manager);
- „Since I recall, the village only now has a dump more or less arranged, but unfortunately not all people take trash to it, many of them throw wherever they find” (manager educational institution).

The study confirms that beyond the RAȘ perimeter activity, extensive and systematic actions for waste collection are not undertaken, leading to inadequate waste management practices:

- „A service that would function on regular basis doesn't exist. Everybody handle it how they can, some take it to the authorized dump, some burn it or some throw it in unauthorized places, in the ditch, in the forest etc.” (manager educational institution);

- „We don't have a centralized waste disposal, each evacuates it as possible. Around the holidays the economic agents contribute at the waste disposal with transportation, usually this thing is done by agriculture leaders” (mayor);
- „Waste is not collected regularly, as tradition cleaning is done before the holidays. Waste collection and disposal is not done because of the money insufficiency, and because the people are poor, poverty is probably the most serious environmental problem, when people are poor no longer think about nature” (manager educational institution).

One of the respondents provided a more critical approach, but wide waste management in the town Soldanesti, emphasizing that the RAS does not have a systematic and uniform program over time, that efforts to improve collection quality and develop the selective collection, made till now not provide the result, requiring even some tougher action:

- Places were set for waste collection but they are not maintained by citizens, waste is not stored selective, I think there are required administrative mechanisms of the LPA, involving police, the Center for Preventive Medicine and Ecological Inspectorate. Responsible services for maintaining cleanliness in the town must be schooled on the importance of integrated waste management. Usually can be noticed an activation in town's sanitation only before holidays, but this should become necessary tradition for everyone to maintain town in a state of good ecological health. People are not aware about this, and probably not perceive that a deplorable sanitary and ecological state affects their health. In this sense are required massive awareness campaigns and work with people and this should be done periodically such because it was educated in this way in the Soviet period.

The same is mentioned the fact that in the past (the Soviet period) salubrity was the responsibility of the collective farm (kolkhoz), and waste management was provided at a higher level than at present:

- "We have an authorized waste dump, but unfortunately is too far from the village and people find it difficult to transport the waste to it. In the past the waste dump was arranged by collective farm at regular environmental requirements, now due to the lack of finances this is not done too much, the waste is collected only with the tractor " (manager educational institution);
- "What relates the past regarding solid waste the village had not an arranged waste dump, and was stored on the shores of rivers Ciorna. Village sanitation in the past, as people talk was charged to the kolkhoz together with village Soviet " (mayor);
- „Authorized place for waste dump exists, but is far away from the village and people not having the necessary transportation means, throw the waste on the edge of the ditches or on the roadsides. In the past the village salubrity was the responsibility of the agricultural household, which was well developed” (mayor).

### **2.3 Socio-economic situation of the communities**

Appreciation of the local socio-economic situation is the direct primary indicator of the degree of improvement of community services. Firstly in terms of living conditions people appreciate the socio-economic development of the village.

Even if the infrastructure is poorly developed in the researched area, the social-economic development of communities included in the study is seen by their population

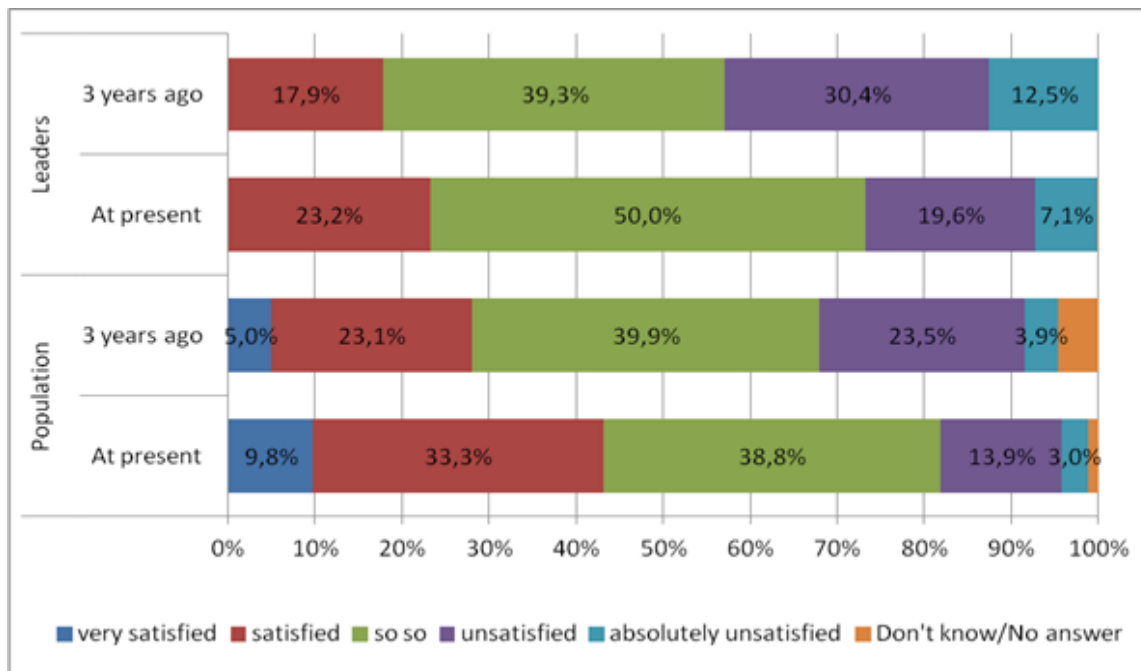
rather positive than negative. Positive feedback predominates numerically over the negative ones, although the largest group is the ones with the mediocre feedback (so and so). Thus, one of ten citizens (9.80%) is very satisfied with the economic and social situation, one of three (33.30%) satisfied. Major group - 38.80% is the citizens who have applied to qualification so and so.

Instead local leaders are more critical in assessing the socio-economic of the communities than the population. None of them said very satisfied, 23.30% declared themselves as satisfied, and one of two has chosen the rating so and so. A significant group are those with negative feedback - 19.60% are dissatisfied and very dissatisfied 7.10%.

To see how evolved the socio-economic situation of the communities in recent years it was measured the public satisfaction degree (question in retrospect) in 2008. Similarly in the study will proceed after completion of the project of expansion of integrated waste management. In the public perception the socio-economic development of communities takes a faster pace.

If per total seem satisfied with the community development at the present moment, about 43.00% of citizens and 23.20% of community leaders, the way the community were developing three years ago were considered satisfied 23.00% citizens and about 18.00% leaders.

Figure 2-1: Satisfaction degree of the socio-economic situation of the community



B1. To what extent are you satisfied with how is developing in terms of socio-economic your community in present (2011)?

B2. To what extent were you satisfied with fact of social-economic development point of view of your community 3 years ago (2008)?

A higher satisfaction of social and economic situation of the community shows people of 41-50 years (48.80% are satisfied or very satisfied), those with higher education (58.70% satisfied or very satisfied) or middle school (satisfied or very satisfied 47.80%), lonely people (46.30%), those employed (50.30%) students and those on ma-



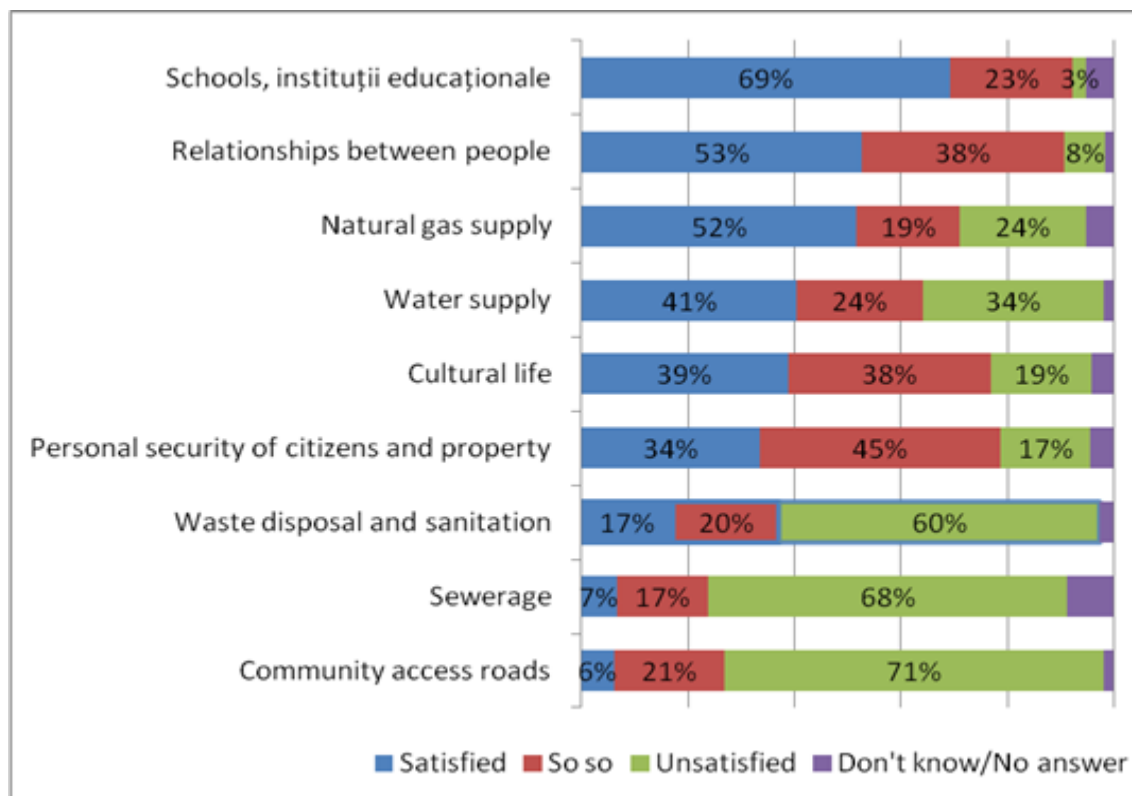
ternity leave (47.60%). We notice an increased satisfaction for people in households with more favourable economic situation - 12.80% and 41.70% very satisfied.

By communities notice higher degree of satisfaction of inhabitants of Lipceni village (satisfied and very satisfied 70% of respondents) and town Soldanesti (57.90%, respectively). In the same localities recorded the highest degree of appreciation of social-economic situation three years ago. These two places are specific by fact that the village Lipceni is the only locality of the studied, that is part of Rezina district and Soldanesti is the only urban locality, and having the proper utilities.

From the perspective of gender note that men show a degree of satisfaction a little higher than women. Thus, are very satisfied with the social-economic situation of the locality 10.20% of men instead of 9.50%, 36 declare themselves satisfied instead of 30.60% for women. This observation is very valuable, because women who care for family homes are most affected by the lack of adequate living conditions.

Sanitation and garbage disposal services (rather short in the area) is an issue that arouses the greatest discontent among the population. Six of ten respondents are satisfied with this element of community infrastructure, and only 17.00% are satisfied. Sanitation is devastated by the percentage of those dissatisfied only by the road infrastructure (71.00% dissatisfied) and by sewerage services (68.00%).

Figure 2-2: Satisfaction degree on various community aspects



In the qualitative study respondents evoke the same issues - roads, water supply, necessary repairs of buildings, and almost all respondents mentioned among the main problems of the community waste management problem.

Comparative analysis provides some very valuable points and highlights gender specific. In general, women are less satisfied, so are more affected by the lack or poor quality of municipal services. Among them the percentage of those who declare themselves

satisfied is less than in case of men in almost all aspects assessed in the study. But in particular, compared to men women are less satisfied with the quality or lack of sewerage services (6.00% satisfied compared with 11.00% men), services and / or waste disposal practices (18.00% satisfied compared with 23.00 % male), the situation with access to water (39.00% satisfied women and 45.00% men) and the relations between villagers (52.00% women and 61.00% men satisfied). Note that the lowest level of satisfaction recorded in assessing quality of rural access roads at both women and men.

In comparison per localities, the first of all can be noticed that without sanitation services, the satisfaction degree of this aspect of community life is completely disapproved of the villagers surveyed, satisfied with the current situation in this area being between 0.00% and 14.00% of respondents. In the town Soldanesti garbage disposal and sanitation services are appreciated by 43.00% inhabitants.

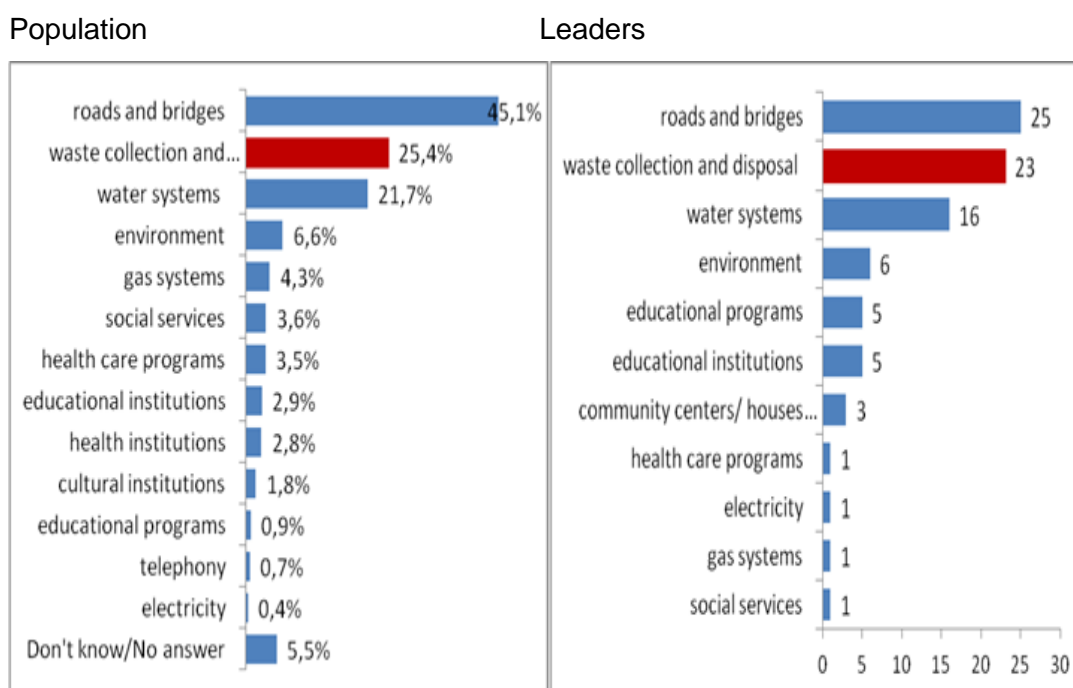
**Table 2-2: Satisfaction degree of various community issues**

The proportion of respondents declaring themselves satisfied	Sex:		Locality:							
	Male	Female	Șoldănești	Șestaci	Hligeni	Mihuleni	Parcani	Lipcenii	Șipca	Olișcani
Relations between people	61.00 %	52.00 %	53.00 %	39.00 %	42.00 %	38.00 %	40.00 %	66.00 %	50.00 %	80.00 %
Cultural life	42.00 %	39.00 %	42.00 %	63.00 %	23.00 %	13.00 %	62.00 %	14.00 %	20.00 %	45.00 %
Water Supply	45.00 %	39.00 %	41.00 %	52.00 %	64.00 %	10.00 %	11.00 %	20.00 %	62.00 %	48.00 %
Natural Gas supply	52.00 %	50.00 %	56.00 %	79.00 %	6.00 %	82.00 %	36.00 %	46.00 %	73.00 %	40.00 %
Personal security of citizens and property	32.00 %	30.00 %	23.00 %	25.00 %	10.00 %	59.00 %	57.00 %	44.00 %	56.00 %	34.00 %
Schools, educational institutions	71.00 %	65.00 %	62.00 %	75.00 %	76.00 %	73.00 %	84.00 %	34.00 %	78.00 %	73.00 %
Garbage disposal and salubrity	23.00 %	18.00 %	43.00 %		1.00 %	1.00 %	5.00 %	14.00 %	1.00 %	5.00 %
Community access roads	6.00 %	6.00 %	7.00 %			28.00 %		6.00 %	1.00 %	7.00 %
Sewerage system	11.00 %	6.00 %	11.00 %	2.00 %		1.00 %	4.00 %		1.00 %	15.00 %

Therefore the list of priorities for the community, according to residents, after the roads are placed collection and waste disposal systems. Thus, 45.10% of people surveyed believe that the most urgent problem that needs to be resolved in the community is roads. One in four indicated that services should be developed primarily for collection and disposal of garbage and 6.60% indicated a problem directly related to salubrity, that the attention should be paid primarily environmental protection issues. On the third place are those that showed the need to develop water supply systems (21.70%), although only about 19.00% of households from surveyed area have a connection to a centralized water supply.

