The European Union's Tacis programme

Black Sea Investment Facility

Georgia – Moldova – Russia - Ukraine

Solid Household Waste Management of the Donetsk Oblast

Complementary Study for EIB

Report: Final Report (Draft)

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Warning

This programme is implemented by the Consortium Thalès EC – GKW Consult - Sogreah. The views expressed in this report do not necessarily reflect the views of the European Commission.

The concept

The main environmental question of the region is: How to reduce the stream of pollution in the Black Sea?

There are 6 countries bordering the Black Sea: Bulgaria, Romania, Ukraine, Russia, Georgia, and Turkey. Three of them are candidates to the adhesion to European Union; three of them are eligible to the Tacis Programme. The candidate countries and the new member states with the help of the European Union, particularly in the framework of programmes of co-operation in the Danube's catchment, do a lot of efforts. But these efforts should stay insufficient without the same efforts in the NIS.

The European Union estimated it should be useful to push these projects and their financing and launched the BSIF Programme. The Black Sea Investment Facility provides studies in aim to facilitate the funding of projects allowing a reduction of the pollution of the Black Sea by the International Financing Institutions.

The target groups

Beneficiary Countries

The beneficiary countries of this investment facility are the three CIS countries bordering the Black Sea (Georgia, Russia and Ukraine), plus Moldova, which is also connected to the Black Sea via its river basins.

IFIs: International Financing Institutions

IFIs involved in the BSIF programme:
World Bank – International Bank for Reconstruction and Development
EBRD – European Bank for Reconstruction and Development
BSTDB – Black Sea Trade and Development Bank
EIB - European Investment Bank

Organisations of the co-operation already existing

BSC Black Sea Commission
BSEP Black Sea Environmental Programme
DABLAS (Danube & Black Sea) Task Force
JEP (Joint Environment Programme) (TACIS)
2001 Regional Environment Programme (EBRD)
Bangkok Facility (EC & EBRD)
MISP (Municipal Investment Support Programme)
GEF Strategic Partnership on the Danube/Black Sea Basin
BSERP Black Sea Ecosystem Recovery Project

Bilateral Donors

Canada, Denmark, France, Germany, Japan, Switzerland, United Kingdom, USA

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Glossary

DRCWT	Company "Donetsk Regional Centre of Waste Treatment"
IFI	International Financing Institutions
JIP	Joint Implementation Project, one of the mechanisms defined by the Marrakech Conference for the implementation of the Kyoto Protocol
LFG	Landfill gas
LSG	Local Self-Government
Municipal waste (MSW)	Waste in charge to the municipalities, of the same nature than household waste, but resulting of specific activities as the street cleansing, the parks and garden maintenance, the open air markets
NGO	Non-Governmental Organizations
Private sector	This denomination is used to name the sub-districts made of individual houses, generally equipped with a private garden
Remediation of landfill	Treatment of hazardous landfill, generally including operations as moving of hazardous waste, waterproofing of the bottom, treatment of leachates, treatment of biogas, etc
Sanitary Landfill	Landfill designed and built in aim to protect the environment, according to international standards and regulations
SHW	Solid Household Waste
SHWM	Solid Household Waste Management
ToR	Terms of Reference
Wastery	Facility where the inhabitants can bring all their exceptional (as which has not to be put or which cannot be put in the bin) waste (construction waste, old furniture, scrap metals, toxic waste, …) and where they are separately collected
WDS	Waste Disposal Site (terminology of Ukrainian regulation)

Summary and experts' comments

The Pre-Feasibility Study: Solid Household Waste Management in Donetsk Oblast (Ukraine) has been done for EIB during the 1st quarter 2006. One man.month was allocated and the study was a synthesis of the existing works. It was mainly based on the Regional Strategic SHWM Plan of Donetsk Oblast. The report of this study had been delivered to EIB on 25/04/06. EIB asked some information and it has been answered on 13/07/06. On 27/07/06 a meeting was held between Dr Axel Hörhager, EIB Project Co-ordinator Balkans and Ukraine, Roland Schulze, EIB Engineer, Electricity and Waste Management, Philippe Fichaux, Tacis expert. During this meeting EIB asked a complementary study that has been approved by the Steering Committee of September.

EBI sent its Terms of Reference on 10/08/06. BSIF answered its Inception Report on 04/09/06.

