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for Ukraine

CAPACITY BUILDING IN DONETSK OBLAST FOR WASTE MANAGEMENT - UKRAINE

Report

Analysis and definition of bottlenecks



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1. Context

1.1. General context

Project activities are defined in several tasks the first is Task 1.1: Analysis and definition of bottlenecks.

The goal is to inventory all the facts that can brake the implementation of a good waste management. A large part of them have been identified during the first Tacis Project: Improvement of the solid household waste management in Donetsk Oblast. Two other programmes have enriched the experience of these bottlenecks as they include a component of solid household waste management:

- Tacis Project: Black Sea Investment Facility

Several meetings have been held between the local administrations of Donetsk Oblast and the EBRD for the financing of the Regional SHWM Strategic Plan. A first analysis of the SHWM in the Autonomous Republic of Crimea has been done, including the audit of 6 landfills.

- Tacis IBPP: Development of a Strategy to Harmonise State and Regional Waste Treatment Legal Basis with the EU Standards

This project made a feasibility study of Regional Plans in Chernivtsi Oblast. It made also an analysis of the Ukrainian standards and regulations.

1.2. Constraints, risks and assumptions

Such an approach cannot pretend to be exhaustive. It's the catalogue of what the Consultant have detected and noticed.

Qualifying facts of bottlenecks is an opinion. The opinion of the Consultant is based on his experience. Anybody can emit some other opinion about the same facts. So we'll try to describe how these facts generate negative effects of the efficiency of the waste management.

2. Decision making processes

2.1. Introduction

2.1.1. Generalities

Even after a lot of time in Ukraine and other CIS countries, the process of decision of the administrative sphere seems always opaque. In fact a non-experienced observer cannot identify the mechanisms of what politologists have named the bureaucratic consensus. This method of decision, inherited from the soviet period, belongs to the culture of a majority of executives. A good decision must not embarrass any colleague, so, the problem will stay at the state of non-decision as long as each one is not convinced that the decision will be affordable for himself. At least the decision must be legal, so the laws and regulations are enough complex and contradicting to let the space for quite any decision. At the end, if the application of the decision is completely unsuccessful at a point it's necessary to find a scapegoat, other texts can demonstrate the decision was illegal. We have daily examples of people fired and re-engaged several weeks after, of orders and counter-orders, of never applied decisions. This ideal balance is distorted by a set of relationships of power between administrations and/or between people. As these relationships are specifically opaque for a foreign observer, it's all the system of decision that appears opaque.

There's not to judge if it's well or bad. The question is only: is this system of decision well fitted to the situation, to the problems to solve, to the constraints of time, and so on?

2.1.2. Who does what?

The activities in the field of waste treatment are managed through a system of public bodies: central bodies of state and executive power, regional governing bodies, local self-government bodies and their executive committees. The functions of organisational structures exercising the management at the regional level are determined by the laws of Ukraine: "On Waste", "On Local Self-Government", "On Local State Administration", etc.

We'll try to clarify the question at 3 levels:

- Operation of the waste management
- Organisation of the waste management
- Investments for the waste management

2.2. Operation of the waste management

2.2.1. Legal framework

The daily job of collection of the waste, disposal of the waste, fixation of the tariffs, collection of the fees, is the task of the local self-government bodies:

In accordance with Article 30 of the Law of Ukraine "About Local Self-Government" such issues as collection, transportation, utilisation and neutralisation of household waste are within **the competence of local self-government bodies**.

According to Article 21 of the Law "On Waste" the local self-government bodies are to ensure:

- b) development and approval of schemes of sanitary cleaning of populated areas;
- c) organisation of household waste collection and removal, including waste of small businesses, creation of landfills for waste disposal, organisation of selective collection of useful components of waste;
- d) approval of local and regional waste treatment programmes and control over their implementation;
- e) introduction of measures stimulating subjects of economic activities, working in the field of waste treatment;
- f) solution of questions dealing with location of waste treatment sites at their territory;
- j) liquidation of non-authorized and not controlled dumps;

k) promotion of waste legislation among population, stimulation of involvement of population to collection and storage of waste as secondary raw materials;
l) issue of permissions as regards allocation of sites or facilities for waste storage and disposal at the territory of a village, settlement, city...
etc.

Local authorities take decisions about allocation of land for waste disposal and construction of waste treatment sites”.

But it's also said that:

In accordance with Article 20 of the Law of Ukraine “On Waste” the competence of state administrations as regards waste treatment includes:

- c) **organisation of development and implementation of regional and local waste management programmes** as well as assurance of implementation of national programmes;
- g) **development of schemes for sanitary cleaning of populated areas;**
- h) organisation and assistance in creation of specialised companies of all forms of ownership for collection, treatment, utilisation and disposal of waste as well as for production, installation and maintenance of the relevant equipment;
- j) **organisation of collection and disposal of household and other types of waste**, including the waste of small manufacturers, construction of landfills for waste disposal as well as implementation of selective collection of useful components of waste;
- m) **assurance of liquidation of unauthorised and uncontrolled dumps** either by itself or upon the decision of the relevant authorised bodies, etc.

And elsewhere the decree about the creation of the State owned company Ukrekokomresurcy says:

State Company “UkrEkoKomResurcy” created in accordance with the resolution of the Cabinet of Ministers of Ukraine as of 26.07.2001 N° 915 “On Implementation of the System of Collection, Sorting, Transportation, Recycling and Utilisation of Waste of Secondary Raw Materials” is to carry out ecological activities throughout the territory of Ukraine aiming at collection, sorting, recycling and utilisation of solid waste as secondary raw materials. It is also supposed to contribute to decrease the volumes of solid waste generated as well as to reduce the negative impact of waste on the environment. The company has its own production capacities as well as material and technical resources necessary for introduction of a system of collection, recycling and utilisation of solid waste as secondary raw materials (it has its own plants for production of equipment and the possibilities to create waste sorting facilities and containers for collection and recycling of secondary raw materials).

It must be added that:

In accordance with Article 23 of the Law of Ukraine “On Waste”, **the competence** of the Ministry of Environment Protection of Ukraine and its local bodies, i.e. the **State Department of Ecology and Natural Resources in Oblast** includes:

- a) co-ordination of activities of other specially authorized executive bodies referring to waste treatment and control over implementation of requirements of ecological safety;
- b) implementation of state control over the observance of environment safety requirements;
- f) creation of information and analytical systems and data bases about volumes of waste generation and waste treatment;
- g) issue of permissions for implementations of waste treatment operations in accordance with the legislation;
- j) approval of locations of waste treatment sites, etc.

In accordance of Article 24 of the Law of Ukraine “On Waste”, the competence of sanitary and epidemiological service of Ukraine and its local bodies includes:

- a) implementation of state sanitary and epidemiological supervision over implementation of state sanitary norms, rules, hygienic norms during waste generation, collection, transportation, storage, processing, utilisation, removal, neutralisation, disposal;
- c) implementation of state sanitary and epidemiological expertise of design and estimate documentation for identification of location and technical and economical justification of projects dealing with construction, extension and reconstruction of waste treatment facilities;
- d) issuing expert conclusions of the state sanitary and hygienic expertise as regards waste treatment facilities;
- e) setting sanitary and hygienic requirements for products produced from or including waste and issuing hygienic certificates for the same; etc.

Another weak point exists in the Law on Waste N° 1998-0187:

Article 9. Subjects of Waste Property Rights

Citizens of Ukraine, foreign subjects, stateless persons, enterprises, institutions, and organisations regardless of patterns of ownership, territorial communities, the Autonomous Republic of the Crimea, and the Ukrainian state shall be subjects of waste property rights.

Subjects of these property rights shall own, possess, enjoy, and dispose of wastes within the limits set by the law.