If the case of leaders in top solving problems requiring priority is similar, going to the same three areas posted before. But here compared to the population, the importance of developing garbage collection and waste disposal services and those of water supply are highlighted.

**Figure 2-3: Community issues to be solved as a priority**



Prioritizing community problems is not very different between genders, both men and women put on the first place the roads problem (49.00% and 46.00%), although women in a greater degree opt for the creation and development of waste disposal services (24.00% women and 18.00% men) and those of water supply (21.00% and 18.00% respectively).

There are some differences between communities. The road problem is indicated as a priority in all localities, except Mihuleni and Parcani villages.

In Mihuleni and Şipca villages on the first place as a priority is the problem of waste disposal services (52.00% and 91.00% respectively), while in town Şoldăneşti this problem is not the top priority, being mentioned only by 8.00% of citizens.

**Table 2-3: Community issues to be solved as a priority**

The proportion of respondents who declare themselves satisfied	Sex		Locality							
	Male	Female	Şoldăneşti	Şestaci	Hlîgeni	Mihuleni	Parcani	Lipceni	Şipca	Olişcani
Water systems	17.00 %	21.00 %	21.00 %	20.00 %	20.00 %	28.00 %	39.00 %	22.00 %	37.00 %	3.00 %
Social services	2.00 %	5.00 %	6.00 %	3.00 %	8.00 %	3.00 %		6.00 %		
Schools, kindergartens, extracurricular institutions	3.00 %	3.00 %	6.00 %	2.00 %		1.00 %	4.00 %			1.00 %

The proportion of respondents who declare themselves satisfied	Sex		Locality							
	Male	Female	Șoldănești	Șestaci	Hligeni	Mihuleni	Parcani	Lipcenii	Șipca	Olișcani
Community centers/ houses of culture	2.00 %	2.00 %	3.00 %	2.00 %	3.00 %	2.00 %				
Collection and waste disposal systems	18.00 %	24.00 %	8.00 %	44.00 %	23.00 %	52.00 %	11.00 %	2.00 %	91.00 %	22.00 %
Family doctor office/Family doctors center/health center	2.00 %	3.00 %	1.00 %	5.00 %	3.00 %	6.00 %	3.00 %	6.00 %	7.00 %	1.00 %
Roads and bridges	49.00 %	46.00 %	49.00 %	53.00 %	59.00 %	10.00 %	26.00 %	52.00 %	47.00 %	51.00 %
Gas systems	3.00 %	5.00 %	5.00 %	1.00 %	9.00 %		10.00 %	4.00 %		3.00 %
Environment	11.00 %	5.00 %	5.00 %	16.00 %	3.00 %	1.00 %			3.00 %	18.00 %
Telephony	1.00 %	0.00 %			7.00 %					
Electricity	0.00 %	1.00 %	1.00 %			3.00 %				
Health care programs	3.00 %	4.00 %	4.00 %	7.00 %	6.00 %	2.00 %	5.00 %		2.00 %	1.00 %
Educational programs	1.00 %	1.00 %	2.00 %		3.00 %	1.00 %				

### 3 Local actors: responsibilities and capabilities

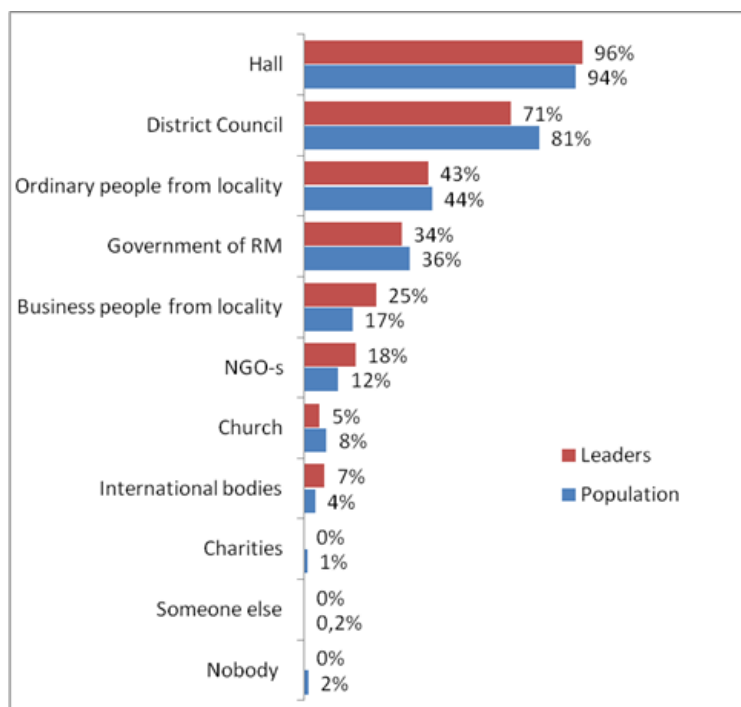
Identification of the circle of actors, which in the eyes of the population are the main responsible for socio-economic problems of the community allow establishing what, would be the accepted format by the population in the implementation of community projects. The survey data suggests that people don't perceive insured community development through partnerships between various actors of different nature. Who is responsible for community development is the state, through its organs on various levels. This is because of the four actors who received the most mentions, are the state organs from all three levels, with decreasing importance on vertical.

Local government is the mainstay of community development, mentioned by 94.00% of citizens and 96.00% of local leaders as the most responsible actor for the community development. Following the state administration of the second level, district level, district council are mentioned by 71.00% of local leaders and 81.00% citizens.

Population ranks third among "accountability", mentioned by 43.00% leaders and 44.00% citizens, followed by government (34.00% and 36.00% respectively).

In this context we conclude that at the local level prevails the perception that community development is possible only if it is provided by the state, and the "expanded" partnership to solve social and economic problems at local level should include, in the perception of respondents, only public administration and population in not associated shape - every citizen apart. The term of the not associated shape we mean that NGOs and charities, which are not merely formalized associations between several people, on the one hand also the church, with a huge mobilization potential, on the other hand are not considered in the minds of those interviewed as potential serious in solving community problems.

**Figure 3-1: Responsible actors for community socio-economic problems solving**



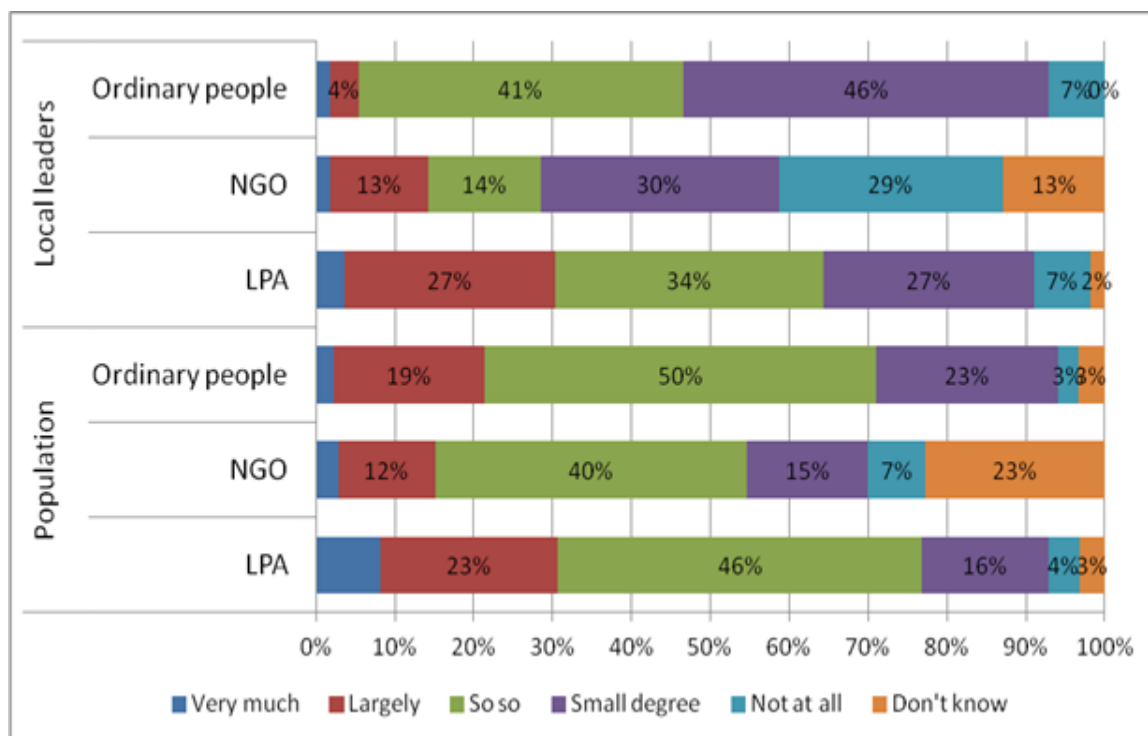
The survey data indicates that the level of confidence in the ability of local administrations in community problem solving is not promising. Only 31.00 % of people surveyed believe that the LPA from their city is dealing largely or very largely with socio-cultural problems of the community, every second citizen (46.10%) gave an average appreciation and 20.00 % believe that local public administration rather not deal with community problems.

The appreciations of interviewed local leaders are more dispersed. A not outlined assessment (so and so) gave a third of respondents (33.90%) in other cases opinions are dispersed in about equal, 30.00% giving a positive assessment, and 34.00% negative.

Note that local leaders are very reserved about the population implication solving problems of the village. Only 6.00% of them believe that the people are involved to some extent, 46.00% believe that the population is involved in a small measure and 7.00% not at all. Interviewed residents, although mostly sceptical at this chapter, "credit" themselves, however, in a greater extent, 21.00% believing that ordinary people are involved in the great extent, and 26.00% believe they engage a little or not at all .

Local civil society is perceived as rather underdeveloped, with minimal implications for community affairs. Only 15.00% of respondents (in both groups) said that NGOs are dealing great or very great with socio-economic problems of communities, while 59.00% of leaders and 22.00% of people have offered negative feedback.

**Figure 3-2: Capacity of PLA, NGOs and people in solving socio-economic problems**

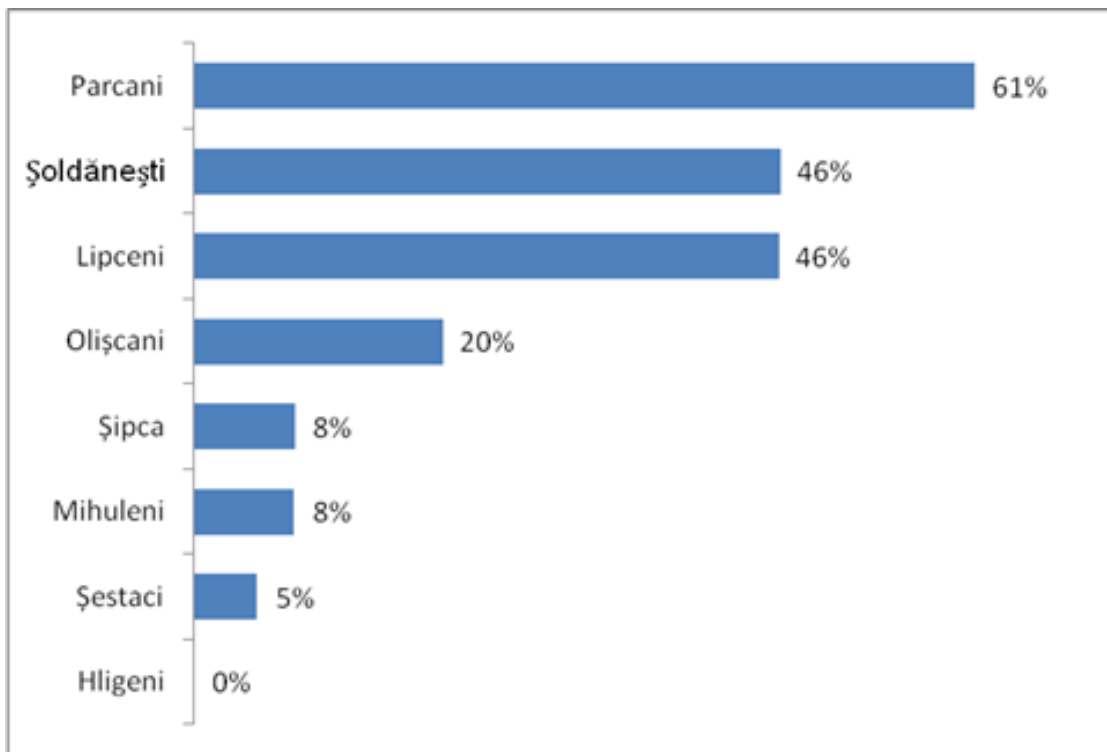


Note: To what extent do you think...are dealing with social-economic problems solving of your community?

We notice big difference of the popularity of local public organs composition in different communities. Town Şoldăneşti and Parcani and Lipceni villages are the communities where the local administrations enjoy the highest appreciation from citizens. But to

keep in mind that the study was conducted at relatively short time after the local elections, which can leave its mark on „rating’s”.

**Figure 3-3: Appreciation of the capacity of PLA solving the socio-economic problems**



Yet within the qualitative study are offered many examples of actions that all actors in the locality are involved to solve community problems. The "best practices" carried out, showing that there is experience of working together to implement community projects related at the moment at repair of school buildings:

- "We have won several projects: gasification of high school, changing doors and windows, a number of projects related to consolidation of the education and training performance. Now continue other work related to repair of the school. These projects we have managed to win and successfully achieved thanks to support of the community businesses, parents, mayors and district authorities. In conclusion, community contribution at any project is very important, otherwise we lose projects. On some projects we had partners district gasification household and District Council " (manager education institution);
- "Therefore we do not have public services in the village. But at certain works citizens, business and local government help. For example, parents have helped to repair kindergarten " (manager education institution);
- "Each contributes as far as possible. Parents contributed financially at the project related to renovation of high school, gave from 100 lei to 300 lei. Economic agents have contributed with large amounts " (business unit manager).

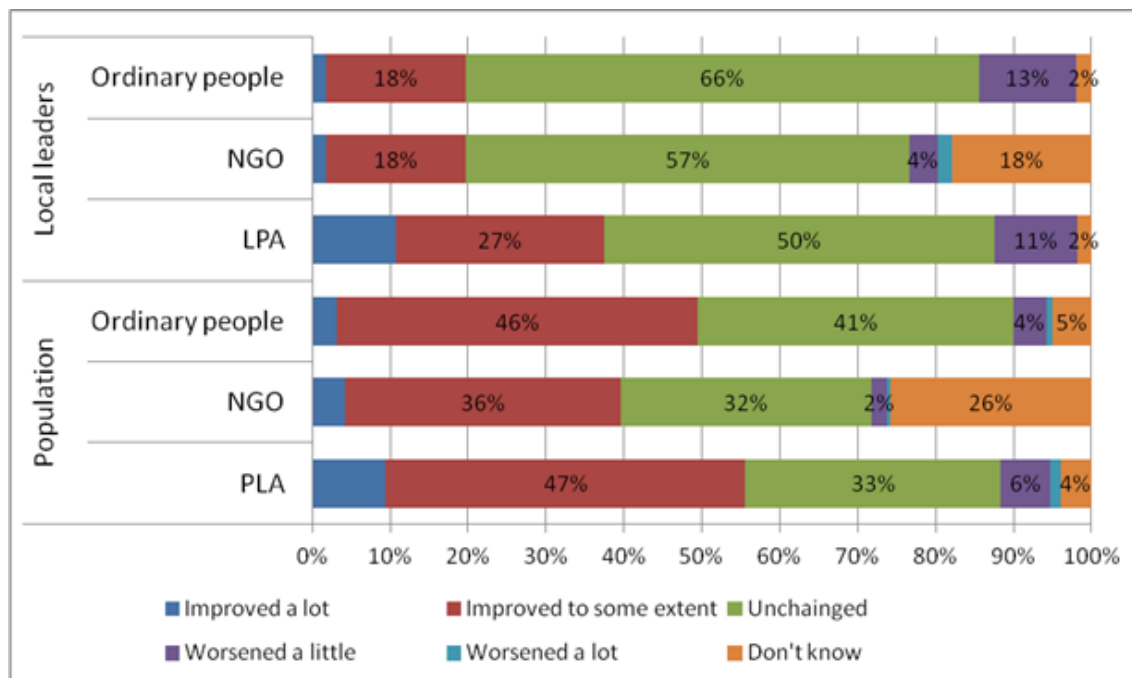
There are experiments carried out in collaboration with all community actors and other projects in other areas, including salubrity:

- "Another example, the contribution of citizens from our suburb with 200 lei, to repair the road in white / gravel, also some people have covered gravel transport services" (business unit manager);
- "As such in the village there are not centralized public services. Usually NGOs, businesses and citizens involved in sanitation activities, triggered by the municipality before the holidays "(mayor);
- "At the moment we implement two projects, one funded by UNDP Moldova and the other funded by GIZ. We have an NGO, involving citizens in solving community problems, working with economic agents "(mayor);
- "In 2009 we created a village community center, funded by UNDP Moldova. Another project on developing the village Strategic Plan for the years 2009-2014. The elaboration process has been a participatory one, the citizens were active and involved, identifying the problems they face. Another project on youth problems in the village, where young people have been involved and active "(mayor).