The main questions of EIB are:

- What are the definitive locations of the 11 scheduled new regional sanitary landfills?
- What is the impact of Carbon Credits on the economy of the project?
- Can the project be feasible without the Carbon Credits?
- Which will be the structure(s) in charge of the funding, construction and operation of the regional sanitary landfills?
- What are the legal and administrative constraints for contracting a credit for the project?

All along 2006, the Regional Administration and the Local Self-Government bodies of Donetsk Oblast have progressed and it is a part of the answer to the questions.

The average rate of the fees is already > 18 UAH/inh/y although it was targeted 12 in 2009. The rate of recovery is 77%, meaning that 100% should be reached for 2009. In such conditions, the Plan is no more so depending on additional incomes as carbon credits.

The location of landfills met an obstacle with the existing regulation about land use. So some additional negotiations are necessary for the definitive choice. Nevertheless the State allocated 30 + 8 mln UAH for the construction of sanitary landfills and the Regional Administration has launched the construction of the one of Kramatorsk that will be 100% Ukrainian funded. The site is very good and all elements are given for a good demonstration project.

Ukraine has fulfilled the obligations for the Kyoto Protocol. So now JI Projects can be developed according to the Track 1 procedure: all decisions will be taken by Ukraine. The study showed that the Carbon Funds are not perhaps the best way. Their only advantage is to provide advance payments but their contractual tariff is low. It should be more interesting to negotiate with Carbon Buyers.

The Regional Council has officially decided the creation of the Donetsk Regional Centre of Waste Treatment. It is the company that will be in charge of the construction and the operation of the regional sanitary landfills and the transfer stations.

Tow key-points will be to be checked for contractual relationships of this company and its customers that are the municipal companies of waste collection: 1/ the obligation to deliver the collected municipal waste to the sanitary landfills and to no other one; 2/ the capacity to enforce the payments for the waste disposal.

1. Regional Landfills Programme

1.1. Question

The Regional SHWM Strategic Plan of the Oblast has decided a Regional Landfills Programme based on 11 (10 to 12) sites. Tacis experts have proposed a methodological approach conclude with a choice of 11 sites among 40 assessed zones. The Oblast Administration has some other propositions of sites.

What is the state of the choice of the sites for the implementation of the new regional sanitary landfills?

1.2. Legal framework

Some new constraints appeared during the study.

1.2.1. Use of the land

The Law defines geological patrimony areas. They are places where it's known that it exists a mineral resource that could be useful someday. A lot of qualities of clay are considered as mineral resources. The problem is that the construction of sanitary landfills requires the presence of good quality clays that are in parallel very often classified as potential mineral resources. In such cases, the existing regulation forbids to implement landfills on these areas.

1.2.2. Ownership of land and cadastre

The situation is still confused. For instance, on the area of the project of landfill of Kramatorsk, the Service of Cadastre of the City knows clearly the ownership of the land for 1/3 of the surface. For the other 2/3, the information exists somewhere but is not managed. So it's much more easy to look for big pieces of land already used for 1 purpose as a quarry or a municipal land.

1.2.3. Norms for landfill design and European standards

1.2.3.1. State Construction Norm of Ukraine DBN B.2.4-2-2005

The State Construction Norm of Ukraine DBN B.2.4-2-2005 "Design Solid Household Waste Landfills - Basic Design Regulations" (State Committee of Ukraine on Construction and Architecture Kiev 2005) is applicable from 01/01/2006.

The norm says:

2.4 SHW landfills can be located:

- *at the area of the 3rd sanitary protection zone of water intakes provided they are naturally protected (presence in lithologic section of quite powerful and mature waterproof rocks) plus installation in the basin of the landfill of a reliable anti-filtration barrier (coefficient of water filtration not more than 10^{-9} m/s);*

2.5 The anti-filtration barrier of SHW landfills is a barrier which in accordance with European standards has a coefficient of water filtration of not more than 10^{-9} m/s.

It's not clear what can be the installation of an anti-filtration barrier with a coefficient of water filtration not more than 10^{-9} m/s. The norm refers to European standards that define a passive geological barrier (or artificial equivalent but with a thickness > 0.5 m) and sealing (or liner or geomembrane according the terminology) as a part of the active draining system. This sealing is "installed" but it has not a lot of sense to define it by a coefficient of water filtration not more than 10^{-9} m/s.