Article 14. Rights of Citizens of Ukraine, Foreign Subjects, and Stateless Persons in the Sphere of Waste Management

In the sphere of waste management, citizens of Ukraine, foreign subjects, and stateless persons shall have the right to:

- (a) manage waste in conditions safe to their life and health;
- (b) receive, in keeping with set procedures, complete and authentic information about the safety level of waste management facilities, both those in operation and ones planned to be built;
- (c) have access, in keeping with set procedures, to waste disposal sites or waste management facilities;
- (d) participate in the consideration of matters relating to the placement, design, construction, and operation of waste management facilities;
- (e) ecological insurance in keeping with the laws of Ukraine;
- (f) compensation for damage to their health resulting from transgressions of the laws on wastes.

Article 15. Obligations of Citizens of Ukraine, Foreign Subjects, and Stateless Persons in the Sphere of Waste Management

Citizens of Ukraine, foreign subjects, and stateless persons shall be under the obligation to:

- (a) observe this Law and other regulatory documents relating to waste management;
- (b) make payments, in keeping with set procedures, for services provided by enterprises, institutions, and organisations collecting, storing, transporting, stabilising, disposing of, and burying wastes;
- (c) carry out other obligations envisaged by the laws, in terms of preventing pollution of the environment with wastes.

A common interpretation is done by the inhabitants of the "private sector" of the Article 14.a and Article 15.b. They pretend that they manage their waste by themselves and deny to pay a fee for the waste collection: I have the right to manage my waste and I should have to pay if I would use the services provided...

This article must be modified as the physical persons are not allowed to manage by themselves their own waste but are obliged to entrust it to the local self-government bodies. The local self-government bodies must be obliged to provide a universal service of solid household waste management all over their territory, at a uniform tariff for all the inhabitants.

2.2.2. Activities of the Operation

2.2.2.1. Collection and fees

The collection of waste is usually done with specific trucks (but also with standard tipper trucks and tractors + trailer), containers, and platforms for containers. In some cases, there's a selective collection using specific containers, platforms and trucks. It's the job of a Municipal Company which:

- Employs the necessary personnel;
- Ensures the waste collection;
- Ensures the maintenance and the repairs of the equipments;
- Is in charge of the operation of the municipal landfill;
- Is in charge of other tasks as street cleaning, snow removal, and sometimes parks and gardens.

The Director of the Municipal Company has to face numerous daily problems: replacement of the missing personnel, replacement of the failing trucks, unexpected problems, accidents, ... The situation of the municipal companies is still very weak after all these years of depressed economy. If the Director has to take a lot of decisions, his system of information is weak. There's no permanent communication with the drivers, no phone on the landfill, no quality control system, no weighting of the waste, ... So he has only oral reports and a very few documents as registers and bordereaux. We must add that he doesn't always control his financial resources. The Municipal Company may be in charge of the recovery of the fees but it may also be done by the municipal administration, and anyway the incomes are insufficient to cover all the necessary expenses. So the main task of the Director is to obtain subsidies from the municipal budget to cover the losses and to improve the organisation of the company.

The containers are disposed on platforms of concrete (the more often) and it's never clear who is responsible of the platforms between the Municipality and the ZHEKs for the choice of the location, the construction, the maintenance and repairs, the cleaning, of these platforms. Moreover, it's not possible for the moment to say who owns the land of the platforms.

The municipalities are free for the fixing of the tariffs. The Municipal Council must ratify this decision.

But conflicts already appear, particularly with the role of UkrEkoKomResurcy. As said in the resolution of the Cabinet of Ministers of Ukraine of November 26, 2003 N° 1844:

By now the state company "UkrEkoKomResurcy" has almost solved the issues of:

1. Creation of a state structure for development and organisation of the system of collection, sorting, transportation, recycling and utilisation of waste, including containers (packages) of domestic production, as secondary raw materials by delegating the corresponding functions of the state company "UkrEkoKomResurcy" to its structural sub-divisions represented by regional directorates and production sites in cities and districts.

The state company "UkrEkoKomResurcy" and its structural subdivisions together with directorates and departments of the regional state administration, regional council, executive committees of city and district councils develop and implement Comprehensive programmes for organization of selective collection, recycling and utilization of waste.

In the last paragraph, the key words are "together with" and "develop and implement". There's no clearer framework for the relationships between UkrEkoKomResurcy and the municipalities! The deal cannot be fair. UkrEkoKomResurcy perceives duties on the packages. We can caricature by saying: the municipalities have the duty to and no means, UkrEkoKomResurcy has the right to and a lot of means.

In the European regulation, the producers have the duty to manage the waste of their packaging. For a lot of reasons, and specifically a better efficiency, they can entrust this task to the municipalities as subcontractors for this obligation. Organisations as DSD (Germany) and Eco-Emballages (France) collect duties from the producers and pay the municipal companies (throughout long term contracts) for the selective collection and the sorting of the packaging waste. On the other hand, these organisations are largely involved in the recycling activities in aim to deliver on the market secondary raw materials respecting industrial specifications.

2.2.2.2. Municipal landfills

The most often, the Municipal Company is in charge of the operation of the municipal landfill.

The operation includes:

- Registration of the deliveries of waste;
- Control of the nature of the waste;
- Location of the downloading of the waste;
- (Police) or (management) of the scavengers;
- Control of and fight against the fires;
- Cleaning around the landfill;
- Covering of the landfill;
- Maintenance and repairs of the equipments.

But some tasks are not done:

- Control and purification of the leachates;
- Sorting and specific treatment of the toxic waste;
- Embankment of the flanks of the landfill;

In aim to fulfil all these tasks, it should be necessary to get the necessary means (personnel, equipments, supplies, budget) and to have a permanent manager on the site. It's very rarely the case.

Another bottleneck is the use to calculate the figures of the waste management in m³. It's a point we'll develop further about the weighbridges.

2.3. Organisation of the waste management

2.3.1. Objectives

In the perfect case where the situation is stable and the environment is stable, there's no need for any organisation. All activities should be relevant of the current operation. But anyone should wish some progress in the waste management.

For millenniums, the management of the waste has been done at the level of the community of inhabitants with the only one purpose to make to disappear the waste for: comfort reasons as odours, sludge, street cleaning; sanitary reasons (recently) as prevention of epidemics. So the management consisted in collection and transportation toward outskirts. Inherited from this culture, each city, each village, sometimes each citizen, has organized the waste management on this scheme.

Nowadays, we have understood that the waste disposal could attempt to the quality of our environment and even to the public health. After a lot of scientific studies and technological researches, we have concluded that the facilities of waste treatment should respect some rules. Economical criteria add to. At the end, the conclusion is that the waste treatment facilities respecting all these criteria have a range of capacity in tons/year, and subsequently must deserve a minimum number of inhabitants. As the common objective is to deserve all the inhabitants of the territory, it means that the implementation and the operation of these facilities must be managed at the scale of the whole territory.

It appears also often that the community is not the right size of territory for the waste collection, and particularly when it's about the selective collection. It means that the management could be greatly improved with an intercity cooperation.

It's also clear that such a system should be efficient only if there's a strong control. The objective is to ensure sanitary conditions for the population. It must be controlled. It must also be communicated to the population.

2.3.2. Organisation of the management = Planning

The decisions of the waste management are not daily decisions. The daily decisions are operation decisions. The decisions of management are mid-term and long-term decisions. But first, let's see the stakeholders involved.

2.3.2.1. Actors

2.3.2.1.1. Regional Administration

According to the Article 20 of the Law of Ukraine “On Waste”, the Administration of the Oblast of Donetsk is in charge of the:

“organisation of development and implementation of regional and local waste treatment programmes, assurance of implementation of state programmes”.

So the preparation of a Regional Strategic Plan for SHWM of the Oblast is under the responsibility of the Administration of the Oblast.