Along the way, in the respondent's perception of local actors capacities are growing. I believe that in comparison with three years ago the LPA contribution to solving community problems has improved, 55.00% of the population and 38.00% of surveyed local leaders. Every second leader and every third citizen believes that there are some changes in this sense.

Believes that has increased the contribution of ordinary people in solving community problems, 49.00% citizens and 20.00% leaders. Also has increased the contribution of NGO-s, in the opinion of 20.00% of leaders and 40.00% of ordinary citizens.

Figure 3-4: The contribution of actors to solve socio-economic problems





#### 4 Attitude on solid waste management

Individual discussions with managers of public and private institutions allow local communities to see that on the one hand the problem of waste management is focused on the public agenda permanently. However, in the opinion of most interviewees in the study, the problem is targeted only by local public authorities and less by other actors and population.

- "People see and know the consequences of solid waste problem, but don't discuss too much, often these issues are discussed at the meetings of the Local Council and by Local Public Authorities" (manager educational institution);
- "Certainly this problem is discussed by the villagers, especially by the village hall. The seriousness of this problem is the transportation of waste to the authorized dump "(manager educational institution);
- "Not much is discussed by citizens. Is discussed more at the local council meetings, but people are looking to their needs "(business unit manager);
- "It is always a problem in the attention of Village Hall, citizens are always prevented by sector guards to take the waste to arranged dump, Hall organized a general meeting on waste, after been liquidated the unauthorized dumps, this issue was discussed at the Local Council also, but we still have unconscious people who throw rubbish in ditches and on the roadsides. At the village exists we have installed warning signs, do not throw garbage in unauthorized places, otherwise they will be amended "(mayor).

Some respondents however noticed some ordinary citizens taking attitude:

- "There is not an unique community approach towards waste, but partially some active citizens discuss in special groups this matter also" (state enterprise manager);
- "Citizens discuss the problem of waste and are not indifferent, I noticed how some people in the village, respected householders, when see someone who throw garbage randomly make comments and ask to take garbage to authorized dump and I make it also, and try to influence parents through their children to keep the environment clean, telling them that it is primarily beneficial for health for all "(manager educational institution).

And in the words of a mayor the efforts to impose discipline in this sense still must be made:

- "I am sure that this problem is the Hall target and is discussed at Local Council meetings. People discuss this issue because it affects the health of many, the waste after big rain get on agricultural lots and in surface waters. Honestly not all people relive and keep cleaning and environmental status of the village, we have people who throw solid waste in unauthorized places, working with them through civilized methods of prevention, but if they do not change their attitude, towards them will be applied tougher measures"(mayor)

The second compartment reflects the quantitative study of population satisfaction degree of waste management services in the community, includes a set of indicators designed to express the perception of the appropriateness of the services / waste management practices, attitudes regarding the separate selection of waste, the perception of the need to place the authorized dumps and others. The general perception is that

authorized dumps must be exist in each locality, 93.00% of surveyed citizens supporting such a statement.

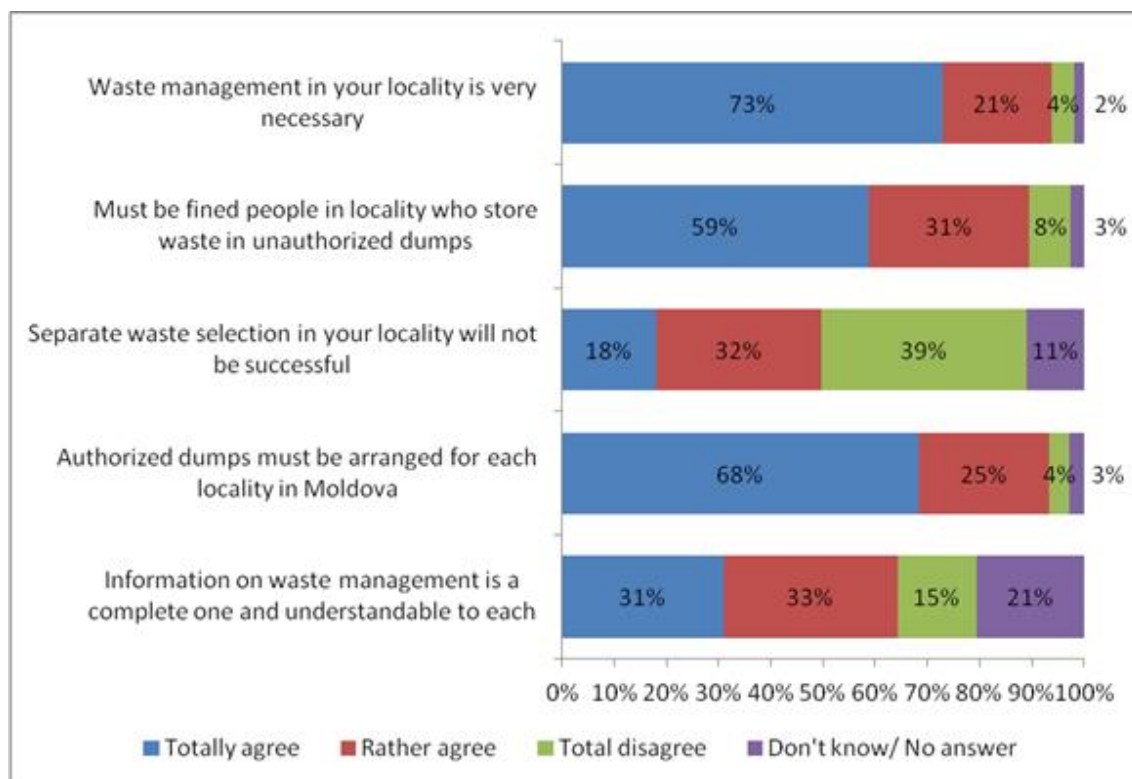
The need of complex approach and centralized collection and disposal of waste is completely accepted by citizens. Only 4.00% of those surveyed do not see the need for management in this area, while 73.00% completely agree that waste management in their locality is necessary, and others 21.00% incline toward this point of view.

Although we will see later, "inappropriate" waste management practices are quite common, people largely accept punishment for waste disposal in unauthorized places, 90.00% of respondents agreeing with penalties for waste disposal in unauthorized places.

Separate waste collection on types is a practice, of the successful implementation of which citizens doubt. They believe that its application in their locality will not succeed through, affirm every second citizen.

Although two of three citizens affirm that this information is complete and understandable for everyone, the degree of overestimation, characteristic for such indicators (people often are reluctant to say that something is not clear) and the fact that 21.00% of respondents did not know to answer this question shows that waste management information currently is not available to the population completely and efficiently.

**Figure 4-1: Citizen’s perceptions on aspects of waste management practices in locality**



Depending on the respondent such major differences in approaches and attitudes on the management of solid waste are not registered.

Instead record different approaches from different localities of the studied population. Note that the inhabitants of Soldanesti the only locality that has a central communal service of waste management (Regia Apa Soldanesti), exhibits an average degree

(compared to other localities) for assessing the need for waste management (73.00%). Also in Soldanesti recorded the lowest level of acceptance of penalization for unauthorized waste storage. The most important is that in the town is recorded the highest percentage of respondents who are reluctant about the success of separate waste selection - 21.60%, which is probably an indicator that expresses the degree of "execution" by the inhabitants of selective waste collection, service offered through the project "Modernization of the salubrity services in the town Soldanesti" in 2009.

Reluctance to successful practice of selective waste collection showed in a high degree by residents of villages Şestaci (21.00%), Mihuleni (21.00%) and Şipca (22.00%).

In Şipca and Mihuleni villages is recorded the highest percentage of those who agree with penalties for unauthorized disposal of waste (90.20% and 92.00%) respectively. This is due to the relatively small number of unauthorized dumps in these localities than others in the area. In Mihuleni village there are not unauthorized dumps, while in Şipca only two of the four dumps are not authorized.

**Figure 4-2: Citizens perceptions of waste management practices by gender and localities**

The proportion of respondents declaring totally agree with the statement	Gender:		Locality:							
	Male	Female	Şoldăneşti*	Şestaci	Hligeni	Mihuleni	Parcani*	Lipcenii	Şipca	Olişcani
Waste management in your locality is very necessary;	71.8 %	74.1 %	72.7 %	56.5 %	79.20 %	79.40 %	95.6 %	14.0 %	93.0 %	77.1 %
In your locality must be penalized the residents which store waste in unauthorized dumps	56.0 %	61.5 %	54.2 %	50.0 %	60.00 %	90.20 %	70.2 %	58.0 %	92.0 %	53.6 %
Separate selection of waste in your locality will not be successful;	18.1 %	18.1 %	21.6 %	21.3 %	9.20 %	20.60 %	16.7 %	10.0 %	22.0 %	13.4 %
Nr. of dumps <sup>1</sup>			#	7	#	1	10	8	4	4
of these unauthorized			#	6	#	0	10	7	2	3

Note: 2/3 of the surface of town Şoldăneşti and 1/3 from the surface of Parcan villagei are covered by platforms for solid waste collection by selection.

Solid waste management practices greatly affect local residents in the area of the study. The most serious problem perceived by people, are spontaneous dumps, unauthorized. This problem was mentioned by every second interviewed citizen. A serious problem raised by citizens is the practice of burning waste, reported by 41.00% of respondents. Lack of separate waste collection conditions ranks on the third place from

<sup>1</sup> „Diagnostic analysis of ME „Regia Apă Şoldăneşti”, 2011, elaborated by Company Pro-Consulting

several problems (20.00%), which show an increasing demand among the inhabitants of such a collection service.

The study shows that male and female population suffer equally of deficient situation, only that women look a little more worried about the lack of opportunities for separate waste collection (24.00% vs. 17.00% among men).

Stands out Lipceni villagers, previously in a lesser manner noted the need to develop waste management services, and now every fourth inhabitant indicates that current practice does not create any inconvenience (24.00%). We note that this would keep rather low level of awareness among residents of the risks posed by irresponsible waste management, in mentioned locality 7 of the 8 places of waste storage are unauthorized.

Again note that in Mihuleni and Şipca villages, the interviewees show a more sensitive perception, with most respondents that are concerned about the unauthorized dumps, waste burning practice and lack of opportunities for separate collection.

**Table 4-1: Experienced problems related to the services of collection and waste disposal**

The proportion of respondents declaring totally agree with the statement	General	Gender:		Locality:							
		Male	Female	Şoldăneşti	Şestaci	Hiligeni	Mihuleni	Parcani	Lipceni	Şipca	Olişcani
Frequency of waste collection	6.00 %	4.00 %	8.00 %	8.00 %	13.00 %	5.00 %	2.00 %	4.00 %	8.00 %	3.00 %	1.00 %
Lack of conditions for separate collection	20.0 %	17.0 %	24.0 %	14.0 %	30.0 %	28.0 %	52.0 %	40.0 %		83.0 %	6.00 %
Waste burning	41.0 %	41.0 %	41.0 %	20.0 %	65.0 %	43.0 %	58.0 %	34.0 %	50.0 %	94.0 %	56.00 %
Spontaneous dumps in community	53.0 %	52.0 %	54.0 %	56.0 %	41.0 %	79.0 %	73.0 %	41.0 %	16.0 %	95.0 %	37.0 %
Doesn't affect me	6.00 %	7.00 %	5.00 %	6.00 %	1.00 %	13.0 %		14.0 %	24.0 %		1.00 %
Other response	0.00 %	0.00 %	0.00 %	0.00 %					2.00 %		

## 5 Waste management

Currently there is only one company in the area providing sanitation - Regia Apa Soldanesti. In 2010 RAS provided waste collection services to 22 economic agents and 4160 residents, covering the town Soldanesti and part of the Parcani village. Population coverage with this service in the project area is up to 30.00%. As the figure shows we announce at maximum actual RAS statistics, not connected to the assessments on actual availability in certain streets / areas of the town.

In other community agents that provide waste management services are absent, and actions in sanitation, undertaken by municipalities are sporadic and insufficient. Annual expenditure of PLA in the villages in the area varies between 3 and 20 thousand lei annually [1]. Involvement under the necessary level of LPA, in large part due to lack of funds for this area, make practically that all villages to have many unauthorized dumps.

The study reveals the following types of solid waste produced by households in the following diagram. It should be noted some deficiencies in public perception of the concept of waste. In many localities there are households that reported no production of kitchen waste, which is unlikely in practice. This perception is due for the kitchen waste is used largely for feeding domestic animals (like pigs). In total, the production of such waste report 86% of households.

Waste yard report 75.00% of households, plastic waste 67.00% of households. 52.00% households reported animal waste, with low level, obviously, in the town Soldanesti (30.00%). Glass waste reported 31.00% of households.

**Table 5-1: Types of waste produced by households in the area**

The proportion of respondents declaring totally agree with the statement	General	Locality:							
		Soldănești	Șestaci	Hligeni	Mihuleni	Parcani	Lipcenii	Șipca	Olișcani
Kitchen waste	86.0 %	86.0 %	96.0 %	99.00 %	100.0 %	76.0 %	98.0 %	78.0 %	78.0 %
Yard waste	75.0 %	73.0 %	99.0 %	100.0 %	97.00 %	83.0 %	98.0 %	82.0 %	50.0 %
Plastic bottles and packaging	67.0 %	71.0 %	96.0 %	98.00 %	95.00 %	61.0 %	90.0 %	86.0 %	27.0 %
Animal waste	52.0 %	30.0 %	94.0 %	73.00 %	83.00 %	56.0 %	72.0 %	98.0 %	47.0 %
Glass bottles and packaging	31.0 %	29.0 %	57.0 %	57.00 %	83.00 %	17.0 %	58.0 %	22.0 %	6.00 %
Clothes, old furniture	22.0 %	10.0 %	77.0 %	80.00 %	54.00 %	8.00 %	62.0 %	3.00 %	2.00 %
Metalic residues	14.0 %	11.0 %	31.0 %	28.00 %	42.00 %	7.00 %	34.0 %	5.00 %	3.00 %
Something else	1.00 %			1.00 %		2.00 %	2.00 %		2.00 %

## 5.1 Waste storage practices

Practically in all localities are massive unauthorized dumps and for sure in each locality are places where waste is dumped in smaller quantities, produced by one or two households. The qualitative research shows that the fight against this practice exists, but it must be maintained continuously as they occur shortly after being liquidated. The main causes are the low level of awareness of the problem among the population, as described above, and the lack of financial capacity to transport waste to authorized dump:

- "There were several unauthorized dumps, but after the election of new mayor have been liquidated. Now appear again, but as I mentioned I consider that because of the lack of centralized transport of waste these dumps appear again "(manager educational institution);
- "There are not unauthorized dumps lately, but appear so regularly in the ditch from the spring, at edge of forest and other places" (manager educational institution);
- "There appear simultaneously in valleys, ditches, forests, forest belts, in the rivers valley. Usually people from town suburb are throwing waste in unauthorized places. About 35% of waste is thrown into ditches, forests, in the valley of Ciorna river "(state enterprise manager);
- "There are more. Citizens living near the forest throw garbage in the woods, near the ravine throw into the ditch, those next to the road on the edge of the village throw in the weeds on the roadside. At these unauthorized dumps are stored, about 50% of solid waste "(management business unit).

Use practices and waste disposal obviously differs by type of waste. At the same time we have the first indicator that reflects the disastrous situation in the perspective of rational waste management and environmental protection. In addition to storing waste in unauthorized places, are widespread the practice of burning and burying them in soil around the court.

Kitchen and yard waste are types with various management practices of them by local population. By proportion, in 21.00% of households this waste is disposed of centralized waste collection services, 18.00% of households put it in unauthorized dumps, 16.00% is buried in the yard, 12.00% practice the use of these wastes for livestock feed. In total, the ratio between appropriate and inappropriate practices is 55.00% to 43.00%.

Among the yard waste management are spread four different practices:

- 24.00% of households place in unauthorized dumps;
- 22.00% in authorized locations after they are discharged by specialized services;
- 20.00% practice their burning;
- 19.00% placed in authorized locations.