Anyway, the Ukrainian regulation refers explicitly to a natural (lithologic) anti-filtration barrier with a coefficient of water filtration not more than 10^{-9} m/s according to European standards.

1.2.3.2. Conclusion

The Ukrainian regulation defines an obligation to study the geological and hydrogeological conditions of sites for sanitary landfills. It defines an obligation to protect the water.

The EU regulation says how to protect water: a geological barrier. It says that it must be made of a natural layer of clay (the permeability can only be got with clay) ≥ 1 m at $K \leq 1.0 \times 10^{-9}$ m/s. It says that it may be substituted with an artificial layer ≥ 0.5 m offering the same performance; practically, it means a layer of compacted bentonite. The Ukrainian regulation refers to the European regulation about this passive barrier.

It exists quarries of bentonite on the territory of Donetsk Oblast. This local production limits the transportation costs. For a standard row of 2 ha, the layer of bentonite should cover 20,000 m² for the bottom and 6,000 m² for the flanks. It makes 13,000 m^3, so with an average density of 2.35, 30,000 t.

The commercial price ex-quarry in 2005 was 600 UAH for 800 kg, so 750 UAH/t. So the cost for a row should be 22,500,000 UAH for the bentonite, + 1,500,000 UAH for the transportation, + 150,000 UAH for the construction of the layer, so a total of 24.15 mln UAH for one standard row of 2 ha.

1.2.3.3. Policy and strategy about land resources

Tacis experts assessed 40 zones defined by the State Company Donbass Geology in 2004 and selected 11 sites. If these sites offer (or seem to offer at this step) good conditions as geology, hydrogeology, topography, road access, they have a main drawback: the land is generally used for agriculture.

The use of the land may be classified as: agriculture, industry, quarries, housing, roads and streets, forest, protected natural area, etc. It's very rare all over the territory of Donetsk Oblast to find a land without specific use. There are some moors at the top of hills or in the bottom of valleys. So we can resume the free of use lands as some abandoned quarries or mines, moors or existing landfills.

Do these free of use lands meet the specification for landfill construction?

Let's compare on the base of a standard project requiring 50 ha of total surface for 24 ha of landfilling rows.

The price of agriculture land given by the Organisation of Agriculture Territory of the oblast is:

- Fields: 91,040 UAH/ha
- Hays: 23,400 UAH/ha
- Meadows: 26,140 UAH/ha
- Forest: 163,100 UAH/ha.

So to buy 50 ha of fields is an expense of 4.5 mln UAH.

The construction of an artificial geological barrier in a free of use land is 24.15 mln UAH for 2 ha, so it's 579.6 mln UAH for 24 ha.

1.3. Sites proposed by the Oblast Administration

1.3.1. Kramatorsk

The Oblast Administration proposes a good site on the territory of Kramatorsk. The site includes an existing landfill and a former quarry of clay.

The Oblast Administration has decided to build this landfill in 2007 and has already allocated large amounts of the 2006 Budget. The order for the studies has been passed after a tender. The Oblast Administration will fund 100% the construction of the landfill.

It has been asked the Tacis Donetsk 2 experts to help to the application of European Standards for the design, the construction and the operation of the landfill. Unfortunately, Tacis Donetsk 2 has not the assigned task and the means for this transfer of know-how.

This landfill should replace the one of Slaviansk in the programme of 11 regional landfills.

1.3.2. Makeyevka

Very recently, Donetsk Geology has indicated a favourable area close to Makeyevka. The Oblast Administration has given an order to study the geological and hydrogeological conditions and the land property status of this land.

1.4. Assessment of potential sites

The Oblast Administration has given to Donetsk Geology an order to study the geological and hydrogeological conditions of all the sites proposed by the Tacis experts (11 sites) and 5 other potential sites. The results are expected for the beginning of 2007.

1.5. Choice of the sites

Subsequently, if the general principle of the spatial repartition of 11 new sanitary landfills is agreed, the short-term objective of the Oblast Administration is to define 5 locations: North, South, East, West, Centre; for a 1st tranche of construction of landfills. This choice is conditioned by the expected geological and hydrogeological studies.