2.3.2.2. Department of Ecology

According to the Article 23, Competence of the Ministry of Environment Protection and Nuclear Safety of Ukraine in the Field of Waste Treatment and its local offices, of the Law of Ukraine “On Waste”, the Department of Ecology is in charge of the:

“a) co-ordination of activities of other specially authorized executive bodies referring to waste treatment and control over implementation of requirements of ecological safety”,

“f) creation of information and analytical systems and data bases about volumes of waste generation and waste treatment”

“j) approval of locations of waste treatment sites”.

So for the preparation of a Regional Strategic Plan for SHWM of the Oblast, the Department of Ecology is in charge of the necessary studies and of the providing of the necessary data.

2.3.2.3. Local authorities

According to the Article 21, Competence of Local Authorities in the Field of Waste Treatment, of the Law of Ukraine “On Waste”, the local authorities as Municipalities and Districts are in charge of:

b) development and approval of schemes of sanitary cleaning of populated areas;

c) organisation of household waste collection and removal, including waste of small businesses, creation of landfills for waste disposal, organisation of selective collection of useful components of waste;

d) approval of local and regional waste treatment programmes and control over their implementation;

e) introduction of measures stimulating subjects of economic activities, working in the field of waste treatment;

f) solution of questions dealing with location of waste treatment sites at their territory;

g) co-ordination of work of subjects of business activities located at their territory within their powers;

h) definition of the amount of payments for waste disposal in the order stipulated by law;

i) implementation of control over rational use and safe waste treatment at their territory;

j) liquidation of non-authorized and not controlled dumps;

k) promotion of waste legislation among population, stimulation of involvement of population to collection and storage of waste, presenting resource value;

Local authorities take decisions about allocation of land for waste disposal and construction of waste treatment sites.

So for the preparation of a Regional Strategic Plan for SHWM of the Oblast, the local authorities should be associated by the way of the designation of representatives who should participate to the works, and they should be regularly informed of the preparation of the Plan.

2.3.2.4. Private companies and NGOs

According to the Article 16 of the Law of Ukraine “On Waste”, the Companies, Institutions and Organisations of all forms of property working in the Field of Waste Treatment in the Oblast have a right to:

“a) receive information in the stipulated order about technologies of waste utilisation, construction and operation of waste treatment facilities”

“c) come out with proposals about location, design, construction and operation of waste treatment facilities”.

So the Companies, Institutions and Organisations of all forms of property (including NGOs) working in the field of waste treatment within the Oblast should be invited to participate to the works of the preparation of a Regional Strategic Plan for SHWM of the Oblast by the way of the designation of representatives who should participate to the works, and they should be regularly informed of the preparation of the Plan.

2.3.3. The reality

In fact, the organisation of the waste management appears only in 2 procedures: the subsidies for the investments, which will be examined in 2.4, and the control of the facilities by the Department of Ecology and the Department of Epidemiology and Sanitary. Out of that, in the current situation, each administrative entity organises by itself the waste management. A first improvement has been done help to the previous Tacis Project with the "Regional Strategic Plan for Solid Household Waste Management of the Oblast of Donetsk 2004-2009", decided by the Regional Administration and approved by the Regional Council.

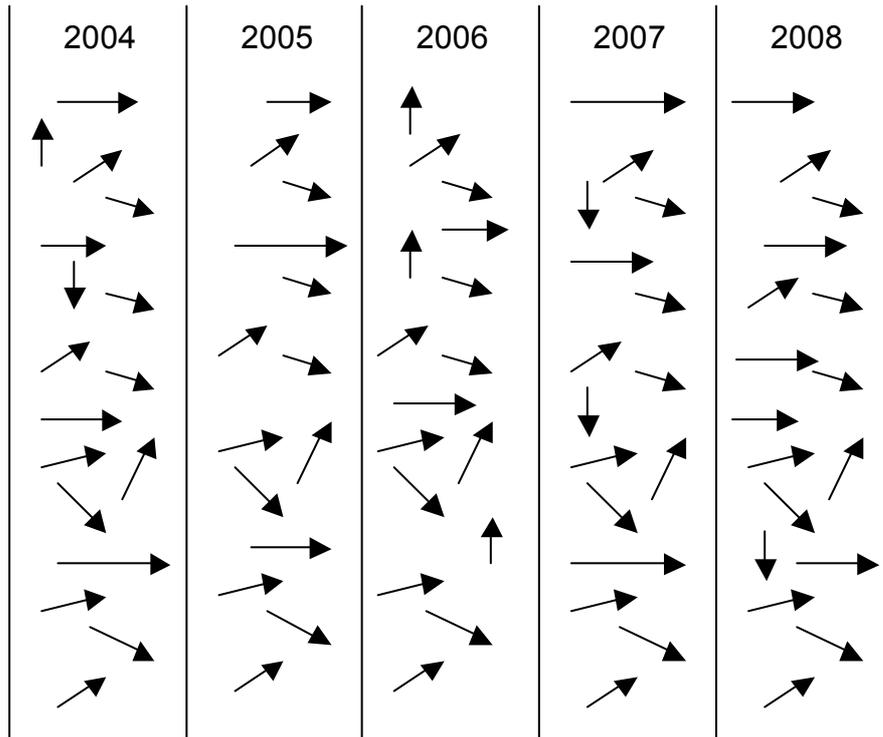
The question of the legal enforcement of such a Plan stays unsolved. A regulation should detail the legal framework of the Plan: lawful validity of the Plan, entities having to endorse the Plan, authority deciding the Plan, role and functioning of the Commission of the Plan, sources of financing of the work of the Plan and further of the Waste Observatory, and so. The Plan should reflect the public common interest and decide what is better for it. But nowadays, nothing can forbid anyone to develop a service or a facility for the waste which could be contrary to what is decided in the Plan.

2.4. Investments for the waste management

So in fact, the only one power of the State and Regional levels of authority is the allocation of subsidies for the waste management.

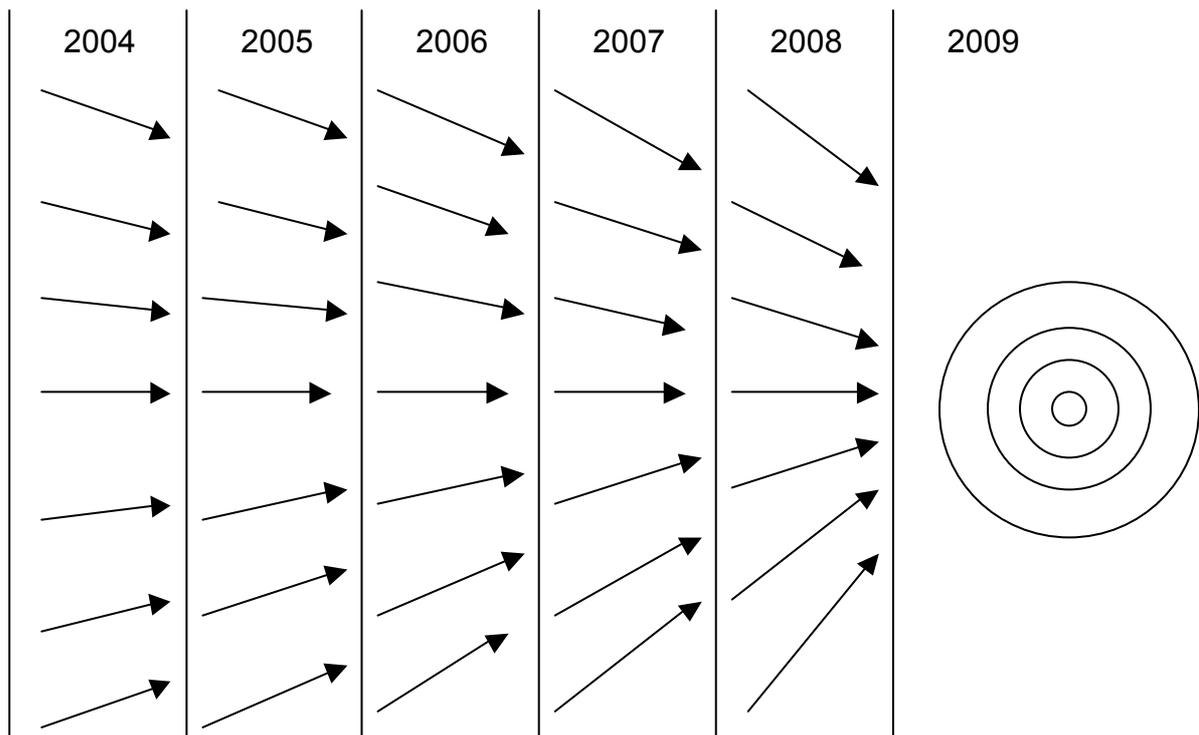
2.4.1. Investment Programme and Strategic Planning