Another 10.00% of households practice their burial in the yard.

Relationship between households that adopt appropriate practices in yard waste management and with inadequate practice is 49% to 53%, predominating numerically households that handle incorrectly this type of waste.

The most alarming in terms of environment protection management are plastic and metal waste practices. In total proceed properly with this type of waste only 35.00% of

households surveyed, which said that they produce such waste, while 67.00% handle it incorrectly in most cases by burning them, practiced by 50.00% of households.

Metal waste are stored by most of the households that have such waste, at unauthorized dumps – 40.00%, and the report appropriate / inappropriate in their case is recorded at the level 58.00% / 42.00%.

Glass waste is stored most of them at unauthorized dumps (42.00% of households). In total 47.00% of households inadequately manage this type of waste, making recycling impossible.

Lowest level recorded for a proper waste management of old clothes and furniture, 71.00% of households practice their burn, while animal waste is the most rational type of waste used, largely because households using these wastes as organic fertilizers.

**Table 5-2: Practice of use/disposal of waste by type**

	Kitchen waste	Plastic waste	Glass waste	Metal waste	Clothes/ furniture	Animal waste	Yard waste
We burn it	10.00 %	50.00 %	1.00%	1.00%	71.00 %	1.00%	20.00 %
Bury them in the yard	16.00 %	3.00%	4.00%	1.00%		6.00%	10.00 %
Prepare fertilizers	6.00%					63.00 %	6.00%
We take it to a common improvised dump (unauthorized)	18.00 %	14.00 %	42.00 %	40.00 %	14.00 %	15.00 %	24.00 %
Are collected by someone responsible	6.00%	8.00%	7.00%	15.00 %		4.00%	1.00%
We take it to a common authorized dump	10.00 %	9.00%	17.00 %	10.00 %	3.00%	10.00 %	19.00 %
Evacuated by a private waste collection service				4.00%			
Evacuated by local administration service of waste collection	21.00 %	18.00 %	29.00 %	29.00 %	10.00 %	6.00%	22.00 %
Feeding domestic animals	12.00 %						
Something else	4.00%			1.00%	4.00%		
Appropriate practices	55.00 %	35.00 %	53.00 %	58.00 %	13.00 %	82.00 %	49.00 %
Inappropriate practices	43.00 %	67.00 %	47.00 %	42.00 %	85.00 %	22.00 %	53.00 %

Note: Sum of the percentages may exceed 100.00% in some cases, because many households practice more than one waste management mode for the same type of waste

In total, according to the survey, 21.30% practice the storage in authorized places of at least a part of produced waste. 21.20% of households benefits from salubrity services.

At the same time we find that people often mistakenly perceive the status of a waste dump. For example in Parcani village, where all 10 existent dumps are unauthorized, 37.70% respondents reported that discharge the waste at authorized dumps. Here

most likely to be confused the authorized dump with waste containers, because only 0.90% of households reported that the waste is disposed by specialized services, while on a third of the locality perimeter are located platforms with trash bins, evacuated by the salubrity service of RAŞ.

Instead in Mihuleni village reported placing waste in authorized locations only 1% of households, while in our data is recorded that there is only one dump, and it is authorized.

Important to mention that benefits from salubrity services (again talking about people's perception) only half (48.20%) from households of town Şoldăneşti. So the available salubrity service does not fully cover the population needs, whether it's the population resistance due to the low level of awareness of the damage, caused by a poor waste management.

**Table 5-3: Households that use authorized dumps and salubrity services**

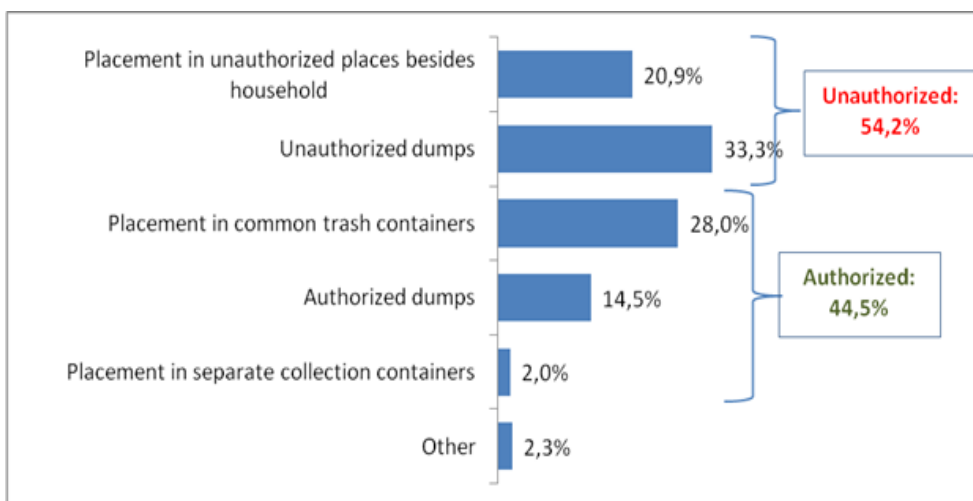
	Store at authorized dumps	Available authorized dumps	Benefits from salubrity services	Available salubrity services
Şoldăneşti	19.20%	+	48.20%	+
Şestaci				
Hligeni	50.80%	+		
Mihuleni	1.00%	+		
Parcani	37.70%	-	9.00%	+
Lipcenii	34.00%	+	6.00%	unknown
Şipca	32.00%	+		
Olişcani	18.40%	+		
<b>Total</b>	<b>21.30%</b>		<b>21.20%</b>	

The study „Diagnostic Analysis of Municipal Enterprise „Regia Apă Şoldăneşti”, realized in the spring of 2011 by Company Pro-Consulting estimates the amount of produced waste in the project area of 260,17 tons per month, or 3,122,1 tons per year.

Per total, in studied area, improper waste management practice prevails as number of households. According to 54.20% of respondents local people mainly use to throw waste in unauthorized places, whether it is about unauthorized dump (33.30%), or separate places in the neighbourhood („at the ditch”) (20.90%). While those who believe that most of local people store the waste in authorized places, only 44.50% from the respondents.



**Figure 5-1: Ways of waste storage, practiced by people**

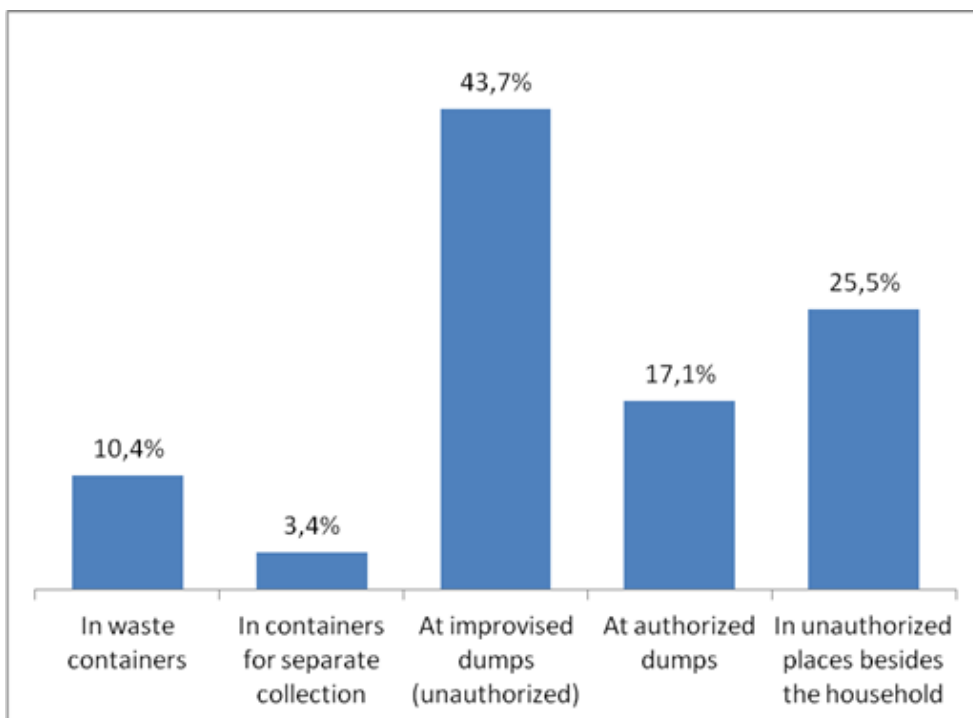


Note: Where local people get used to throw waste?

Another estimation of the distribution of the total volume of waste placed in different types of deposits was obtained on the basis of views expressed by local actors. They were asked to estimate how much a part (in %) of waste produced in the village are stored in different types of dumps. The chart below presents averages rates on across sample. Even if we saw above, 44.50% of surveyed citizens say that the population places the waste mainly in authorized locations, if we refer to the volume of waste, in containers (either joint or separate collection) are positioned, as estimate the leaders only 13.80% of waste. At authorized dumps only 17.10% of the total volume of waste.

Most of the wastes in the area are stored in unauthorized places - 69.20%.

**Figure 5-2: Distribution of the volume of waste by disposal places**



Note: Estimation made by community leaders

Every second respondent consider that is stored in unauthorized places over 50.00% of waste. Even if the town Soldanesti and Parcani where there is salubrity service, many respondents believe that significant parts of the total volume of waste are placed inappropriately. In Soldanesti third of respondents believe that the volume of abandoned waste at illegal dumps is below 20.00% of the total, 36.80% consider that 20.00% -50.00% of the waste, and 29.70% believe that more than half of the total of waste. In Parcani similar distribution was obtained.

We notice Lipceni village, where 68.00% of respondents had the opinion that the volume of waste placed in unauthorized places doesn't exceed 20.00 % of the total .

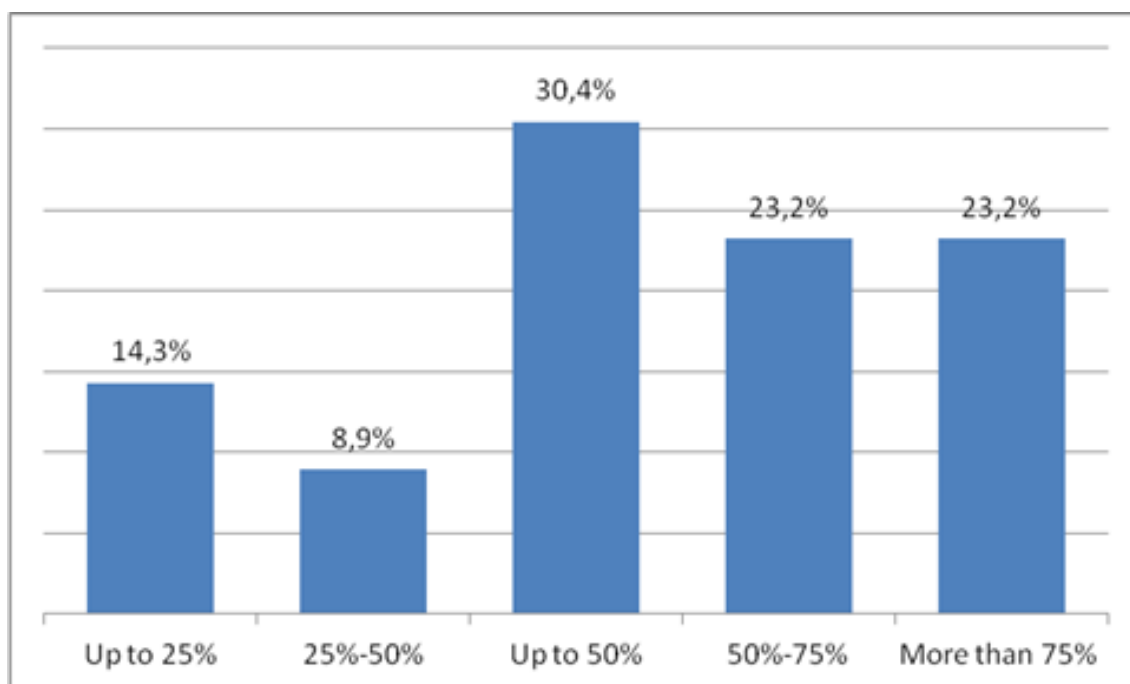
Şestaci, Hligeni villages; together with Mihuleni and Olişcani are distinguished by high volume of waste placed illegally.

**Table 5-4: The proportion of waste placed at unauthorized dumps: population appreciation**

		Up to 20.00%	20.00%-50.00%	Over 50.00%
General:		20.10%	29.10%	50.80%
Locality:	33.50%	36.80%	29.70%	
		15.70%	84.30%	
	5.00%	17.50%	77.50%	
		3.90%	96.10%	
	25.40%	45.60%	28.90%	
	68.00%	22.00%	10.00%	
	4.00%	49.00%	47.00%	
	3.40%	20.10%	76.50%	

Community leaders are even more critical in appreciation, 77.00% of them consider that the volume of waste placed in unauthorized places exceeds 50.00%, of which 23.20% consider even over 75.00% of the waste.

**Figure 5-3: The proportion of waste placed at unauthorized dumps: leader's appreciation**



## 5.2 Combating inadequate waste storage practices

Until now, several aspects were discussed showing that sanitation measures and carry out actions to combat the practice of placing waste in unauthorized places are not systematic. From the qualitative study we find that almost every community have been applied in the not too distant past sanctions in the form of fines or convictions in community work, but there is not a permanent activity in this sense. Are taken measures, the main purpose of which relates to public awareness in environmental protection:

- "I know precisely that many people were penalized, some even several times, especially in the period after the dissolution of the authorized dumps. These sanctions have been taken with the mayor, district management and environmental inspection. Our village, together with the whole district participated in the April 16, 2011, at the sanitation of the country under the slogan "Come on Moldova" high school students and teachers have participated very actively, somehow this action warned the citizens and tried through children to influence the parents "(manager educational institution);
- "No one was punished. Just try to convince people, give them a deadline to collect garbage they threw in unexpected places, but it is impossible to detect all, people must work on education "(business unit manager);
- "Sanctions have been applied by environmental inspection of the district, about 10 people were punished, I do not know precisely in this year or last year. In addition to Village Hall operates a commission dealing with environmental problems of the village, making periodic raids in the village and warns citizens which have garbage at the gate, meaning on the road "(manager educational institution);
- "This is monitored continuously by the village hall. There were cases when people have paid a fine, but there have been cases when people could not pay the fine and worked for the community "(manager educational institution);
- "They were fined two people who could not pay fines because of poverty, their records were in dispute and the court of the town Soldanesti decided that they will work 40 hours each for the community service "(mayor).

Alarming to note that none of those interviewed did not address the issue of waste burning and burying them, although this practice, I saw that they are widespread, and are also inappropriate practices.

## 5.3 Selective waste collection

If we talk about the fully researched area, at the moment have access to selective waste collection services 46.30%. It's really about the town Soldanesti population (93.30% said that in their town this service is available) and in Parcani village (95.60%). If the Mihuleni village 10.80% of respondents said that they have access to this service, most likely referring to platforms located in the Parcani village.

Referring to the entire area, low access to selective waste collection service in the area has a number of social categories. First it is about the elderly, from people of 60 years and over only 36.00% believes that they have access, and 37% among pensioners. The similar proportion is from people with low level of education (incomplete secondary or less) - 36.20%.

The household economic status also involves some variation in this sense. Have access to collective waste selection service only 23.9% from households classified as having a low socio-economic level.

These categories are less likely to support the creation of such services.

Depending on the locality, we find that the population of Lipceni and Hligeni villages is also less willing to support the development of these services, only 72.50% and 64.00% respectively are willing to contribute and support the selective waste collection.