1.6. Programme of construction of landfills

Anyway, the principle is agreed and begins to be applied, and the exact location will only impact the cost of the transfer. So it is scheduled to associate the 11 new sanitary landfills to 40 big transfer stations. In small cities, the transfer will be ensured with simplified transfer quays. Year by year, the programme is the following:

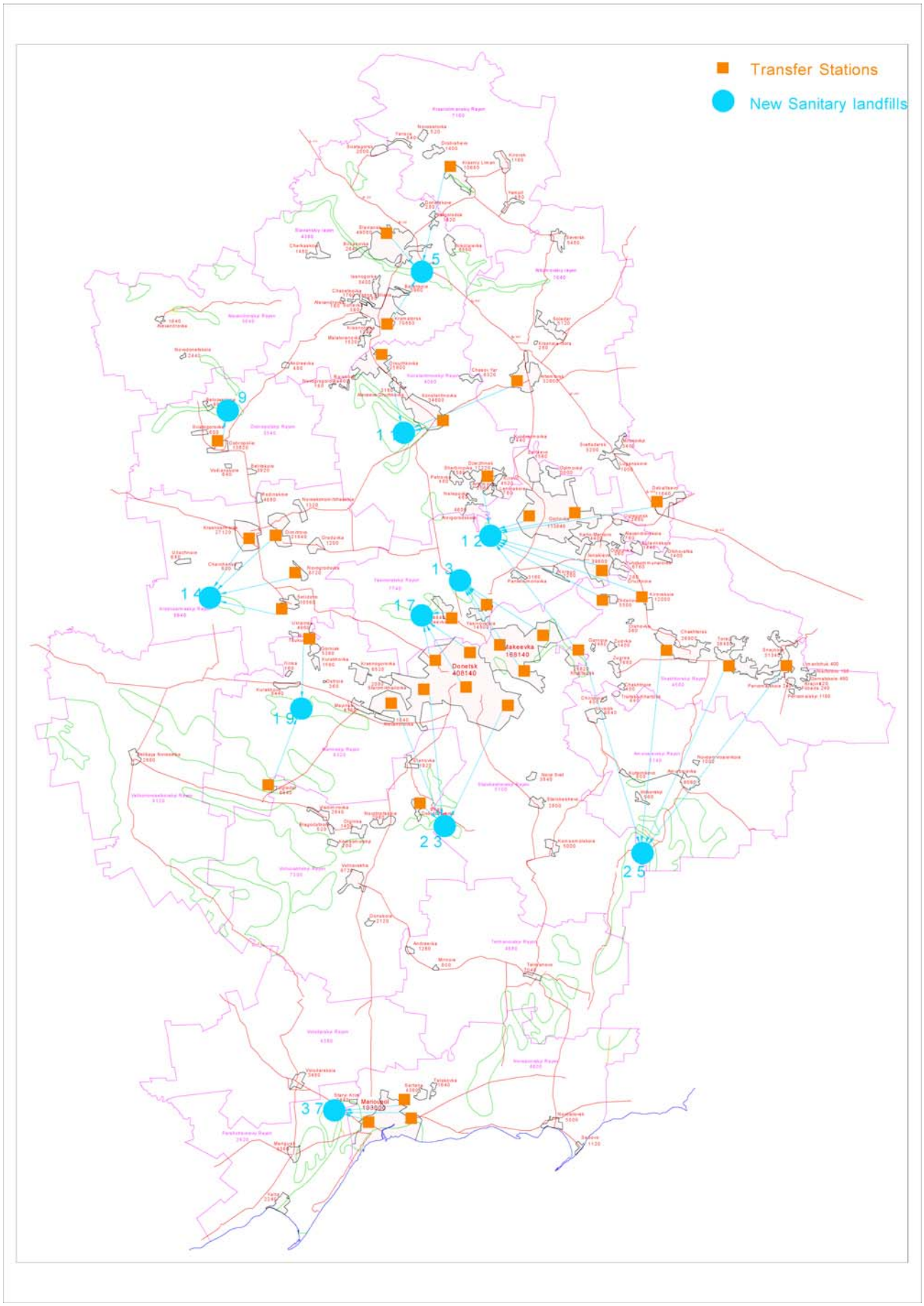
Year[1]		Landfills		Transfer Stations
2007	5	Site Tcherevkovka (Slavianskiy Rayon)	1	Kramatorsk
			2	Krasniy Liman
			3	Slaviansk
2007	13	Site Kamenka (Yasinovatskiy Rayon)	16	Makeyevka 1
			17	Makeyevka 2
			18	Makeyevka 3
			19	Yasinovataya
2007	17	Site Severnoe (Yasinovatskiy Rayon)	24	Avdeyevka
			25	Donetsk 1
			26	Donetsk 2
			27	Donetsk 3
2008	23	Site Dokuchaevsk (Starobeshevskiy Rayon)	30	Dokuchaevsk
			31	Donetsk 4
			32	Donetsk 5
			33	Donetsk 6
2008	37	Site Priazovskoie (Pershotravneviy Rayon)	38	Marioupol 1
			39	Marioupol 2
			40	Marioupol 3
2009	11	Site Artema (Konstantinovskiy Rayon)	5	Artemovsk
			6	Druzhkovka
			7	Konstantinovka
2009	14	Site Novoelizabetovka (Krasnoarmeyskiy Rayon)	20	Dimitrovo
			21	Krasnoarmeysk
			22	Novogrodovka
			23	Selidovo
2010	9	Site Belozerskoie (Dobropolskiy Rayon)	4	Dobropolye