The usual practice can be defined as the accumulation of a lot of requests for subsidies, emitted by the local bodies, for a period of 5 years. It can be defined as an Investment Programme, in the measure the budget can afford that. The drawback is that each one sees its own preoccupations, so some projects can concurrence each other, or can be oversized or undersized along their life length. It can be illustrated as below.



A common drawback is as the Budget is annual and limited, there's a temptation (and a common use) to spread the available money among a lot of projects, so each project cannot be completely financed before a number of years.

A Strategic Plan firstly defines the target. The target is a politic objective, reasonable according to the starting situation and the available means. So it becomes possible to sort the projects aiming the target and to size them correctly. It can be illustrated as below.



So it's also easy to decide to finance completely each year a few projects by having a straight view of the target and to manage a synchronization of all the projects. It must be also said that it's necessary to provide transition solutions because everything cannot be done at once.

2.4.2. Existing practice

The current practice in Ukrainian administration for the long-term programs is to list the investment projects that each city needs in the future years. This list is then aggregated at the regional level after checking by the regional administration that technical-economic studies have been carried out. In few cases administration endeavours to merge some facilities in order to rationalise obvious cases (neighbouring towns). Each city mentions the cost of the investment, and the share that could be taken by the local city budget. Then the Regional administration adds its own financial contribution. The surplus is then attributed to "other investors". The result is that the programme has two main particularities:

- The program is too large, because not studied as a system. The number of facilities exceeds the technical necessities and the means of the region. In the Donetsk Oblast 2000-2005 program, 39 polygons should be built or renovated, for a capacity exceeding the total amount of solid waste produced in the region and a total investment of 120 millions UAH (25 UAH per inhabitant). When the other existing polygons are added, the total capacity is the double than needed. It is obvious that the present system multiplies doubled and useless facilities, which cannot be built.
- The program is not based on carefully designed forecasts: change in waste composition due to the life of the enterprises (new productions, new processes, stopped productions) are not taken into consideration.

No political decisions included in the law on waste are explicitly asserted. Targets for general impact of the program on waste coverage rate, recycling amounts are not set.

Usually in Europe, the Regional Plan for SHWM is a strategic plan. It organizes the main decisions about waste management for the next 5 years. In fact, it applies the policy defined by the State. For example in France, the 1992 law fixed the objectives to be targeted for 2002. Above the law are, for Europe, European regulations, fixing objectives. It's the same level of policy than the law. The 1992 law itself instituted the regional waste management plans. Under the strategic plans, tactics is let to the local authorities and the industrialists which have to manage the waste and which have to take operational decisions, day to day, within an annual budget.

2.4.3. Ways of progress

2.4.3.1. The leadership over the project

Two bodies could reclaim the leadership of the dialog process: the Regional Council (*Oblast Soviet*), which gathers elected authorities who are representative of the population of the oblast, and the national administration in the oblast, which undoubtedly has the best technicians and the more influence on the oblast.

In a decentralised country, the elected authorities would have taken the responsibility of the dialog process, but, in a concern of adequacy with the reality of Ukraine, it seems relevant not to hide that the administration lead by the Governor is the key actor in this process. In comparison, it must be considered that in France, for example, the SIWM plans were often lead by the prefects (equivalent to the governors). It would be possible that the Governor (or his representative) becomes the chairman of the Commission of the plan.

Furthermore, the Department of Environment should also be closely associated to the preparation of the process and to the dialog itself, since it is practically the DOE that has the most technical competences and shall practically apply the plan.

2.4.3.2. Planning of the waste management

The Planning Authority must have an authority on the subject. According to the texts, this authority is shared between the regional state administration and the regional Department of Ecology (*Bodies of local self-government shall decide on the allocation of plots for placement of wastes and the construction of*

waste management facilities. Art 21 of the Law on Waste). But the application is mainly in the hands of the Department of Housing and Communal Services and under the control of the Sanitary and Epidemiological Service.

One main problem in Ukraine is that the law defines an obligation for the producers to dispose their waste in regulated conditions, and an obligation to apply waste management planning. Nothing defines the appropriate technologies to be used for each waste, the appropriate means, the control of the relevant facilities. In fact, it seems it is supposed that the market will generate spontaneously the facilities for all species of waste and that everybody will use them!

For the moment, the Planning Authority must be a Department of the regional state administration but it's difficult to say which one.

2.5. Organisation of a multilateral public dialog

This dialog process cannot be limited to a series of bilateral meetings between the responsible body and the others concerned bodies. In this case, there would be a risk that the process turns to only a series of *hearings*, with a responsible body making arbitrations, and it appeared in European Union that it is far more profitable to organise a multilateral dialog between all the concerned organisations. The frame of this multilateral dialog could take place in what could be called the "Commission of the Plan", since the notion of commission is well associated with the idea of deliberation and is easy to translate in many languages.

One major issue is that such a public multilateral dialog, that has become a traditional way of taking decisions in Western Europe (or at least offers possibilities of expression for every social bodies), is not usual in this region. Several interviews with elected authorities or administrative executives confirmed that the vertical way of management that was used in USSR is far from being disappeared. Beyond legislative imprecision and contradictions about local self-governments in regard of the vertically organised State administration, the social conventions still give an enormous importance to this administration. Thus, the chairman of the regional State administration (the Governor), who is designed by the President of Ukraine, is clearly the most influent individual in the region, and the State administration remains of a determinant influence in any public domain.

Some NGOs are claiming for a participation of the public in the decisions concerning the protection of the environment. A lot of various practices have been experienced in the Western countries, since the public conference to the process of instruction and decision in a Court. It must be remained that the necessity of a multilateral public dialog appeared because there was a full distrust of the public toward the decisions of the administrations, all what is called "technocratic decisions". But the dialog requires several conditions.

The Public doesn't know what are the constraints of the decisions. It's a question of culture and to create this culture, it's a question of education. We cannot forget that 14 years (and perhaps 10 years of hell and 4 years of revival) are not a lot to change the culture of a country. Decisions must be taken and decisions are always compromises trying to arbitrate between a lot of constraints and to optimize the expected results. Ecology became a science and the waste management uses more and more sophisticated technologies. Hereto, it's not easy to understand these technical questions. So a lot of efforts must be pursued to raise the culture of the public about ecology and management.

In parallel, any administrative entity involved in the processes of decision must continuously develop its efforts of pedagogy. The citizens are founded to worry about projects they don't understand. If a facility is planned to be built at my door, I can understand that it will perturb my life, and perhaps it will be hazardous for my health. If I cannot get understandable explanations, I will fight against this project. As usually it is the promoter of the project that will give me explanations, he must be credible. So the administrations have to build a fame of credibility, without to forget that it's 20 years to build a fame and 20 minutes to destroy it! As the common opinion is that everybody is corrupted, there's a long way to do.