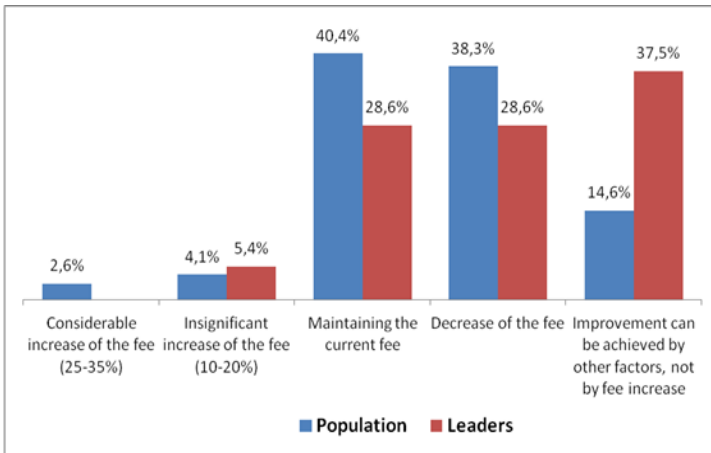
**Table 5-5: Access to the waste collection and willingness to contribute to such services**

		Households that affirm they have access to the selective waste collection services	Households that would support and contribute to the development of such service
General:			
Gender:	Male	45.90%	88.10%
	Female	46.80%	87.00%
Age:	Under 40 y.o.	49.10%	90.10%
	41-50 y.o.	52.90%	93.20%
	51-60 y.o.	45.40%	84.40%
	over 60 y.o.	36.00%	81.10%
Education:	Incomplete secondary	36.20%	79.70%
	Secondary, high school	51.20%	88.90%
	Secondary, professional	42.90%	90.80%
	University degree	60.10%	94.00%
Household size:	1 person	58.60%	83.40%
	2 persons	46.30%	88.90%
	3 persons	44.60%	83.70%
	4 persons and more	41.60%	91.30%
Occupation:	Employee	54.80%	91.30%
	Unemployed	40.40%	86.70%
	Retired/disabled	37.00%	80.40%
	Student/maternity leave	69.60%	97.30%
	Employed abroad	45.10%	89.20%
Locality:	Şoldăneşti	93.30%	92.60%
	Şestaci		88.00%
	Hligeni		72.50%
	Mihuleni	10.80%	86.30%
	Parcani	95.60%	96.50%
	Lipceni		64.00%
	Şipca		98.00%
Olişcani		82.10%	
Household economic status:	Low	23.90%	78.60%
	Average	39.80%	88.00%
	High	65.30%	93.90%

## 5.4 Services cost

Neither population nor local leaders are not willing to increase taxes in order to improve waste management services. Large proportion of respondents (14.60% of citizens and 37.50% of local leaders) believe that their improvement does not require tariff increase, and others 28.6% of citizens and 38.30% of leaders believe that the charges even should be reduced.

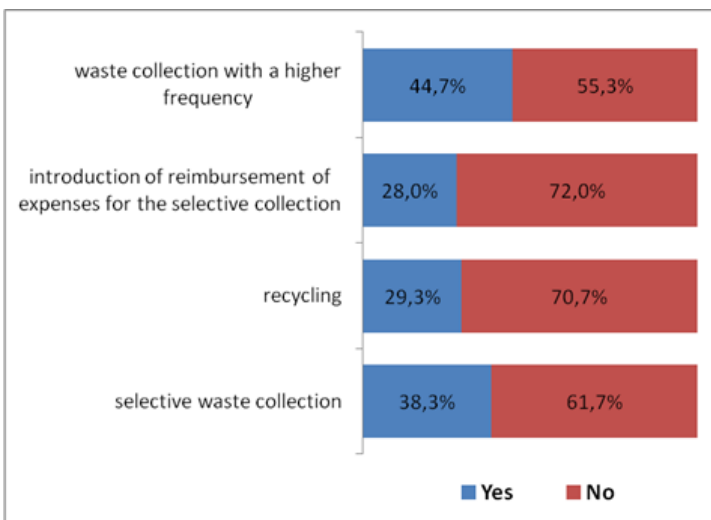
**Figure 5-4: Necessity to increase the tariff to improve services**



But to develop special practices for waste management services many people would be willing to bear additional costs. Most people would be willing to pay higher rate to increase the frequency of waste disposal, although previously only 6.00% of respondents showed their discontent with the frequency of waste collection. Follows selective waste collection, for which they are willing to bear additional costs 38.30%.

It is surprising that more advanced approaches to waste management are less accepted by the population. Only 28.00% of people interviewed consider that the residents of their community would be willing to pay higher taxes for the introduction of cost reimbursement system for selective waste collection and 29.30% of the population would be available to increase rates for recycling.

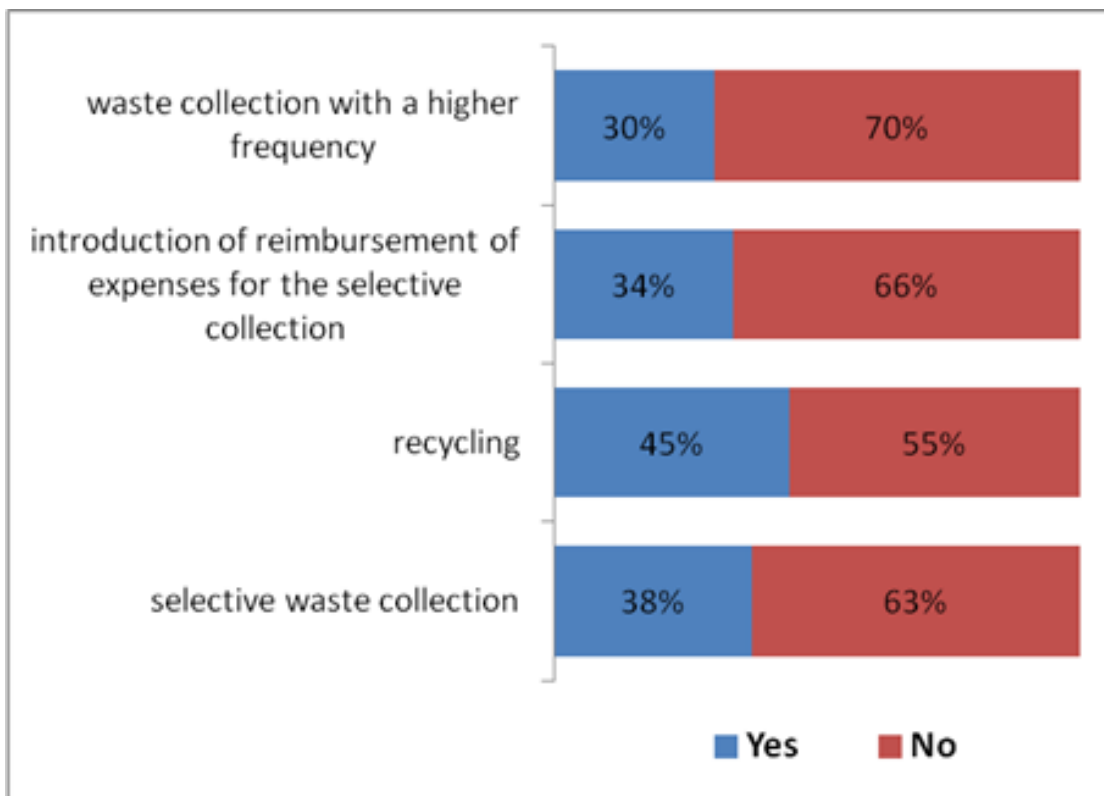
**Figure 5-5: The waste collection services for people who willing to pay higher taxes**



Note: Citizen opinion

Community leaders are even more conservative in appreciation of the availability of people to pay more for better services, except for waste recycling. If this practice should be introduced, 45.00% of surveyed leaders believe that people would accept the increase of the tariffs for waste management services.

**Figure 5-6: The waste collection services for people who willing to pay higher taxes**



Note: Community leaders

## 6 Women's access to public services

Women constitute about half of our population of working and employed population. Operation of the main spheres of budget activities, such as education and health, is provided mostly by women.

At the same time, women are disadvantaged socially and economically. In 2010 the average salary of a woman is 23.90% lower than of a man, the average pension with about 15.00%.

Women are not fully found in the state administration at all levels. At the last election only 20 of the of 101 Parliament members elected are women. In local elections in June women are only 18.00% of elected mayors, 28.60% of local councillors and 17.40% of district councillors.

In the study area, the situation is not more brilliant. All mayors of the 8 Halls are men and in local councils women are less than 1 / 3 - 27.40%.

Gender equality debates and relevant studies provide sufficient arguments that the limited offer and reduced access to public services have a double impact on women, putting them in a more disadvantageous aspect. In terms of lack of relevant and qualitative utilities, the woman that is responsible for household appliances is overburdened by volume and time in household work. For those, the low presence of services such as electricity, water, gas, sewage, heating and not least the sanitation services are direct indicators that are invoked in the population reflecting in the standard of living of the population and the degree of disadvantage of women as a social phenomenon.

In this context the lack of basic services to ensure decent living conditions in the study area, while only 19.10% of households are connected to water supply, only 17.40% to sewerage, services available almost exclusively in the town Soldanesti, as well as the centralized sanitation services and waste disposal services, serve direct indicators of the difficult situation in which the woman is.

As women's access to public services we appeal to the thematic study "Socio-economic empowerment of women from rural space", realized within the Program "The economic empowerment of women through increasing employment opportunities in Moldova" with the support of the Swedish International Development Agency (SIDA) and United Nations Fund for Women. We reproduce here the conclusions of the study, where is clearly described the more disadvantaged women situation in rural areas of the country:

- The women from rural area are employed only in a proportion of a third. The most vulnerable are young women, for which is characteristic the highest rate of unemployment;
- Every third unemployed woman is housewife, and every tenth are those who are in the child care leave. The main reason for the unemployment indicated by these women is the inability to find a job, including a well-paid job;
- The presence of children in the household is another factor that determines the employment of women in the workforce. Family responsibilities are the basic reason for 18.00% of unemployed women and for those with children 30.00% are not employed because of family responsibilities;
- Availability and quality of children care may help reduce the impact of family responsibilities on women's employment rate. Day care institutions in most cases

(91.00%) are available in each locality, yet 9.00% of women with children which temporarily don't have job, as a reason for unemployment indicate the insufficiency of pre-school places;

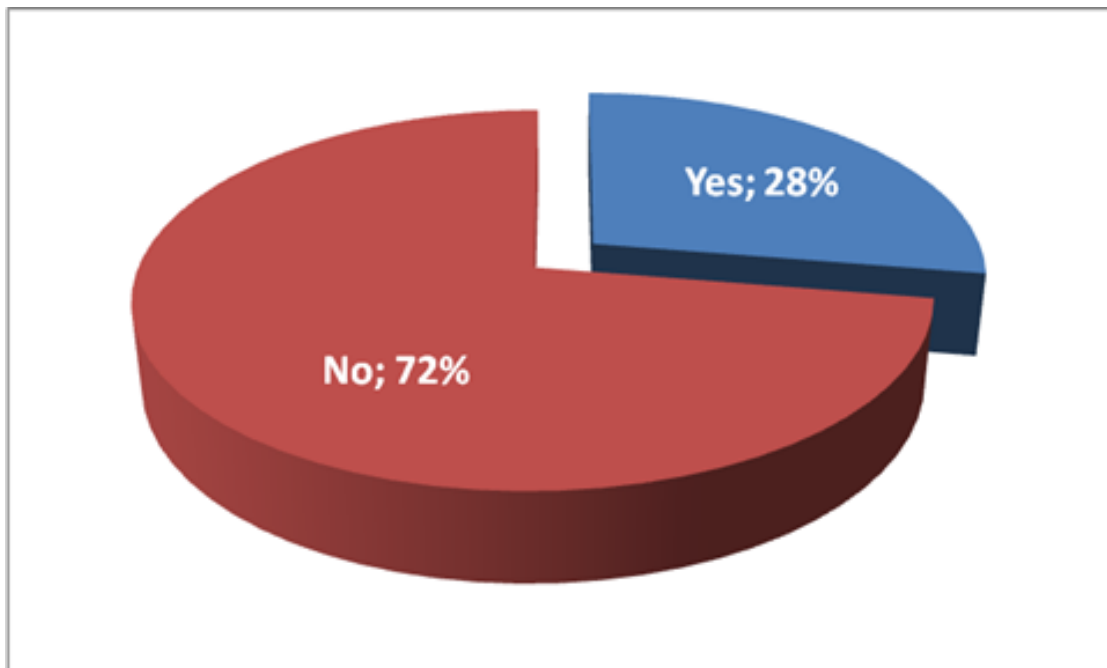
- Starting and running a business is the least explored area by women. Of all surveyed women only 5.00% have experience in starting and managing a business and other 12.00% in the past have not been involved in business, but in the future intends to start their own business. Women older than 35 years show a greater interest in launching a business, especially the business-oriented services such as trade, catering and entertainment. For women in the age group of 35-55 years the most requested sector of the economy is the agriculture;
- Practically every third woman considers she is not ready, nor has experience in business, and wishes to benefit of business training. The information requested in the context of initiating a business is the lending, taxation, market outlets, preparing a business plan and establishment of contacts and business relations;
- Over the last five years every ten women attended at least a training course. Most training received women employed in the public sector and in particular in the field of construction and development planning, health, culture and art, science, education and public administration;
- Every fifth woman indicated that currently needs re-qualification courses, and 16.00% believe they want a course for skills improvement. The most requested training area is agriculture, followed by education, sewing, health, finance and economics;
- Availability of local training and consultancy services vary from one service to another. The easiest are available at local level advisory services and agricultural land rights. Information on jobs in the region can also be obtained in the village, but more often it is available in the district center. At the local level are less available vocational training services, legal advice, consultancy and professional guidance in business initiation;
- Woman's access and ownership of agricultural land is not restricted in the case of Moldova. About two thirds of surveyed women own agricultural land from the possession of the household. The main problem women are facing with in the agricultural land processing and management are the insufficient funds and labour force;
- Access to credits is also not restricted to women, but in some cases they can not benefit from such services, as financial insolvency and lack of warranty.



## 7 Intercommunity and inter-sectorial collaboration

At the chapter of inter-community and inter-sectorial collaboration we must start with a less optimistic note. Among the population from the localities in the area the organization of service delivery of waste management is perceived rather negatively at inter-community level. Seven of ten citizens consider that this would not contribute to improvement of the quality of these services.

Figure 7-1: The SWM at region level provide or not a higher quality of these services



Note: Public opinion

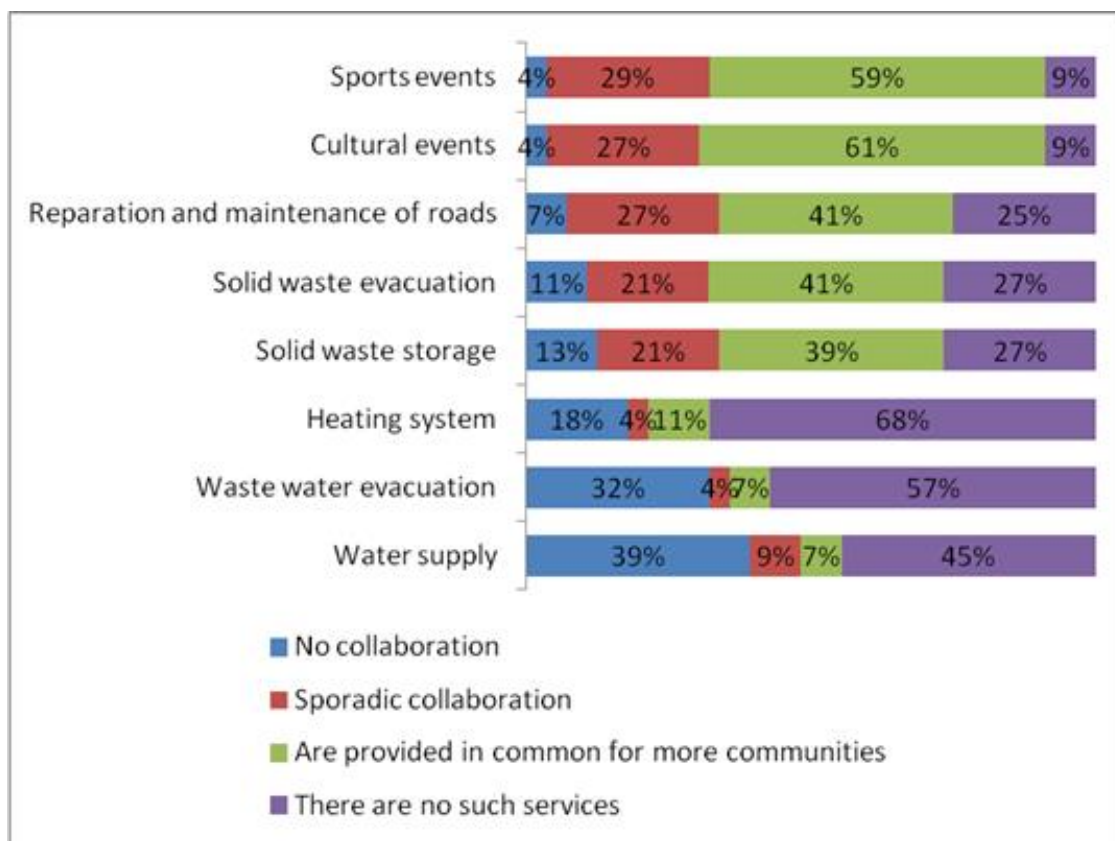
Rejecting the idea of inter-community collaboration probably due to the lack of knowledge of the inhabitants of the mechanisms of creation and operation of community services.