[1] Year of construction

2010	12	Site Troïtskoe (Yasinovatskiy Rayon)	8	Debaltsevo
			9	Dzerdzhinsk
			10	Yenakievo
			11	Gorlovka 1
			12	Gorlovka 2
			13	Khartsizsk
			14	Kirovskoye
			15	Zhdanovka
2011	19	Site Dolneie (Maryinskiy Rayon)	28	Selidovo
			29	Ugledar
2011	25	Site Kumanovo (Amvrosievskiy Rayon)	34	Khartsizsk
			35	Shahtersk
			36	Snezhnoye
			37	Torez

Table 1 Programme of construction of landfills and transfer stations

This programme is illustrated on Map 1.



Map 1 Sanitary landfills and transfer stations

1.7. Economy

1.7.1. Available finances

The State Budget allocated 30 mln UAH for the investment in the waste disposal of the Donetsk Oblast for 2006. On October, the State Budget allocated an additional amount of 8 mln UAH.

The State Budget for 2007 is under preparation. Usually, it's finalised on February.

1.7.2. Investment costs of the landfills

1.7.2.1. Consultancy and expertise

Usually IFIs ask for guarantees of good end, meaning that the project should be:

- Secure for environment protection;
- Finished on time;
- Within the limits of the budget.

A good way to get these guarantees is for IFIs to pass directly contracts of consultancy an expertise with independent consulting and engineering companies for specific tasks of the project. The more often IFIs pay directly these tasks and include the amount in the loans. Usually for landfills these tasks are:

- Siting of landfills respecting Western regulations and the relevant studies;
- Design and engineering studies, including assessment of impact on health and environment, construction studies, applying Western regulations and norms;
- Works mastering and leadership of all the construction works;
- Cost control of the construction;
- Quality Assurance Plans and generally all the controls of construction.

In parallel, technical assistance agreements often include transfer of technology and training.

But the investment is mainly made of civil works that will be done by local companies because it's should not be cost efficient to move all the equipments and workers of foreign companies. Ukraine has its own regulation about rules of construction. So there must be a partnership with local technical offices that know the local regulation and the local know-how of the civil works companies.

At least, local laboratories are not equipped for some analyses and tests required by Western regulations and norms. In such cases the samples should be sent to Western laboratories.

1.7.2.2. Civil surveys

In a sanitary landfill the landfilling rows are built. Each row is designed as a basin because the purpose is to insulate the leachates of the environment. It means that the bottom surface of each row must be directly the geological barrier of clay. It's also preferable if the flanks of the row can be cut in the layer of clay. If not, they must be built with the local clay. It's also greatly desirable that for all the landfill, all flows are gravitational.

Practically, the topsoil and the different geological layers must be cut, moved and stored by nature. They will be reused for the construction of flanks and the final cover of the landfill.

Usually one digs:

- The rows
- The basins for leachates collection and treatment
- The ditches for rainwater management
- The ditches for pipes networks (leachates, biogas, electricity, fire water, drinkable water, waste water, etc.)
- The basement of roads and lanes

- The basement of constructions

Usually one builds:

- The dykes around the rows
- The dykes for smoothing the slopes of roads and lanes
- The dykes hiding the view on the site
- The final cover of the rows.