3. Powers of control

Let's not dream. Nobody wants to pay for the protection of the environment. Once the means are given to control the source of the waste and their destination, all the operations of the chain must be under control. It's the role of the public power and it's a police power. In aim to do that, must be controlled the nature of the waste, the quantities of waste, their origin, their transportation, the good operation of the landfills. To do these controls, liable metering dispositions (laboratories, systematisation of the weighting of the waste) must be available everywhere. So the Administration must have enough means in terms of personnel, computers, vehicles. All that must be regulated with a system of sanctions and these sanctions must be applied.

The common drift of this situation is corruption. If we impose to a subject an obligation without any reasonable operating solution, for example if the treatment of a waste is imposed although there's no such a facility or if it's out of price, a corrupter is created. If a power is given to the administration without the decent means to work (including the wages of the officers), corruptibles are created. And when a corrupter meets a corruptible, there's corruption.

At least, trying to promote a minimum of democratic process, all decision of the administration toward a justiciable may be contested in front the court with fair chance of success and be pleaded in appeal if necessary.

So fundamental is to create or to restore a true administration of the environment and all the annex necessary components.

3.1. Enhancement of the Administration

There's no policy of waste without a police of waste.

3.1.1. To improve competencies

The French culture of the administration of environment is to size the Inspectorates as enough large to gather a polyvalent team of Inspectors. Each one must be a good generalist and must have a domain of expertise. On average each inspector has 15 days per year of training courses, shared in generalities and in his own domain of expertise.

The Ministry must define a policy of training for the Inspectors and must begin to apply it as soon as possible. Each inspector must define each year with his hierarchy his own annual programme of training.

3.1.2. To dispose of the necessary means

The Inspection must dispose of the necessary means for a maximum of controls. It supposes to be equipped with vehicles and computers. For a just-in-time information about the news of the regulation and so, the inspectorates must be equipped with modern communication tools: phone (with invoices paid in time), fax, internet, and even mobile phone when there's a emergency situation. The communication of the regulation news must be managed in aim to ensure each one receives in time the new texts and instructions from the Ministry. The objective must be as soon as possible:

- 1 computer for each inspector;
- phones, fax and mobile phones in each inspectorate;
- internet access in each inspectorate;
- 1 car (in good state) for 2 inspectors;
- supplies budget;
- management of the information: systematic diffusion of new or updated regulations, access to a pollution database, ...

Today the Inspection has laboratories. There's too many laboratories and each one has not the means to dispose of a modern equipment. The existing equipment of these laboratories is sized for % or %

investigations using chemical reagents dosage methods. Nowadays, regulations and investigations for pollutions require ppm (part per million) if not ppb (part per billion) analysis. These corresponding equipments are not available in the laboratories of the inspection. The existing laboratories use Ukrainian standards, describing the methods in accordance with their equipment. The analysis with modern laboratory equipments are described in international standards (ISO), European standards (CEN) or national standards. For the moment, these international standards are not recognized by the Ukrainian office of standardisation. This question must be answered preliminarily to any investment in laboratory equipment.

3.1.3. To review the scale of the fines

The maximum fine is today calculated as 5 times the minimum salary. A fine of 425 UAH cannot be dissuasive for an industrial company ! The maximum fine should be calculated on the basis of the incomes of the company, with a fixed minimum amount.

3.1.4. To review the procedure of prosecution

The Inspection has its own programme of control and monitoring. The inhabitants can complain of pollution or troubles. It can be to the Inspection, to the Security Service, to the Prosecutor, to the Mayor, to the Governor, to the Deputy. The Inspection has to examine the complaints, to carry on inquiries, audits, controls, and to report to the authorities.

Actually the procedure requires different samplings and analysis with strict rules which are too heavy in comparison with the means of the Inspection. The procedure must be adapted to the means of the Inspection, naturally staying fair for the facilities, and periodically revised with the evolution of the means.

3.2. Improvement of the passportisation of the waste facilities

Within some conditions a facility has to ask an authorization from the administration. It's usually called a "permit", in Ukraine it's called a "passport". The company has to provide a study and a description of the means it will use in aim to control its emissions of pollution.

The level of these studies is largely weak for two causes: good studies are expensive and good studies require highly qualified study offices. The IPPC Directive can inspire a reform of the procedure of passportisation and of the content of the files submitted to the administration.

Another factor must be taken into account. The protection of underground water requires geological and hydrogeological studies. The necessary data are belonging to the Geology Administration and are considered as Defence Secret. It must be decided to free the part of this information which is necessary for the studies of local impact on underground water.

At least, everywhere the permitting procedure includes a consultancy of the neighbours: inhabitants, local authorities. Such a disposition must be progressively included in the procedure. Progressively because it supposes to improve the public awareness about these questions.

3.3. Development of consulting and engineering

As we said previously, the level of skills of the existing offices (studies, engineering, consulting) must be improved in aim to improve the quality of the projects and the studies.

This can be reached with a budget for public orders (studies for the Ministry or for local administrations) and fair calls for tender. The ISO 9000 certification of these offices can be pushed and helped. At least, co-operations, licensing agreements, joint ventures with Western offices must be encouraged.

As soon as possible, the standards and norms missing in the Ukrainian standards must be taken as they are in the international standards: ISO, CEN, ASTM¹; or national, and applied in the new projects.

¹ Formerly known as the American Society for Testing and Materials, ASTM International provides standards that are accepted and used in research and development, product testing, quality systems, and commercial transactions around the globe. ASTM standards constitute a wide international consensual approach about these problems as a "state of art".

4. SHW collection

4.1. Daily rough waste collection

The existing system is able to ensure a daily waste collection in the cities in the collective housing areas. The system lays on three techniques.

4.1.1. Containers

In the housing area, collection points are organised with 1 to 5 containers. The containers are made of sheet steel with an edge for the handling by the truck, with a capacity from 0.75 to 1.20 m³. They can be put on a concrete platform and they can be surrounded on 3 sides by a concrete wall or a wire netting.

The truck parks close the containers in such a position the handling arm can catch a container. There's one operator. He catches the container and empties it in the truck. He has to move the hydraulic drawer to compact the waste in the box. He must move the truck for each container. Often, the waste spill out during the operation of emptying and are spread on the ground around the collection point. The main reasons are: the driver cannot ensure if the box is full or not and he has to respect his round programme so he empties the containers of his round without paying attention if the waste go in the box or on the ground; the emptying operation is not acute and depends of the nature and of the compaction of the waste inside the container so a part of the waste can fall out of the hopper. After emptying, the driver leaves and let the collection point in its state because he is not paid to clean it. It happens often that after the passage of the truck, the concierge or the cleaner of the buildings reloads the spread waste in the containers which are so immediately full again.

For this reason, and also because it happens that the number of containers for a housing area is insufficient, the waste are burnt in the container.

The truck has to collect the waste and to carry it to the landfill. Small trucks are well fitted to the road conditions inside the urban area: they are able to pass anywhere and are easy to manoeuvre. But they pass a major part of their time in waste transportation and not in waste collection and they are not well fitted to this carry 10 m³ on several tens kilometres.

Nevertheless, this existing system offers today the lowest cost for the waste collection and it can be improved as we will say.

4.1.2. Refuse chutes

Some buildings are equipped with a refuse chute ending down in a waste bunker. The bunker is manually emptied by a team of one driver and two workers in an open truck. The frequency of the operation is usually once a week.

The storage of waste one week along in the bunker favours the proliferation of infests. The loading operation is long (1.5 hour). As for the containers, the truck has to collect the waste and to carry it to the landfill. Small trucks are well fitted to the road conditions inside the urban area: they are able to pass anywhere and are easy to manoeuvre. But they pass a major part of their time in waste transportation and not in waste collection and they are not well fitted to this carry 10 m³ on several tens kilometres.