This is because community leaders welcomes and supports the idea of service delivery at the intercommunity level. Currently few public services in the area are organized at intercommunity level. We can grade all public services in three groups according to this indicator. Public services provided mainly at intercommunity level are those related to sports and cultural events, when 59.00% and 61.00% leaders announced that these services are provided in common for more communities.

In the community cooperation group of medium intensity is placed the waste management (more due the coverage of sanitation services of RAS of the localities Soldanesti and Parcani) and reparation and maintenance of the roads. At the moment, consider 41.00% of the interviewed leaders, the reparation and maintenance of roads and waste disposal are provided in common for more communities, and 39.00% that in this way are delivered the waste disposal services too.

The heating, water supply and sewage disposal are areas where practically the inter-community cooperation is missing.

**Figure 7-2: The degree of intercommunity collaboration providing community services**



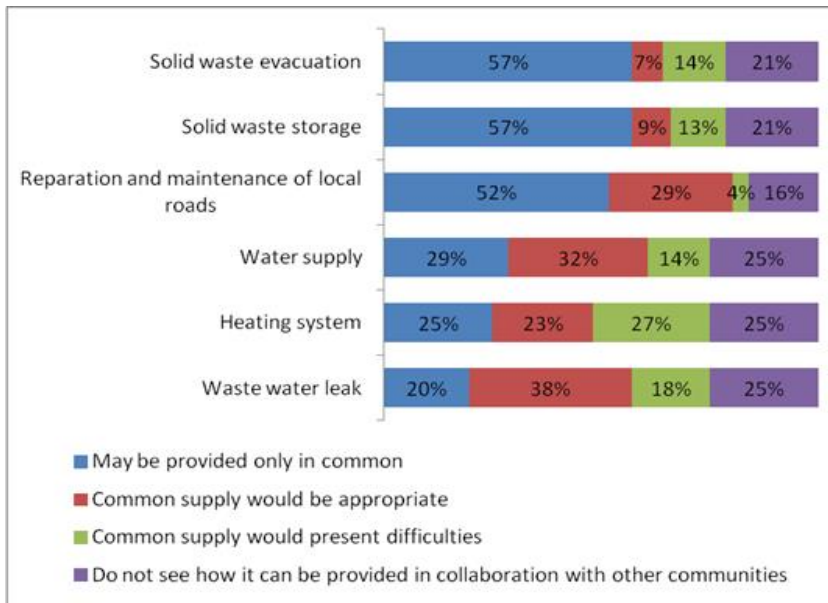
What public services are currently provided in collaboration with neighbouring communities ?

Services from second and third groups (classification by inter-community approach at present), according to community leaders, must be applied the inter-community approach, moreover, waste management services, in the opinion of the majority leaders, can be provided only in common with participation of more communities.

More than a half (57.00%) of the leaders believe that solid waste disposal and storage can be performed only in common, and other 7.00% -9.00% consider that joint provision would be appropriate. Only 21.00% of respondents say they do not see the formula in which such services may be provided in common.

In the largest proportion is supported intercommunity cooperation in the field of roads, 52.00% believe that this service can be provided only in common, and 29.00% that would be appropriate.

**Figure 7-3: Intercommunity public services provided for more communities**

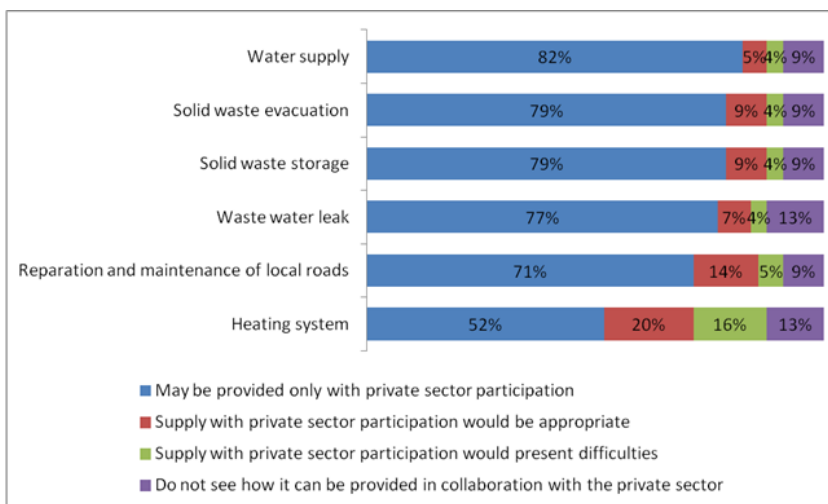


Note: Which of the following public services you think need to be developed and delivered in common with several communities?

Private sector participation in public services is accepted by most interviewed actors, but with significant restrictions in management formula.

On the one hand, the vast majority of actors and whether of the service they were related believe that these services can be provided only with the participation of the private sector - water supply 82.00%, waste disposal and storage 79.00%, waste water discharge 77.00%, road repairs 71.00% and heating 52.00%.

**Figure 7-4: Appropriate public services provided in common with the private sector**

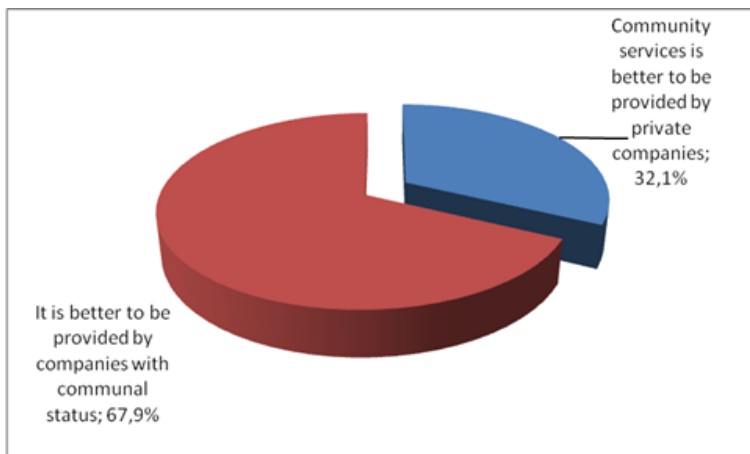


Note: Which of the following public services you think need to be developed and delivered in common with the private sector?

On the other hand, the status of private companies that participate must be that of the subcontractor, and the basic manager of the services should be the public sector. Two

thirds of the leaders (67.9%) believe that the community services it is better to be provided by utilities companies.

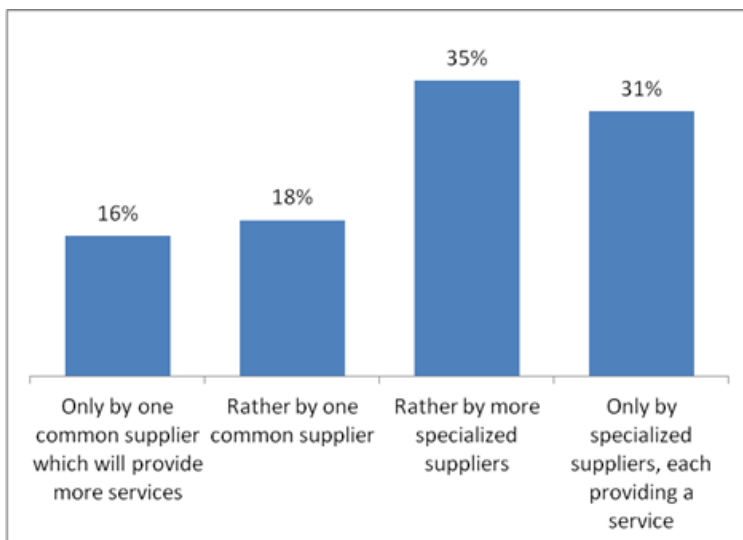
**Figure 7-5: Private sector involvement in public services**



Note: Do you think community service providing by private providers would be more appropriate?

The intersectorial formula is not welcomed in public services providing, most of the respondents supporting specialized public companies for such services. Only 34.00% of respondents say that public services must be provided by a common supplier.

**Figure 7-6: Acceptance for services provision in the intersectorial formula**



Note: Creating a single provider for multiple services

Do you think that providing more community services is best to achieve by a common provider or by specialized suppliers?

## 8 Reference indicators matrix

Table 8-1: Reference indicators matrix

Objectives	Indicators	Reference level
<b>Determination of consumer satisfaction degree:</b>		
<ul style="list-style-type: none"> <li>Determination of satisfaction degree of residents with quality of waste management services</li> </ul>	% People satisfied with the quality of waste disposal and sanitation services	17%
<ul style="list-style-type: none"> <li>Collecting feedback to evaluate residents' satisfaction degree on each segment of the existing waste management system</li> </ul>	% Population who feel disturbed by: frequency of waste collection lack of conditions for separate collection waste burning spontaneous dumps in community	5,9% 20,4% 40,7% 52,6%
<ul style="list-style-type: none"> <li>Identification of the level of awareness about the separation, recycling and appropriate disposal of household and commercial waste.</li> </ul>	% People declaring how important recycling modalities are: Recycling Reuse of plastic bags Compost at home - garden waste Compost at home - garden waste	52,3% 40,8% 35,0% 36,1%
<ul style="list-style-type: none"> <li>The satisfaction of the current general level of waste management</li> </ul>	% Population which agrees that in their town is a proper waste management	4%
<ul style="list-style-type: none"> <li>Evaluation of public satisfaction degree with the placement of containers and garbage bins on the sidewalks or streets.</li> </ul>	% People expressing support for this	87,5%
<ul style="list-style-type: none"> <li>Evaluation of satisfaction degree of the population on domestic solid waste deposits and platforms for waste pre-collection.</li> </ul>	Only 21% of the population in area currently receive sanitation services and have access to platforms of waste pre-collection. So this indicator should be estimated at the final measurement, after the project	
<ul style="list-style-type: none"> <li>Evaluation of public perception on environmental and health issues waste-related.</li> </ul>	Indirect indicator:% of population that believes that the problem of waste management is currently a priority for the population	25,4%
<ul style="list-style-type: none"> <li></li> </ul>	The issue place in the top priorities for communities	2
<ul style="list-style-type: none"> <li>Evaluation of knowledge degree of rights and obligations of the consumers and their willingness to contribute to improvement of the situation.</li> </ul>	% Of respondents who believe that people would accept higher taxes for: Selective waste collection Waste recycling	38,3% 29,3%
<ul style="list-style-type: none"> <li>Identifying the roles from</li> </ul>	% Leaders who welcome:	

Objectives	Indicators	Reference level
private and public sectors.	Private sector involvement in waste management	79%
	Believes that community service is better to be provided by private companies	32,1%
<ul style="list-style-type: none"> <li>Identification of people's points of view on the taxes for waste collection, transportation, treatment and disposal (willingness to pay, accessibility).</li> </ul>	% Of respondents who believe that people would accept higher taxes for:	
	Selective waste collection	38,3%
	Recycling	29,3%
	introduction of the system of reimbursement of expenses for the selective collection	28,0%
	waste collection with a higher frequency	44,7%
<ul style="list-style-type: none"> <li>Evaluation of existing system of sanctions and incentives applied in the field, highlighting gaps and causes of its inefficiency.</li> </ul>	Qualitative survey data	
	Penalties	All applied sanctions till now are penalties and community work.
	Incentives	They do not exist
	Gaps	There are not ongoing efforts to combat inadequate management. Sporadic taken measures have short-term effect
	Inefficiency causes	Lack of PLA available resources Lack of environmental education measures of population
<ul style="list-style-type: none"> <li>Collection of feedback from the public regarding the free access of residents to the waste deposit.</li> </ul>	Indirect indicator for the accessibility of authorized deposits is % of waste placed in unauthorized places, leaders estimation	69,4%
<ul style="list-style-type: none"> <li>Identify the level of consumers awareness on the economic, technical and environmental requirements of the provided services</li> </ul>	Indirect indicator: % of population that does not accept the increase of the charge for waste management services to enhance quality	78,7%
<b>Identification of the participation degree of more actors:</b>		
<ul style="list-style-type: none"> <li>Identification of the level of participation of all actors of civil society in planning, implementation, monitoring and evaluation of public policies in local public services</li> </ul>	Qualitative survey data	confirms the existence of projects implementation practices and some community problems solving involving all actors in the community

Objectives	Indicators	Reference level
<ul style="list-style-type: none"> <li>Evaluation of women's access to local public services.</li> </ul>	It will reflect through proportion of households with direct access to public community utilities: Connected to water supply Connected to sewerage Connected to the gas pipeline Benefits of sanitation services and waste disposal	19.1% 17.4% 48.6% <30%
<ul style="list-style-type: none"> <li>Evaluation of the level of cooperation between citizens and public authorities in local public services.</li> </ul>	Qualitative survey data	Shows the existence of practices of projects implementation and solving community problems involving citizens
<b>Intercommunity and inter-sectorial cooperation:</b>		
<ul style="list-style-type: none"> <li>Identify the level of sectorial cooperation of the involved actors in public service delivery at different levels</li> </ul>		In this area only in the perimeter of activity of RAS there is the practice to provide more services by the same provider.
	% Leaders who consider that more community services is better to be provided by a single provider	34%
<ul style="list-style-type: none"> <li>Identification of intercommunity cooperation degree on public services in solid waste management sector.</li> </ul>	Intercommunity cooperation is currently realized only within cultural and sports events.	
	% Leaders who claim that the services are provided in common with neighbouring communities Water supply waste water disposal The heating system Solid waste storage Solid waste disposal Repair and maintenance of roads Cultural Events Sports events	7% 7% 11% 39% 41% 41% 61% 59%
<ul style="list-style-type: none"> <li>Identification of intersectorial collaboration degree in the process of elaboration of local development strategies.</li> </ul>	The study did not identify any practice of intersectorial collaboration in this sense.	

## 9 Conclusions

The volume of solid waste production (in agriculture, construction and other economic activities, other community services) and the household, accumulated in the research area is about 1,506 tons annually only in town Soldanesti. Accurate statistics for the 7 villages don't exist, but according to statistics for 2010 of the Agricultural Department Soldanesti, of the 200,000 tons of animal waste, produced by the 34 villages in the district, of which approximately 20000-25000 tonnes are used as fertilizer for agriculture, the rest are mixed with other waste exported to the dumps. It follows that, a village annually produces about 5900 tons of animal waste only. Animal waste from these 7 localities is about 41,300 tons. Localities sanitation in the area was still remains a difficult problem and priority, being ranked on the second place after the issue of roads and bridges (Figure 3. Priority issues to be addressed). Each locality in the area currently has 1-2 dumps and, as a rule, they are not arranged according to the standards of sanitation and the environment. Given the data obtained in this report on waste, we find that in rural areas in the region there is an inadequate waste management, by extending the surfaces of unauthorized dumps, leading to pollution of arable land, including of the groundwater, of Ciorna river and therefore of the river Nistru. Waste management is one of the difficult problems, complex and far from being solved not only in the reference area, but also throughout the country, according to international standards and restrictions. Aggravation of waste issues, in particular, of solid waste is generated by how bad the problems are now solved at different stages of integrated waste management. The most used method in the treatment of waste storage in the area is on the ground storage, which is a serious source of pollution of soil and groundwater. It should be noted that the vast majority of dumps, by the way that they are made and operated, they are far from respecting environmental requirements. In villages in the area there are not arranged warehouses for selective storage of solid waste and industrial waste. Being at the initial stage of development of waste management: Soldanesti town and Parcani village, their disposal shall be made a priority, through separate collection. Existing dumps in the area don't have special information signs, not dammed and have no drainage system for disposal of harmful spills. There are not performed waste burial works. Some of them are stored outside the perimeters admitted and specially designed. Waste impact on the environment has increased alarmingly in recent years. Improper administration produces contamination of soil and groundwater and emissions of methane, CO<sub>2</sub> and toxic gases, with direct negative effects on human health and the environment.

It can be seen that the reference area does not have sufficient technological capacity for collection, recycling or recovery of waste and their use as secondary raw material for other processes. Under these conditions most of the waste reach the dumps, even if they contain useful materials such as glass, metal, paper, plastic, etc...

Due to lack of facilities and faulty operation, the dumps are among the objects identified as impact and risk generators for environment and public health.

The main types of impact and risk caused by domestic and industrial solid waste in the area, in the order they are perceived by the population:

- Changes in landscape and visual discomfort;
- Air pollution;
- Pollution of surface waters;



- Changes in soil fertility and in the composition of biocoenoses on the lands nearby;
- Air pollution with bad odors and wind-blown suspensions is particularly evident in the current municipal waste dumps, where is not practiced the cell operation and covering with inert material.