It's necessary to build roads (sometimes access road from the main road) that must be frost resistant and parking. The key parts of the landfill as the leachates treatment station and the biogas pumping station must be easily accessed by trucks.

Each row is operated with successive layers (5 or 6 meters) and there must be an access lane for the trucks that dispose the waste. This lane is made of stones. An other lane (dirt track) is used by the compactors between the rows and the maintenance workshop.

The landfill must be completely enclosed with a fence ≥ 2 m high (or natural obstacles as deep ditches full of water). A path or a lane allows the inspection of the fence.

1.7.2.3. Constructions

The landfill is a facility including:

- Gate and control room
- Weighbridge and weighting room (may be common with control room) and equipped with a radioactivity detection portal
- Wheels washer equipment (for the trucks leaving the landfill)
- Office
- Maintenance workshop
- Laboratory (for control analyses)
- Biogas pumping station
- Biogas electricity power station
- Leachates treatment station
- Hazardous waste storage
- Fuel tank and distribution pumps for the machines and trucks
- Meteorological station

1.7.2.4. Mobile equipments

The landfill uses:

- Two or more specialized waste compactors (depending the daily flow of waste)
- One (minimum) all-purpose handling machine
- Light trucks for the cleaning around the landfill

Depending the landfill, it must be searched what's the cheapest for the construction. All along the lifetime of the landfill it will be necessary to build new rows and lanes and to close full rows. It may be done by subcontractors companies or done by the landfill itself. In this last case the landfill must own its own machines and trucks.

1.7.2.5. Summary of the investment

The total investment is assessed in Annex. The following table summarizes the total investment.

1.7.3. Capacity of the landfills

It is considered the capacity is unlimited. The life length should be at least 25 years, so the minimal capacity is 25 years of production of waste. For the biggest ones it's something like 8 mln tonnes. The thickness can be 50 m and this volume corresponds to 25 ha of rows. But a large part of the investment is fixed whatever is the tonnage yearly disposed. It's difficult to find a good site. It's easier to well manage a big landfill than a lot of small ones. All these arguments pledge for big sites (50 ha or more) that can be used for a long time.

In the model, we use standard rows of 2 ha with a thickness of 30 m waste, so an average capacity of 600,000 tonnes.

1.7.4. Operation costs of the landfills

Classically, the operation costs are sorted by:

- Supplies
- Subcontracted works
- Maintenance
- Wages
- Amortizations and provisions
- Interests and finance charges
- Taxes

1.7.5. Transportation costs to the landfills

There are 3 schemes of transportation to the landfills:

- Big transfer stations: the transport is done with specialised semi-trailers (capacity 90 m^3 – 22 t, moving floor);
- Small transfer stations: the transport is done with a carriage truck + trailer equipped with a handling arm and carrying 2 30 m^3 tippers;
- Very close to the landfills: the collection trucks go directly to the landfill.

1.7.6. Potential of biogas production of the landfills

1.7.6.1. Model

We use the predication model developed by the company Hofstetter. This Swiss company is specialized for >30 years in landfill biogas collection, incineration and conversion to electricity. We have tested this model on several landfills with a follow-up on several years and the real biogas streams were conform to the predication at <2% gap.

The model is defined for the following parameters:

1.7.6.1.1. Objective

The model has been developed for the sizing of biogas networks, pumps, flares and power stations.

1.7.6.1.2. Waste composition

The model is applicable to household waste containing around 40% organic matter and 15% cellulosic matter (paper, cardboard, wood).