4.1.3. Villages

In several places there's a waste collection with a tractor and a trailer. The inhabitants dispose the waste in buckets at the door (in fact on the edge of the road) or in containers at the end of the street. The workers empty the buckets in the trailer or empty the container with shovels.

Naturally, the carriage tractor + trailer cannot be fast to go from the village to the landfill and a lot of time is spoiled for the transportation of waste.

4.1.4. Westernization of the collection

The usual European waste collection associates roll containers and heavy trucks. The usual containers have a capacity of 80 to 340 litres for individual housings and 500 to 1100 litres for collective housing. The last collection trucks have a capacity of 20 m³, with a rate of compaction from 3 to 5. But these trucks are heavy: 26 tons full loaded. The usual operation is done with a crew of 1 driver and 2 workers.

This collection system is much more efficient for urban centres in terms of tons collected and carried per hour but more expensive with a huge investment and a crew of 3 people.

4.2. Non collected waste

4.2.1. Recyclable

Maybe 10 % of the solid household waste can be recycled. For the moment, an unknown part is recycled. Very low-income people use to sort the waste directly inside the containers, the bunkers and the sidewalk bins within the urban areas. They pick mainly the glass bottles and the cardboard they can easily sell to collectors' shops.

Directly on the landfills, scavengers are sorting glass bottles, PET bottles, cardboard, iron and non-ferrous metals. They make packets with polypropylene bags. Usually these packets are bought by collectors and some bribes may be distributed.

The previous Tacis Project has equipped 20,000 inhabitants of Slavyansk with a selective collection. It started in July 2004 and the collected packaging waste (with a large majority of PET bottles) is accumulating in the yard of the municipal company. These packaging waste must be sorted and baled to be sold but: i) the sorting plant of Kramatorsk is not operational; ii) the PET recycling plant built by UkrEkoKomResurcy in Slavyansk is under construction and there's no outlet for the moment.

4.2.2. Wild burning

A common practice in the private housing sector is to burn the waste in the yard or in the garden during summer, and in the stove during winter. It must be said that it justifies or it results from the fee is not paid and the waste is not collected.

It has been said that the waste is too often burnt in the containers.

It must be added that almost all dumpsites and landfills are burning. The fire reduces the volume of the waste and there's always this atavism of the purifying fire.

The wild burning of the modern waste containing numerous synthetic molecules emits a lot of pollutants to atmosphere as dioxins and heavy metals.

4.2.3. Wild dumpsites

It's common to find at the end of the street, even in the private housing sector in urban areas, a wild dumpsite. As the waste are not collected, the inhabitants decide by themselves to put their waste in the closest hole. It's often the bed of a brook and so the pollutants of the waste will quickly join the surface waters.

In some cities, the municipality yearly removes these dumpsites with no charge for the inhabitants.

4.2.4. Monsters

In the EU terminology, "monsters" are the household waste that cannot be collected by the standard truck. It's the furniture, the electrical equipments, old linoleums and carpets, windows, etc. These waste appear when people are moving or changing their equipment or renovating their home. Actually in Ukraine these waste don't exist. It means that until a recent past, everything was carefully over-repaired and reused because the shortage and, at last extremity, people had to find a vehicle to carry it to the landfill or to some discreet wood.

But for several years the economical recovery is characterized by a high demand in home equipment. More and more people are renovating their home, buying new equipments, renewing the furniture. It will generate more and more monsters and this growth will be exponential.

4.2.5. Toxic household waste

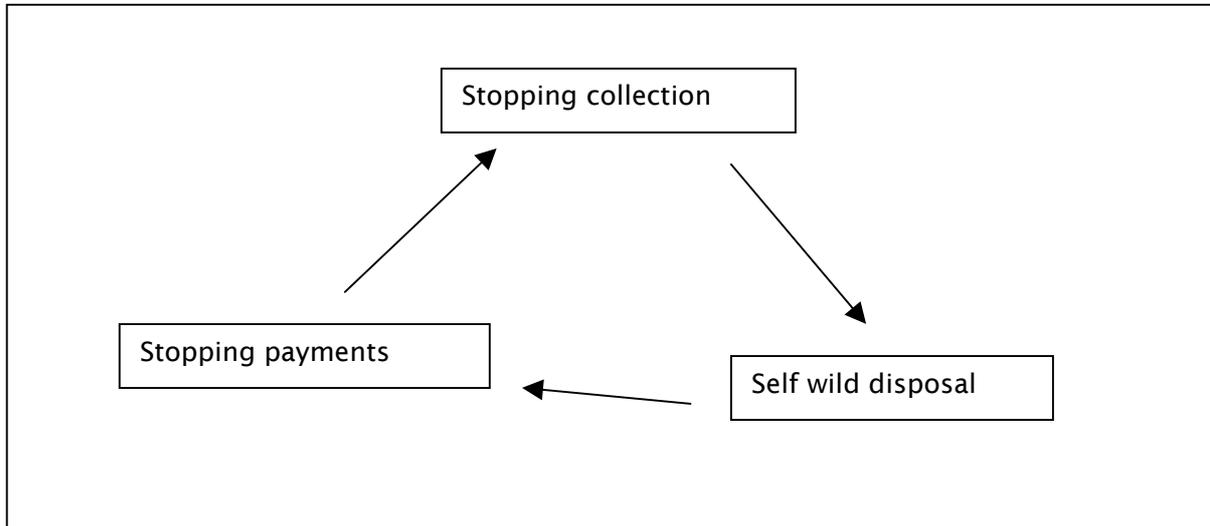
Toxic household waste include medicines; batteries; aerosols; empty packages of solvents, paints and chemical products; electronic devices. For the moment Ukraine doesn't own facilities for the safe disposal or the recycling of these toxic waste. They are not separately collected and are polluting the household waste.

4.2.6. Green waste

Green waste are an excellent material to make compost or organic fertilizer. It only supposes that the plants have not been too much treated with pesticides and chemical fertilizers. During a part of the year, these green waste may represent a huge volume of waste to collect and to dispose. It's not a good waste for the incineration but it's a very good waste for the methanization. For the moment, these waste are not separately collected and disposed. The more often they are burnt in the garden.

5. Waste fees

As previously said, there's a vicious circle:



The two main cases are the multi-storey buildings and the private sector.

5.1. Multi-storey buildings

The waste fees are now separated of the general housing charges for the multi-storey buildings. So the inhabitants are clearly informed of the cost of the waste management. But the ancient system of payment cohabits with the new ones. Depending the local situation, the fees can be paid:

- To the ZHEK at the same time than the housing charges;
- To a Common municipal settlement centre as in the City of Donetsk;
- To the Sber Bank (or another bank having a contract with the municipality).

5.2. Private sector

The inhabitants of the individual housings are supposed to sign a contract with the municipal company (or the private one) in charge of the waste collection and to pay a monthly fee. The systems of payment are the same than above.

5.3. Computerization of the fees

The Regional Strategic Plan for SHWM has put as priority for 2005 the computerization of the fees. It targets two objectives: to reach progressively 100% fees collected; to reduce the cost of the recovery by a better efficiency of the system.

The principle stays a monthly payment but it concerns very low unit amounts. The size order is 2 or 3 UAH for a family. Only a minority of the population has a bank account and the Ukrainian banking system has not generalized modern ways of payment as cheques, automatic debit, inter-bank automatic money transfer and so. The common practice inherited from the soviet period is to go to the Sber Bank with the bill of the fee and to deposit in cash the payment on the account of the ZHEK.

If the ZHEKs have a good knowledge of the identity of the occupiers of each apartment, the other organizations have to face the problem of the registration and the update of their customers. It's the same problem for the electricity company, the gas company and the waste fees management, and a minor one for the water supply as far as counters will not be generalized.