A negative aspect identified in the reference area, is that, that many useful and recyclable materials are stored together with the non-recyclable, being mixed and contaminated chemically and biologically, and their recovery is difficult.

Problems the waste management is facing with in the area can be summarized as follows:

- Storage grounds is the most widely used method for final disposal thereof;
- Existing dumps are often located in sensitive places: near the houses, surface waters or ground waters, recreation areas;
- The waste dumps are not properly equipped to protect the environment, leading to water and soil pollution in those areas;
- Current waste dumps are not operated properly: not compacted and are not covered periodically with inert material, to prevent fire, unpleasant odors;
- There is no strict control of quality and quantity of waste entering the dump, there are no facilities for the recovery of produced biogas, access roads to and within the deposits are not maintained, and transport are not washed at the exit of deposits, deposits lack of enclosure, with appropriate entry and warning signs;
- Land occupied by waste dumps are considered degraded lands that cannot be used for agricultural purposes;
- Waste collection from population is made in a non-selective manner, reaching mixed at the dumps, so much of their potential is lost: paper, glass, metals, plastics.

All these lead to the conclusion that the waste management requires the adoption of public policies and specific measures to ensure effective and appropriate logistics of every stage of waste disposal in the environment. Compliance of these measures should be the object of monitoring activity of environmental factors affected by the presence of waste, and entry into practice in the reference area of all the requirements and principles of integrated solid waste management.

Moreover, the study shows that the synergy of efforts and public - private partnership is necessary for a sustained and effective and sustainable management of solid waste, to solve the solid waste problems in the localities in the area of reference. This is confirmed by the fact that more than a half (57.00%) of leaders believe that solid waste disposal and storage can only be done in common, and others – 7.00% -9.00% believe that the common provision would be appropriate. Only 21.00% of respondents say they do not see the formula in which such services may be provided in common. Perhaps this attitude is determined by the fact that the population is not familiar with the negative effects that occur in the absence of waste management according to the principles of integrated management of solid waste, not knowing any benefits with environmental, social and economic valence, which come after the waste processing and recycling.

The necessity of establishing a public - private partnership in integrated management in the area is confirmed by the fact that private sector participation in public service provision is supported by most interviewed actors, but with significant restrictions in the

management formula. On the other hand, the vast majority of actors, regardless of service to which they referred, believe that public services provided for residents, can be efficiently , performed at a high level of quality, only with the participation of private sector, such as water supply (82.00%), waste disposal and storage (79.00%), sewage discharge (77.00%), road repairs (71.00%) and heating (52.00%).

At present in developed countries annually accumulates about 800 – 1,000 kg waste per capita, in Moldova - about 340 kg, Chisinau - about 400kg. Proper management of waste, which by nature is both a source of pollution, and a source of raw secular materials, should be integrated with long-term understanding of the consequences of made decisions. In connection with the current trends on tackling waste, must take into account the following aspects:

- Reduction of waste;
- Avoiding environmental pollution.

Greening cities, understood generally as sanitation activities, envisages achieving and maintaining hygiene of human settlements (urban or rural), of which depend to a large extent, the quality of life. Under current legislation of the Republic of Moldova, sanitation is a "local public service of communal management, organized, coordinated, regulated, managed, monitored and controlled by local public authorities. "In this regard the efforts of public authorities should be directed to implementation of the issues related to the manifestation of solid waste in relation to environmental factors and their ecological impact, in order to find the most appropriate, effective and sustainable solutions to the problems, posed by waste management, strategic planning elements, waste classification, environmental legislation and EU directives on waste management, recovery and disposal methods for waste, sanitary waste burial concept, design, construction, operation and closure of the deposits for solid waste; producers and consumers responsibility in waste generation.

From many environmental problems that threaten our planet, a major problem is, no doubt, the waste. Each of us, young or old, throw every day in the bin objects that no longer serve, which are empty, broken or worn.

Few of us think of the management of waste for a decent future, a cleaner environment and a healthy life. Not appreciate the true value of recycling as a big win for the environment you have to leave it clean for future generations. For this, it is the duty of each of us to think, before throwing things, which we don't need.

Conclusions above, are in full resonance with satisfaction and dissatisfaction of the population in the reference area not only of lack of public services and their quality there, where they exist (town Soldanesti, Parcani and Lipiceni villages), but also to the quality of governance act at local level. These assessments are available to all groups of respondents from the localities, covered by the study. A higher satisfaction of social and economic situation of the community shows people of 41-50 years (48.80% are satisfied or very satisfied), those with higher education (58.70% satisfied or very satisfied) or middle school (satisfied or very satisfied 47.80%), lonely people (46.30%), those employed (50.30%) students and those on maternity leave (47.60%). We notice an increased satisfaction for people in households with more favourable economic situation - 12.80% - very and 41.70% - satisfied. By communities notice higher degree of satisfaction of inhabitants of Lipiceni village (satisfied and very satisfied 70.00% of respondents) and town Soldanesti (57.90%), respectively. In the same localities recorded the highest degree of appreciation of social-economic situation three years ago. These two places are specific by fact that the village Lipiceni is the only locality of the studied, that is part of Rezina district and Soldanesti is the only urban locality, having the proper

utilities. Such a picture is rather determined by the transition period crossed and by public ignorance of other living standards, public services available to citizens in EU countries, USA, etc...

Local leaders are more critical in assessing the socio-economic community's situation than the population, especially in localities Olişcani and Şestaci in which many of them develop their business successfully initiated 3-5 years ago. In individual interviews, conducted with local leaders, also in these localities, from their part there is the attitude to bring added value to the local economy, environment and social status in their own localities, through waste processing and recycling. In the locality Şestaci a business unit manager of regret, that were burned around 400 tons of wood waste, which could produce pellets for heating. After this case, voluntarily, collect this waste from authorized and unauthorized dumps in the area, storing them in a special place. At the moment of the interview was a quantity of about 150 tons, saying that with the consolidation of business, will develop a technological mini-installment for making pellets.

This example and attitude speak for themselves, about the urgent need to implement a warehouse storage, with solid waste processing structures to the highest standards, near to the village Parcani, which would have every chance to become one with regional character, a fact that would ensure sustainability of the project in question and create opportunities to use alternative thermic resources obtained from waste, but also the reuse of other waste that could be supplied as raw materials for further processing structures.

None of the local leaders said it was not very satisfied, 23.30% declared themselves as satisfied, and one of two have chosen qualifying so and so. A significant group is the ones with negative feedback - 19.60% are dissatisfied and 7.10% very dissatisfied. This says that this target group is more informed, more prepared and is willing to get involved and change things for the better, very important for that area, with greater deprivation of living conditions, which is determined by the absence in these locations for utilities.

This study provides some very valuable points and highlights the gender specific. In general, women are less satisfied, so are more affected by the lack or poor quality of public utilities. Among them the percentage of those who declare themselves satisfied is less than in case of men, in almost all aspects assessed in the study. In particular, compared to men women are less satisfied with the quality or lack of sewerage services (only 6.00% satisfied, compared with 11.00% of men), services and / or waste disposal practices (18.00% satisfied, compared to 23.00% of men), the situation with access to water (satisfied 39.00% of women and 45.00% of men) and the relations between villagers (52.00% women and 61.00% men satisfied). Note that the lowest level of satisfaction recorded in assessing the quality of access roads in localities, both at women and men.

This assessment, dissatisfaction and attitude of women in the area are determined by the fact that women are more inclined towards social responsibility, and lack of comfort, determined by the public utilities has a significant negative impact on the role of mother of the woman, because the social status of women has triple beneficial consequences: the increased comfort and welfare of his family, living standards and reduction of the poverty in the concerned area.

"Empowering women, equality between women and men are premises for achieving security for all people in the political, social, economic, cultural and environment areas", this statement of the Beijing Actions' Platform of the Fourth World Conference, on Women in Beijing from 4 to 15 September 1995, talks about the role of women in the area not only in achieving this project but also about the fact, that women will become

the most powerful engine in economic growth resumption and sustainable development worldwide. Many experts point out, that the future power will be not China or India, but will be women. A World Bank study, involving about 12,000 women in 22 countries, showed the important role of women.

## **Annexes**

Annex 1	Questionnaire for households
Annex 2	Questionnaire for local leaders
Annex 3	Individual interview guide

## **Annex 1**

Questionnaire for households

**Questionnaire for evaluation of citizen's position on waste management**

*Dear Sir / Madam,*

*The given questionnaire is elaborated by the ARD "Habitat" in the solid waste management area, created within the project "Modernization of communal services in the Republic of Moldova", implemented by the Agency for International Cooperation of Germany (GIZ) in Moldova.*

*Please answer the following questions. We guarantee that the provided information is confidential. We appreciate your kindness.*

No. quest. \_\_\_\_\_

Day \_\_\_\_ Month \_\_\_\_ 2011

**A: STATISTICAL DATA**

**A1.** Your Age: |\_\_|\_\_| years **A2.** Gender 

Male	1
Female	2

**A3.** Number of persons in household: |\_\_|\_\_| people

**A4.** What is the last educational institution you graduated? (One answer)

No education	1	High school	5
Incomplete secondary education	2	Post-secondary school (college)	6
General school	3	University degree, incomplete higher education	7
Vocational school	4	No response	8

**A5.** Are you ... 

married	1
divorced	2
widow	3

living in couple, unmarried	4
never married	5

**A6.** If we refer to the last job, are you employed in the Republic of Moldova or abroad?

In Moldova	1
Abroad	2
Not working	0

**A7.** What is your main occupation in Moldova? (One answer)

Engaged in non-agricultural sphere	1	Pupil / student	5
Employed in agriculture	2	Retired / disabled	6
Occasional worker (by day)	3	Maternity Leave	7
Unemployed	4	Working abroad	8
		Something else (what?) _ _____	__ __

**A8.** What language do you speak usually?

Moldovan / Romanian	1
Russian	2
Other	3
Refusal	9

**A9.** You own ...? (On line one answer)

	Yes	No	No answer
1) Land	1	2	9
2) Houses, besides of where you live	1	2	9
3) Business units	1	2	9


<b>A10. You have in the household (house)?</b> <i>(Indicate only objects that work)</i>	Yes	No	No answer
1. Water supply (aqueduct)	1	2	9
2. Sewerage	1	2	9
3. TV	1	2	9
4. Natural gas	1	2	9
5. Car	1	2	9
6. Telephone	1	2	9
7. Mobile Phone (GSM)	1	2	9
8. Washing machine	1	2	9
9. Tape recorder / Video	1	2	9
10. Cable TV	1	2	9
11. Satellite TV Antenna	1	2	9
12. Refrigerator / freezer	1	2	9
13. Computer	1	2	9
14. Internet connection	1	2	9

**A11. Address**

Urban	1	<b>A12. Locality</b>	
Rural	2	<b>A13. District</b>	

**B: COMMUNITY STATE**

	<b>B1. To what extent are you satisfied with fact how develops in terms of socio-economic your community in present (2011)?</b>	<b>B2. To what extent were you satisfied with fact of social-economic development point of view of your community 3 years ago (2008)?</b>
1. Very satisfied	1	1
2. Satisfied	2	2
3. So So	3	3
4. Unsatisfied	4	4
5. Absolutely dissatisfied	5	5
8. Don't know	8	8
9. No answer	9	9

**B3. More specifically, how satisfied are you of the following socio-economic services in your community today?**

Services	Very satisfied	Satisfied	So so	Unsatisfied	Absolutely dissatisfied	Don't know	No answer
1. Relations between people	1	2	3	4	5	98	99
2. Cultural life	1	2	3	4	5	98	99
3. Water Supply	1	2	3	4	5	98	99
4. Natural gas supply	1	2	3	4	5	98	99
5. Personal security of citizens and property	1	2	3	4	5	98	99
6. Schools, educational institutions	1	2	3	4	5	98	99
7. Garbage disposal and sanitation	1	2	3	4	5	98	99
8. Community access roads	1	2	3	4	5	98	99



9. Sewerage	1	2	3	4	5	98	99
Something else (what							

**B4. What do you think is the most stringent problem at present in your community? What to do now in first place for the community?**

*OPERATOR! DO NOT READ CLASSIFIER. LISTEN FOR RESPONDENT RESPONSE AND SELECT FROM CLASSIFIER THE MOST APPROPRIATE RESPONSE*

1. Water systems
2. Social services
3. Schools, kindergartens, extracurricular institutions (including educational centers)
4. Community centers / houses of culture
5. Collection and waste disposal systems
6. Family doctor office / family doctors center / health center
7. Roads and bridges
8. Gas systems
9. Environment
10. Telephony
11. Electricity
12. Health care programs (training, equipment, study tours, etc.. no construction)
13. Educational programs (training, equipment, furniture, books, etc.. no construction)
97. Other (note \_\_\_\_\_)
98. Don't know / No answer

**B5. To what extent do you think local government (municipality) is dealing with social-economic problems of your community?**

1	2	3	4	5	98	99
Very much	Largely	So so	Little	Not at all	Don't know	No answer

**B6. In the past 3 years (compared to 2008) how far it has improved local government contribution (municipality) to socio-economic problems?**

1	2	3	4	5	98	99
Much improved	Improved to some extent	Unchanged	Deteriorated less	Worsened more	Don't know	No answer

**B7. To what extent do you think non-governmental organizations (NGOs) are doing with social-economic problems of your community?**

1	2	3	4	5	98	99
Very much	Largely	So so	Little	Not at all	Don't know	No answer

**B8. In the past 3 years (compared to 2008) how far has improved the contribution of nongovernmental organizations (NGOs) in social-economic problems?**

1	2	3	4	5	98	99
much improved	improved to some extent	unchanged	deteriorated less	worsened more	Don't know	No answer

**B9. To what extent do you think ordinary people are dealing with social-economic problems of your community?**

1	2	3	4	5	98	99
Very much	Largely	So so	Little	Not at all	Don't know	No answer

**B10. In the past 3 years (compared with 2008) to what extent you think ordinary people improved contribution to socio-economic problems?**

1	2	3	4	5	98	99
Much improved	Improved to some extent	Unchanged	Deteriorated less	Worsened more	Don't know	No answer

**B11. Who do you think is most responsible for solving social and economic community problems?**

	1. First	2. Second	3. Third
Non governmental Organizations?	1	1	1
District Council	2	2	2
Local business people	3	3	3
International bodies	4	4	4
Ordinary people in locality	5	5	5
Hall	6	6	6
Local church	7	7	7
The Government	8	8	8
Charities	9	9	9
None	10		
Other (note _____)	___/___	___/___	___/___

**C. WASTE MANAGEMENT / Localities sanitation**

**C1. What types of solid waste (garbage) makes your household?**

1. Kitchen Trash
2. Plastic bottles and packaging
3. Glass bottles and packaging
4. Scrap metal (beer cans)
5. Clothes, old furniture
6. Animal waste (manure)
7. Yard trash
8. Other, specify \_\_\_\_\_

**C2. What to do with solid waste (garbage) in your household? (Indicate for each type of waste marked C1)**

	Kitchen trash	Plastic bottles and packaging	Glass bottles and packaging	Scrap metal	Clothes, old furniture	Animal waste (manure)	Yard trash	Other
Burn them	1	1	1	1	1	1	1	1
Bury them in the yard	2	2	2	2	2	2	2	2
Prepare fertilizer	3	3	3	3	3	3	3	3
Take it to a common improvised dump	4	4	4	4	4	4	4	4
Are collected by someone responsible	5	5	5	5	5	5	5	5
Take it to a common authorized dump	6	6	6	6	6	6	6	6
It is collected by a private garbage collection service	7	7	7	7	7	7	7	7
It is collected by a local service of garbage collection	8	8	8	8	8	8	8	8
Other								

**C3. How is usually evacuated the garbage from your household? (Indicate for each type of waste marked C1)**

	Kitchen trash	Plastic bottles and packaging	Glass bottles and packaging	Scrap Metal	Clothes, old furniture	Animal waste (manure)	Yard trash	Other
1. Discharged by specialized service	1	1	1	1	1	1	1	1
2. Evacuated on our own with wheelbarrow	2	2	2	2	2	2	2	2
3. Evacuated with our own transportation	3	3	3	3	3	3	3	3
4. Evacuated with neighbors	4	4	4	4	4	4	4	4
Other								

**C4. Where the locals use to throw the waste?**

1. The waste containers;
2. Containers for separate collection
3. The improvised dumps (unauthorized)
4. The authorized dump
5. The ditch
6. No waste
7. Other

	C5. If garbage is discharged. How often you evacuate the garbage?	C6. How much costs one evacuation?
Per year	□□□□	□□□□□□□□
Per month	□□□□	□□□□□□□□
Per week	□□□□	□□□□□□□□
Per day	□□□□	□□□□□□□□