1.7.6.1.3. State of the waste

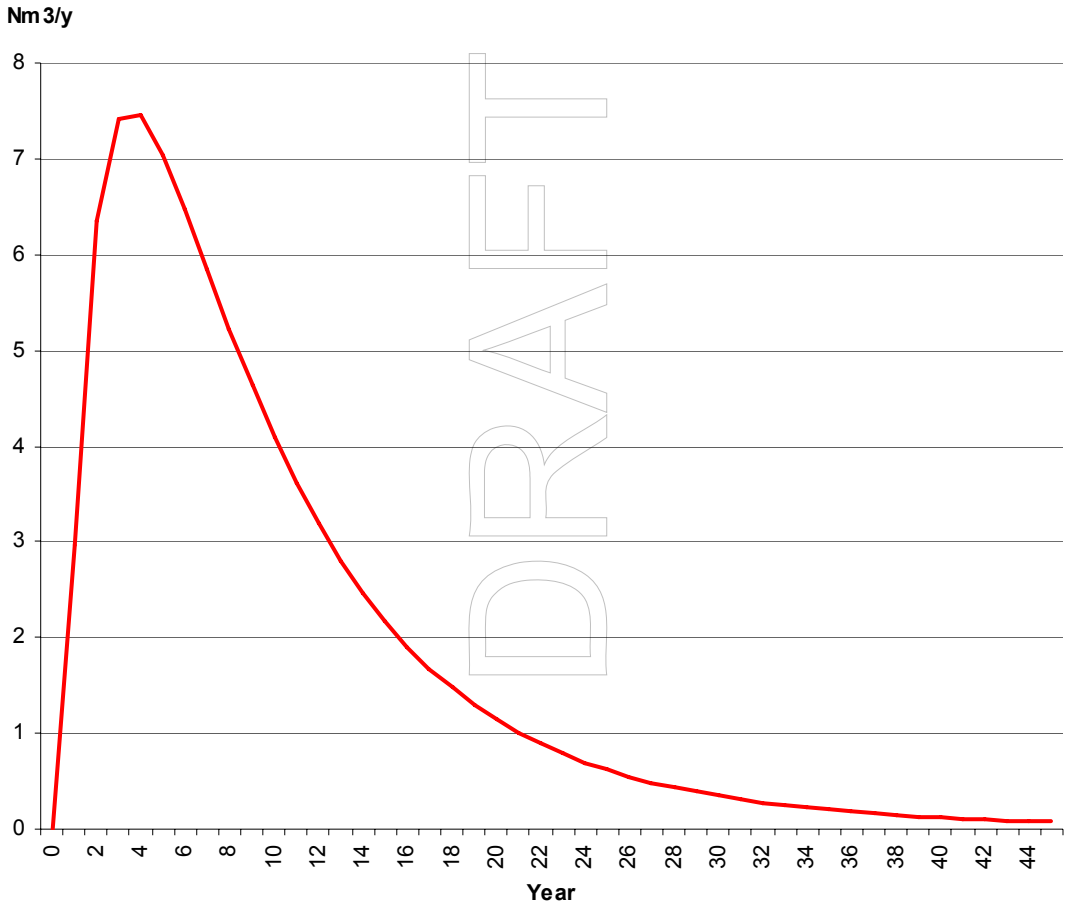
The waste are disposed fresh and are not burnt on the landfill.

1.7.6.1.4. Landfill operation

The waste are densely compacted. The rows are airtight. The biogas is aspired by a pumping system. Each well is equipped with a gas well head enabling precise monitoring and flow regulation. The rows are rainproof and the leachates produced by the biodegradation are drained and collected. There's no introduction of additional water in the mass of waste as re-aspersion with leachates.

NOTE: with airtight and rainproof rows, the biogas production is not sensitive to the weather (frost or rain).

In such conditions, the biodegradation of one tonne of waste spreads on 50 years. The model is a table of yearly volume of methane produced by 1 tonne of waste all along 50 years.