If anybody is supposed to be registered and to update his address on his internal passport, it's not done according to the heavy bureaucracy he would brave for that.

So the main bottlenecks for the computerization of the fees are: to establish a common codification of the inhabitants-customers; to establish a common updating procedure of the moving (and birth and death) of inhabitants; to define a light, secure, automatic procedure of payment with the Sber Bank.

It will also be necessary to take into account the situation of very low income inhabitants, handicapped, pensioners, veterans, who must be taken in charge by State subsidies or are dispensed of this payment.

For the rest, it must only be reminded that the service of the fee has to produce a lot of statistics for several administrations.

At least, the system must define the way and the means to get payment from the bad payers. It must include an automatic first level follow-up procedure (automatic mailing for instance) and second level recovery action (seizure for instance).

6. Landfilling

6.1. Definitions

Today, each city, each village, each hamlet, has its own landfill which is only a place where the waste are disposed and accumulated. Naturally, each one tried to establish his landfill as close as possible the housings in aim to reduce the transportation of the waste without any consideration for the protection of the environment nor the public health.

The construction of new sanitary landfills is a huge effort of investment which must be justified by the enforcement to dispose there all the SHW of the Oblast.

Each new landfill will be linked to a waste catchment. It means that a landfill is associated with a list of cities, rayons, villages which will be equipped with transfer stations and with means of transportation. The definition of the area deserved by a landfill is done in aim to optimize the global costs transportation + disposal at the scale of the Oblast.

The service must be invoiced directly to the municipalities on the base of the weight of the waste.

The landfills can directly contract with the big enterprises which can bring their waste directly to the landfill. The contract must include a procedure of control of the quality of the waste and the procedures to apply in case the waste are forbidden for landfilling.

6.2. Management

Several solutions are available for the management of the landfills. The sanitary landfills may be operated by: a unique regional company (public, in public-private partnership, or private); by as numerous companies as landfills (municipal, intercity, in public-private partnership, or private). The sanitary landfills may be owned and operated by different companies. The funding of the investment will need loans and the lenders will ask for the guaranty of the local self-government bodies and maybe of the State.

The sanitary landfill is high tech. So it will be necessary to transfer a lot of western know-how and it's easier to manage that with 1 company than with several companies.

The management of 10 sanitary landfills by 1 company facilitates the breakdown service by lending of equipments from one to another in case of failure or of maintenance operations, and allows more easily the transfer of the waste to another landfill in case of accident.

6.3. Transfer stations and transportation

The municipal (or private) service can be responsible only for the operations it manages. During the collection, the municipal service must check the waste it collects. When the waste are mixed at the transfer station, it becomes difficult to attribute any responsibility to a particular truck driver. So we consider that there must be a transfer of responsibility at the downloading of the collection truck in the transfer station.

The company operating the landfill must operate also the transportation and the transfer stations. It's the best way to optimize the transportation between the populated area and the landfill.

There are three schemes for the transportation:

6.3.1. Cities

The transfer station is built on the model proposed in the Regional Strategic Plan. The estimated unit construction cost is 1,600,000 UAH. The waste are transported with semi-trailers of 80 m³ capacity. The collection trucks are weighted in aim to calculate the production of waste of each truck each round, each sub-district, ... The semi-trailers are weighted in aim to control that the same quantity of waste will leave the transfer station and will arrive in the landfill.

It must be compared the global cost between local trucks and semi-trailers and western trucks and specialized semi-trailers.

6.3.2. Villages

A transfer equipment is made of a simple quay and the waste are carries with removable 30 m³ tippings. The collection truck or the trailer is downloaded by gravity into the tipping. A truck equipped with a handling arm brings an empty tipping and take away the full one. It exists the possibility to carry 2 tippings with a truck and a specific trailer.

6.3.3. Direct transportation

In particular cases, the collection truck can go directly to the landfill.

7. Other ways to collect and safely dispose the waste

7.1. Self-Composting

Domestic self-composting has been developed as a technique of waste collection and disposal in aim to solve the problem of the collection in specific geographic conditions: hamlets in mountain with 1 m snow during winter, very isolated houses or farms, etc. It may be successful at a large scale with a strong effort of communication toward the involved inhabitants.

The investment is cheap. The operation cost is null for the organic (and paper) waste. But the non-biodegradable waste must be collected and the fee must be reduced for these inhabitants.

7.2. Pre-paid bags

It sets a direct relationship between the payment and the service. The bags must be specifically identified and easy to procure. A variant is to propose two bags: one with charge for rough waste, one free of charge for the recyclable. In this last case, the bags must be transparent for an easy checking of the nature of the recyclable waste.

8. Funding of the investments

8.1. Financing management of waste

A tariff system includes several components:

- The general framework of the tariff;
- The organization of the relationships between the collector and the customer (usually under a contractual form);
- The modes of calculation of the invoice;
- The modes of recovery;
- The administrative organization for the execution of these functions.

We can speak only of the payment for the disposal of the common industrial waste because we have no data about the disposal of hazardous waste. This part of the problem should be studied.

8.1.1. Description of the existing system

The existing system of tariff and payment for the household waste disposal is built upon three major principles. These principles, which may have an implicit character, fund the finance relationships between the City, the Collector and the Consumers:

1. *direct payments* – the consumer or his representative pays directly to the company for waste collection services;
2. billing for service delivery based on the factual volumes of waste collected, expressed in m³;
3. or billing for service delivery based on SIW accumulation norms established by local authorities in m³.

8.1.1.1. Analyse

For historical reasons bound to the crisis of non-payment (wages and bills), the system of tariff and payment of the disposal of household waste became by the same **complex** and **inefficient**.

The on going bad functioning of the system is the consequence of the incoherence or the inefficiency of these principles or their application.

It may be noticed that the system is supposed to respect the polluter-payer principle but it transforms in non-payer-polluter.

By practice, the relationships are done in fact essentially between the customers and the collectors. By the fact, the City doesn't intervene in the tariff if not on only three points:

- Definition of tariffs used by the public utility responsible for waste disposal : price per m³ of collected waste and m³ of waste disposed at the landfill (for residential buildings and budget organizations)
- Definition of regulated volumes (norms of household waste accumulation in m³ per year per person for residential sector and for other facilities per calculated unit), on the basis of which there are calculated the tariffs for inhabitants of the private sector.
- Approval of a type-contract.

8.1.1.2. Direct payment

The payment of the service is directly done from the consumer to the collector, out of that the City or any administrative structure help as intermediary. The direct payment is an ancient tradition, going back to the communist period.

It must be distinguished three cases:

- Collective housing;

- Private sector;
- Enterprises and other organizations.

The direct payment takes two aspects:

- For the private sector and the enterprises, payment by the consumer to the collector by a money transfer in the hands of the Spare Bank (“Ochadny Bank”);
- For the collective housing sector, the system includes two stairs: payment of the charges by the inhabitants to the ZHEK, then payment by the ZHEK to the collector.

8.1.2. Recovery

8.1.2.1. Enterprises

Budget organizations and institutions pay for waste collection services by contract based on factual volumes and in accordance with the tariff established by City authorities. The procedures for definition of the volumes of waste are the same as the ones used by ZHEKs. For non-budget companies a public utility can fix higher tariffs than the ones used for ZHEKs, however, the profit margin cannot exceed 20%.

It should be noted that many companies collect household and common industrial waste by themselves paying only for waste disposal at the landfill.

There is no control of the factual contents of containers. That means it is not possible to identify hazardous waste which can be among the waste of companies, and they can be only revealed during the disposal at the landfill.

8.2. Funding of the investments

We have to distinguish 2 domains of investments: the update of the collection; the Regional Landfill Programme.