**C7. Are created conditions in your city for selective waste collection (selective collection containers, waste delivery points, etc...)?**

1. Yes	2. No
--------	-------

**C8. Please indicate if you will help and support the selective waste collection? (Explain why?)**

1. Yes	2. No
--------	-------

**C9. Waste collection and disposal is charged?**

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

**C10. In case of positive response, the rate for the collection and disposal of waste is of/ why?**

1. For a person	1. Family
2. up to 5 lei	2. up to 5 lei
3. up to 10 lei	3. up to 10 lei
4. up to 15 lei	4. up to 15 lei
5. Another response (please specify)	5. Another response (please specify)

**C11.To what extent, in your opinion people know how to calculate the fee for waste disposal?**

1.Largely
2.Little
3.Not informed

**C12.How do you think for which activities listed below the population would agree to pay higher taxes.**

	YES	NO
1.Selective waste collection	1	2
2.Recycling	1	2
3.Introduction of the system of reimbursement of expenses for the selective collection	1	2
4.Waste collection with a higher frequency	1	2
5.Creation at district / regional level of facilities to motivate people to selective waste collection	1	2

**C13.What is needed, in your opinion, to be taken to improve services for collection and disposal, explain?**

1.Considerably increase the fee for waste collection and disposal (25.00-35.00%)
2.Insignificant increase the fee for waste collection and disposal (10.00-20.00%)
3.Maintaining the current fee for waste collection and disposal
4.Reduce the current tariff for waste collection and disposal
5.Other (specify)

**C14.According to you, which is the total volume of waste abandoned at illegal, % ?**

1.Up to 20.00%
2.Up to 50.00%
3.More than 50.00%

**C15.What could be the contribution of Public Associations to solve the problem of waste? (Select two, why?)**

1.Information and public/children awareness;
2.Develop and implement waste management projects;
3.Collaboration with central and local authorities to solve this problem;
4.Contribution to localities sanitation and environmental components;
5.Promote the application of best practices and international experience in the field;
6.Development and publication of brochures, leaflets, etc...;
7.Other

**C16.Compared with other services in the list, how important is each of the following services to be improved?**

	Very satisfied	Fairly satisfied	Not too satisfied	NOT AT ALL satisfied
Electricity .....	1	2	3	4
Water supply .....	1	2	3	4
Waste water discharge .....	1	2	3	4
Solid waste storage .....	1	2	3	4
Solid waste disposal .....	1	2	3	4
Heating .....	1	2	3	4
Roads .....	1	2	3	4

**B: ATTITUDE REGARDING SOLID WASTE**

**C17. Next to each of the statements below, select the cell that corresponds to your opinion on the set:**

	Totally agree	Rather agree	Total disagree	Don't know/ No answer
1. Waste management in your locality is a very appropriate and necessary;	1	2	3	9
2. In your locality have to be fined residents who store waste in unauthorized dumps;	1	2	3	9
3. Separate waste selection in your locality will not be successful;	1	2	3	9
4. Authorized dumps must be arranged for each locality in Moldova;	1	2	3	9
5. Information on waste management is a complete and understandable to each;	1	2	3	9

**C18. Using the following categories, you can classify the importance of the following ways for recycling?**

	Totally agree	Rather agree	Total disagree	Don't know/ No answer
Recycling	1	2	3	9
Reuse of plastic bags	1	2	3	9
Compost at home - Garden waste	1	2	3	9
Compost at home - Kitchen waste	1	2	3	9

**C19. Which of the aspects listed below in the waste management in community bothers you more ?**

Frequency of waste collection	1
Lack of conditions for separate collection	2
Waste burning	3
Spontaneous dumps in community	4
Not affect me	5
Another response ( <i>please specify</i> )	

*Thank you for your cooperation!*

## **Annex 2**

### Questionnaire for local leaders

## QUESTIONNAIRE FOR EVALUATION OF CITIZENS POSITION ON WASTE MANAGEMENT

**Dear Sir / Madam,**

**The given questionnaire is elaborated by the ARD "Habitat" in the solid waste management area, created within the project "Modernization of communal services in the Republic of Moldova", implemented by the Agency for International Cooperation of Germany (GIZ) in Moldova.**

**Please answer the following questions. We guarantee that the provided information is confidential. We appreciate your kindness.**

Nr. quest. \_\_\_\_\_

Day \_\_ Month \_\_ 2011

### A: DATE STATISTIC

**A 1. Your age:** |\_\_| |\_\_| years      **A 2. Gender**    Male        1    Female        2

**A 3. Type of respondent:**

1. Mayor
2. Counselor
3. NGO representative
4. SME manager
5. Local leader (specify \_\_\_\_\_ )

**A 4. Address**      Urban        1      **A 5. Locality** \_\_\_\_\_ |\_\_| |\_\_|  
                           Rural        2      **A 6. District** \_\_\_\_\_ |\_\_| |\_\_|

### B: COMMUNITY STATE

	<b>B1. To what extent are you satisfied with fact how develops in terms of socio-economic your community in present (2011)?</b>	<b>B2. To what extent were you satisfied with fact of social-economic development point of view of your community 3 years ago (2008)?</b>
1. Very satisfied	1	1
2. Satisfied	2	2
3. So so	3	3
4. Unsatisfied	4	4
5. Absolutely dissatisfied	5	5
8. Don't know	8	8
9. No answer	9	9

**B3. More specifically, how satisfied are you of the following socio-economic services in your community today?**

Services	Very satisfied	Satisfied	So so	Unsatisfied	Absolutely dissatisfied	Don't know	No answer
1. Relations between people	1	2	3	4	5	98	99
2. Cultural life	1	2	3	4	5	98	99
3. Water Supply	1	2	3	4	5	98	99
4. Natural gas supply	1	2	3	4	5	98	99
5. Personal security of citizens and property	1	2	3	4	5	98	99

6. Schools, educational institutions	1	2	3	4	5	98	99
7. Garbage disposal and sanitation	1	2	3	4	5	98	99
8. Community access roads	1	2	3	4	5	98	99
9. Sewerage	1	2	3	4	5	98	99
10. The other _____ )							

**B4. What do you think is the most stringent problem at present in your community? What to do now in first place for the community?**

*OPERATOR! DO NOT READ CLASSIFIER. LISTEN FOR RESPONDENT RESPONSE AND SELECT FROM CLASSIFIER THE MOST APPROPRIATE RESPONSE*

1. Water systems
2. Social services
3. Schools, kindergartens, extracurricular institutions (including educational centers)
4. Community centers / houses of culture
5. Collection and waste disposal systems
6. Family doctor office / family doctors center / health center
7. Roads and bridges
8. Gas systems
9. Environment
10. Telephony
11. Electricity
12. Health care programs (training, equipment, study tours, etc.. no construction)
13. Educational programs (training, equipment, furniture, books, etc.. no construction)
97. Other (note \_\_\_\_\_)
98. Don't know / no answer

**B5. To what extent do you think local government (municipality) is dealing with social-economic problems of your community?**

1	2	3	4	5	98	99
Very much	Largely	So so	Little	Not at all	Don't know	No answer

**B6. In the past 3 years (compared to 2008) how far it has improved local government contribution (municipality) to socio-economic problems?**

1	2	3	4	5	98	99
Much improved	Improved to some extent	Unchanged	Deteriorated less	Worsened more	Don't know	No answer

**B7. To what extent do you think non-governmental organizations (NGOs) are doing with social-economic problems of your community?**

1	2	3	4	5	98	99
Very much	Largely	So so	Little	Not at all	Don't know	No answer

**B8. In the past 3 years (compared to 2008) how far has improved the contribution of nongovernmental organizations (NGOs) in social-economic problems?**

1	2	3	4	5	98	99
Much improved	Improved to some extent	Unchanged	Deteriorated less	Worsened more	Don't know	No answer



**B9. To what extent do you think ordinary people are dealing with social-economic problems of your community?**

1	2	3	4	5	98	99
Very much	Largely	So so	Little	Not at all	Don't know	No answer

**B10. In the past 3 years (compared with 2008) to what extent you think ordinary people improved contribution to socio-economic problems?**

1	2	3	4	5	98	99
Much improved	Improved to some extent	Unchanged	Deteriorated less	Worsened more	Don't know	No answer

**B11. Who do you think is most responsible for solving social and economic community problems?**

	1. First	2. Second	3. Third
Nongovernmental Organizations	1	1	1
District Council	2	2	2
Local business people	3	3	3
International bodies	4	4	4
Ordinary people in locality	5	5	5
Hall	6	6	6
Local church	7	7	7
The Government	8	8	8
Charities	9	9	9
None	10		
Other (note _____)			

**B12. How would you rate the following local authors ability to solve social and economic problems of the community at present, compared with 3 years ago?**

		Much better	Better	Same	Worse	Much worse
1	NGO-s	1	2	3	4	5
2	Local Public Authorities	1	2	3	4	5
3	Economic agents	1	2	3	4	5
4	Residents	1	2	3	4	5

**B13. How would you rate the following local authors ability to manage community development projects in the community today, compared with three years ago?**

		Much better	Better	Same	Worse	Much worse
1	NGO-s	1	2	3	4	5
2	Local Public Authorities	1	2	3	4	5
3	Economic agents	1	2	3	4	5
4	Residents	1	2	3	4	5

**C. WASTE MANAGEMENT / LOCALITIES SANITATION**

**C1. Where the locals use to throw waste in your community? How many percent of the total quantity of the waste is stored in each type of deposit.**

Garbage containers	_____ %
Containers for separate collection	_____ %
The improvised dumps (unauthorized)	_____ %
The authorized dump	_____ %
The ditch	_____ %
No waste	_____ %
Other	_____ %

**C2. There is in your locality an authorized waste dump?**

1. Yes	2. No
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**C3. If Yes, at what distance from the center of the community is located?**

|\_|\_|\_|\_| meters

**C4. Are created conditions in your locality for selective waste collection** (selective collection containers, waste delivery points, etc..)?

1. Yes	2. No
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**C5. Waste collection and disposal is charged?**

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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**C6. In case of positive response, the rate for the collection and disposal of waste is of/ why?**

For a person	For a family
Up to 5 lei	Up to 5 lei
Up to 10 lei	Up to 10 lei
Up to 15 lei	Up to 15 lei
Other response ( <i>please specify</i> )	Other response ( <i>please specify</i> )

**C7. To what extent, in your opinion people know how to calculate the fee for waste disposal?**

Largely
Little
Not informed

**C8. How do you think for which activities listed below the population would agree to pay higher taxes.**

	Yes	No
1.Selective waste collection	1	2
2.Recycling	1	2
3.Introduction of the system of reimbursement of expenses for the selective collection	1	2
4.Waste collection with a higher frequency	1	2
5.Creation at district / regional level of facilities to motivate people to selective waste collection	1	2

**C9. What is needed, in your opinion, to be taken to improve services for collection and disposal, explain?**

1. Considerably increase the fee for waste collection and disposal (25.00-35.00%)
2. Insignificant increase the fee for waste collection and disposal (10.00-20.00%)
3. Maintaining the current fee for waste collection and disposal
4. Reduce the current tariff for waste collection and disposal
5. Other (specify)

**C10. According to you, which is the total volume of waste abandoned at illegal, % ?**

1.Up to 25.00%
2.25.00%-50.00%
3.Up to 50.00%
4.50.00%-75.00%
5.More than 75.00%

**C.30 What could be the contribution of Public Associations to solve the problem of waste? (Select two, why?)**

1.Information and public/children awareness;
2.Develop and implement waste management projects;
3.Collaboration with central and local authorities to solve this problem;
4.Contribution to localities sanitation and environmental components;
5.Promote the application of best practices and international experience in the field;
6.Development and publication of brochures, leaflets, etc...;
7.Other

**C.31 Compared with other services in the list, how important is each of the following services to be improved?**

	Very satisfied	Fairly satisfied	Not too satisfied	NOT AT ALL satisfied
Electricity .....	1	2	3	4
Water supply .....	1	2	3	4
Waste water discharge.....	1	2	3	4
Solid waste storage .....	1	2	3	4
Solid waste disposal .....	1	2	3	4
Heating .....	1	2	3	4
Roads .....	1	2	3	4

**D. INTER COMMUNITY AND INTER-SECTORIAL COLLABORATION**

**D1. What public services are currently provided in collaboration with neighboring communities?**

		No collabora- tion	Sporadic col- laboration	Are provided in common for more communities	There are no such services
1	Water supply	1	2	3	4
2	Waste water discharge	1	2	3	4
3	Solid waste storage	1	2	3	4
4	Solid waste disposal	1	2	3	4
5	Repair and maintenance of local roads	1	2	3	4
6	The heating system	1	2	3	4
7	Cultural Events	1	2	3	4
8	Sports events	1	2	3	4

**D2. Give examples of community problems solved in common with other communities? Describe the situation as thoroughly. Operator! Write the exact response of the respondent**

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**D3. Which of the following public services do you think need to be created and delivered in common with several communities?**

		Can be provided only in common	Joint provision would be appropriate	Joint provision would present difficulties	I do not see how it can be performed in collaboration with other communities
1	Water supply	1	2	3	4
2	Waste water discharge	1	2	3	4
3	Solid waste storage	1	2	3	4
4	Solid waste disposal	1	2	3	4
5	The heating system	1	2	3	4
6	Repair and maintenance of local roads	1	2	3	4

**D4. Do you think community services provision is more appropriate to be done by private providers?**

1. Community services is better to be provided by private companies
2. It is better to be provided by companies with common status

**D5. Which of the following public services do you think need to be created and delivered in common with the private sector?**

		Can be provided only with private sector participation	Provision with private sector participation would be appropriate	Provision with private sector participation would present difficulties	I do not see how it can be performed in collaboration with the private sector
1	Water supply	1	2	3	4
2	Waste water discharge	1	2	3	4
3	Solid waste storage	1	2	3	4
4	Solid waste disposal	1	2	3	4
5	The heating system	1	2	3	4
6	Repair and maintenance of local roads	1	2	3	4

**D6. Do you think the provision of more community services is best to be achieved by a common provider or by specialized suppliers?**

1. Only by one common supplier to provide more services
2. Rather by a common supplier
3. Rather by more specialized suppliers
4. Only by specialized suppliers, each providing a service

### **Annex 3**

#### Individual interview guide

## **Baseline study of the project "Improving the solid waste management in the town Soldanesti and in seven villages "**

### **Introduction**

What are in your opinion three most stringent problems of your community? Why exactly these?

But to which community issues are given priority at the moment by LPA, citizens, local businesses?

To what extent the community is now able to solve community problems? Explain.

### **Waste**

- Describe the history of the community regarding the solid waste management?
- To what extent solid waste problem is discussed at community level?
- Describe the current situation of solid waste in the community. How is collected? Where is stored? The waste is collected on a regular basis? If not, why?
- There is in community an authorized dump? Please describe (at what distance is, how is arranged)?
- Which part of the produced local solid waste is stored at this dump?
- There is a central sanitation system and waste management in your town / village. If yes, what percentage of households uses the service and how well it works?
- There are unauthorized dumps in the community? Describe them. What part of households uses to store solid waste in these dumps? What part of the solid waste produced by locality is stored in unauthorized dumps?
- Have been initiated some activities to solve the solid waste disposal problems? What measures are taken to restrict garbage disposal to unauthorized dumps? For example. How many householders in the current year have been sanctioned for placing garbage in unauthorized places? What are the sanctions? Who carried out the penalties?

### **Public projects**

- To what extent PLA of the I and II levels, local economic agents, NGOs, residents (ask for each division) are involved in the implementation, maintenance and development of public services?
- How would you evaluate the cooperation of these actors to solve community problems?
- Give examples of activities / projects carried out at the community level realized in the community? Describe the process of their realization, involved actors?
- How do you see possible to solve problems related to waste?

- Who would be the right actors to solve problems related to waste disposal (local government I and II levels, local businesses, NGOs, people)? How do you see their contribution?
- To what extent the above mentioned actors are trained to carry out projects to solve problems related to waste?
- Do you think people are willing to contribute financially to solving the problem of solid waste collection and disposal? To improve this service? But economic agents?
- To what extent is possible and necessary the inter community cooperation to resolve waste problems? How do you see this cooperation? Explain.
- What would be impediments in the implementation of large projects to solve the waste problem? But what would be the things that would make it easy to resolve these problems comparing to other which affect the community?

### **Future**

- How do you see your community in 5 years? What will be the agenda of community problems? Which problems will be solved and which not? But the problem of waste?
- How do you think is appropriate in the near future to be realized some large projects to solve the problem of waste? What would be the impediments?