8.2.1. Funding of the collection equipments

The estimation of the Regional SHWM Strategic Plan for the waste collection needs is:

Action	Equipment	N inh. concerned	N	Unit Cost (UAH)	Amount (M UAH)
Put at level of collection	Trucks	2 000 000	400	96000	38,400
	Tractor + trailer	200 000	180	78000	14,040
	Containers	2 000 000	20 000	250	5,000
Development of collection	Trucks	2 200 000	450	96000	43,200
	Tractor + trailer	400 000	350	78000	27,300
	Containers	2 200 000	22 000	250	5,500
TOTAL					133,440

Adding the investments for the disposal, the needs are 400 million UAH for the period 2005-2009.

The renewal and the extension of the park of collection (trucks and containers) cannot be paid with the own means of the local self-government bodies, nor by the state subsidies. The planned investments for waste management (collection and disposal) for the period 2001-2005 amounted 121.195 million UAH and this amount has never been completely funded.

The small cities and the rayons cannot negotiate loans with the International Financing Institutions as the World Bank or the EBRD or with commercial banks because they have not and cannot develop inside their administrations the competencies for that. The biggest cities and the regional administration have these competencies.

Each municipal waste collection company has its own repair and maintenance workshop. A tradition inherited from soviet period (shortage management) is that these workshops repair until (and often over) the last extremity each component of the equipments, even re-tooling engines blocks!

A solution is to create a regional leasing company. This company could borrow the money from IFIs and rent the equipments to the cities and rayons. It may be only a financial renting or a full renting including the maintenance. This last solution should guaranty a high level of availability of the equipments for the municipal companies.

This solution requires a common decision of the regional and the municipal levels, and then a negotiation with the IFIs and, as it will be required, the Ministry of Economy for a state guarantee.

8.2.2. Funding of the Regional Landfill Programme

The rough estimation of the Regional Landfill Programme is 50 million € on 10 years. It can be funded only help to IFIs and banks.

The components of the Regional Landfill Programme are: the studies; the construction of the regional sanitary landfills and the purchase of their equipments; the construction of the transfer stations; the purchase of the transportation means.

The regional sanitary landfills must be precisely located. For each one, a feasibility study will say the expected capacity and the amount of the investment. For each sanitary landfill, several cities and rayons will be assigned. The necessary transfer stations will be located and their investment will be calculated. The transportation costs between the transfer stations and the landfills will be calculated. All that will determine, case-by-case, the disposal cost and the transportation cost.

At the regional level, a question must be answered. After the calculation of the case-by-case costs, it may be decided to apply a unique regional price for the disposal of the SHW. It's possible in the frame of a unique public regional waste disposal company. It corresponds to the application of the principles of: universality of the service; solidarity between local self-government bodies; and equality between inhabitants.

The funding of the Regional Landfill Programme must then be negotiated with the IFIs and banks, and, as it will be required, the Ministry of Economy for a state guarantee.

9. Insufficient data about waste management

9.1. Context

Any waste management must be based on data and to make data requires to apply codifications.

The existing waste codification has been defined in the Waste Classifier DK 005-96 in 1996. The designer of this codification has been Zinoviy Broyde.

The resolution of the Cabinet of Ministers of Ukraine 1998-1218 of 3 August 1998 defines the regulation On Development, Approval and Review of the Waste Generation and Waste Disposal Limits so called "passportisation".

The resolution of the Cabinet of Ministers of Ukraine 1998-1360 of 31 August 1998 defines the regulation On Keeping the Inventory of Waste Generation, Waste Treatment and Waste Utilization Sites.

In application of To Order of the Minister of Ecology and Natural Resources of Ukraine N° 1/1 of Jan.8, 2003 "Political Priorities, Strategic Directions and Mechanisms for Implementing the State Policy in environment protection, efficient use of natural resources, ecological safety, hydrometeorological, topographic, geodetic and cartographic activities" saying:

The main objective of the current national policy is achievement of a substantial improvement in the Ukraine's environmental conditions (anthroposphere, sociosphere, technosphere, biosphere, atmosphere, hydrosphere, lithosphere), installation of ecological and environmental preconditions for sustainable development of the nation.

It is envisaged that there will be the following strategic directions in the work of the Ministry for 2003-2005:

4.2 further elaboration of the legislative process and legal base in the area of environment protection, acceleration of the process of harmonization of the Ukraine's environment protection legislation with international requirements, especially with those of EC;

As it is often the case, the document (Waste Classifier DK 005-96) has been criticised and it became necessary to revise it. It has been clarified by an explanatory note:

1. Grounds for development of Classifier

The grounds for development of the draft second edition of the Classifier are the following:

- Instructions of the Cabinet of Ministers of Ukraine as of December 5, 2000 N°14814/96 as well as the decision of the Cabinet of Ministers of Ukraine as of March 15, 2002 N°138-r "On Approval of Measures Ensuring Economic and Social Development of Ukraine in the Year 2002" (item 48 "State Waste Classifier Harmonised with the European Catalogue of Waste");
- Resolution of the Cabinet of Ministers of Ukraine as of October 10, 2001 N°1314 "On Introduction of Changes into the Programme of Utilisation of Industrial and Household Waste for the Period up to 2005";
- Minutes of Meeting of the Inter-departmental Working Group on Improvement of the State Waste Classifier as of April 10, 2001- N°1.

2. Aim and tasks of the development of the second edition of the Waste Classifier

The aim is to develop a new (the second) edition of Waste Classifier DK 005-96 (hereinafter referred to as "WC"), harmonised with the European standards. It should be based on the general experience of use of the first edition DK 005-96 and the relevant conceptual and methodological techniques that are to be developed in order to improve the Classifier.

This work is determined by the necessity to bring the structure and contents of the Waste Classifier in line with the practical requirements of the day and to harmonise it with the European documents of the relevant level.

In 2003 a conference in Kharkov has been organized and a draft second version of this Classifier has been presented. This was provided by Mrs. Vygovskaya Anna Pavlovna who is an employee of the Council of Productive Forces Studies of Ukraine of the National Academy of Science of Ukraine (Kiev)

and the collaborator of Mr. Mishenko Vladimir Sergeyevich who is very famous for this work and it seems like he is in charge of these activities. The coordinates are the following:

Council of Productive Forces Studies of Ukraine of the National Academy of Science of Ukraine

Tel.: + 38 044 216-91-23

Address: 60 bulvar Shevchenko, office 1105, Kiev, Ukraine.

We have this draft edition which is about 45 pages in Ukrainian.

The Government of Ukraine has decided to revise the existing codification and to harmonize it with the European codification. Till today, this new codification of the waste has not come into force.

9.2. Systematization of the Weighbridges

The waste must be managed in tons and no more in m³.

The new sanitary landfills and the transfer stations will be equipped with weighbridges.

For the transition period, several landfills will be kept in operation. These landfills must be equipped with weighbridges as soon as possible.

9.3. Regional Waste Observatory

The first Tacis Project made studies about: production of SHW (figures of 2002); composition of the SHW (figures of 2003); public opinion poll (figures of 2003); inventory of the existing landfills (data of 2004). The figures of the SHW production have been registered in a geodatabase.

Living a period of fast economical recovery, it's assumed that all these figures will quickly evolve.

Decisions have been taken and it's necessary to check their concrete results. A yearly report can inform the authorities and also the inhabitants, what could participate to the public awareness.

The next Regional Strategic Plan will lay on the data of the on going and future years and it's necessary to prepare them.

At least, the methodologies applied to procure these figures were developed with the available means of the moment and they must be progressively improved.

The management of all that is relevant of a so-called "Regional Waste Observatory". It needs 3 people (1 economist, 1 engineer, 1 geographer), some computer hardware and software, a budget for subcontracted studies. The creation was approved by everybody but has not been still decided (neither the budget).