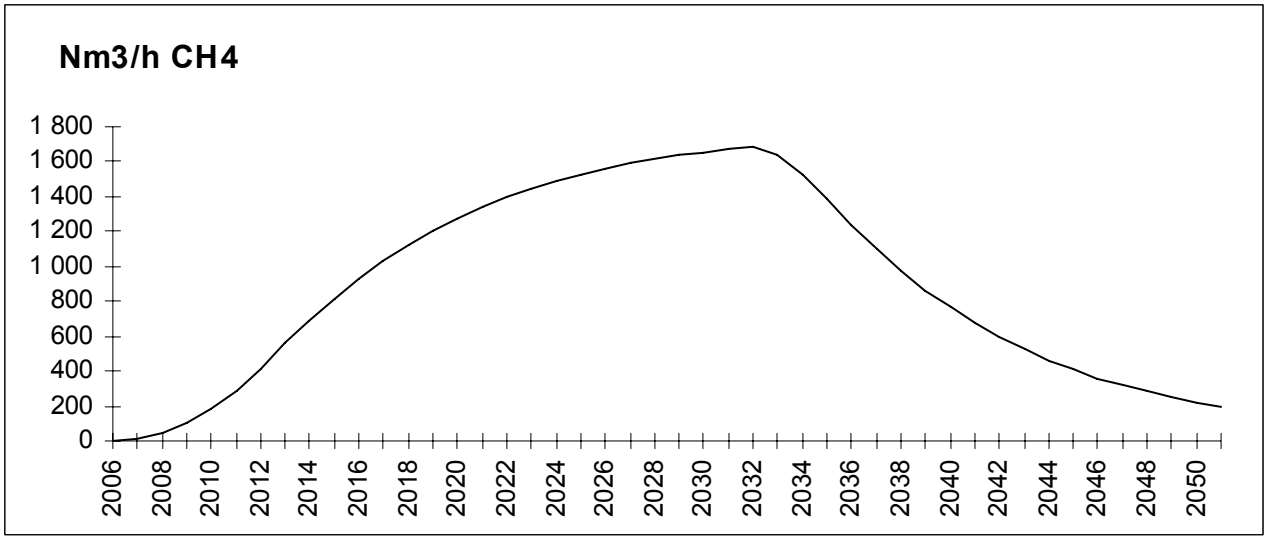


Graph 1 Collected CH_4 from 1 tonne SHW

Year	m^3/y
0	0.000000
1	2.970000
2	6.356000
3	7.422000
4	7.451000
5	7.046000
6	6.468000
7	5.841000
8	5.222000
9	4.639000
10	4.104000
11	3.621000
12	3.189000
13	2.806000
14	2.467000
15	2.169000
16	1.907000
17	1.677000
18	1.476000
19	1.299000
20	1.145000
21	1.010000
22	0.892000
23	0.788000
24	0.698000
25	0.618000
26	0.549000
27	0.487000
28	0.434000
29	0.387000
30	0.345000
31	0.308000
32	0.276000
33	0.248000
34	0.222000
35	0.200000
36	0.180000
37	0.163000
38	0.147000
39	0.133000
40	0.121000
41	0.109000
42	0.100000
43	0.091000
44	0.083000
45	0.075000

Table 2 Collected CH_4 from 1 tonne SHW

For a particular landfill the calculation of the stream of biogas is made by taking the tonnage of each year and applying the coefficient all along the oldness of the waste.



Graph 2 Collected CH_4 of a landfill

Year	CH_4 m^3/h	Disposed SHW Tonnes/year
2006	0	30,000
2007	10	60,000
2008	42	90,000
2009	99	120,000
2010	182	150,000
2011	289	180,000
2012	418	180,000
2013	557	180,000
2014	693	180,000
2015	818	180,000
2016	932	180,000
2017	1,035	180,000
2018	1,126	180,000
2019	1,207	180,000
2020	1,278	180,000
2021	1,341	180,000
2022	1,396	180,000
2023	1,445	180,000
2024	1,488	180,000
2025	1,525	180,000
2026	1,558	180,000
2027	1,588	180,000
2028	1,613	180,000
2029	1,636	180,000
2030	1,656	180,000
2031	1,673	180,000
2032	1,689	
2033	1,642	
2034	1,523	
2035	1,382	
2036	1,238	
2037	1,102	
2038	977	
2039	864	

2040	763	
2041	673	
2042	593	
2043	523	
2044	462	
2045	408	
2046	360	
2047	319	
2048	282	
2049	250	
2050	222	
2051	197	

Table 3 Collected CH_4 of a landfill

1.8. Conclusion

The definitive location of the 11 sites is not achieved. The question of the land use is always hanging. But: the principle of building 11 new sanitary landfills and closing all existing municipal landfills became a consensus; a very good first site has been decided in Kramatorsk.

Kramatorsk is a very good project:

- Geology and hydrogeology are very good;
- The site is bordered by the main road of the Oblast;
- The project includes the remediation of the existing landfill and it will be a real progress for the neighbours;
- The project is in synergy with the already implemented sorting facility of Kramatorsk and the selective collection in Kramatorsk and Druzhkovka;
- The Oblast Administration asks for taking into account European standards in aim to make a demonstration facility.

For the model of business plan, the definitive location is not a key-point for the moment. We have established all the figures of the costs. What can ever change are the distances between the cities and the regional landfills but, all in all, it should not modify a lot the final costs.

2. Leasing company

2.1. Question

What is the feasibility of the leasing as a way to manage the investments for the waste collection?

2.2. Problem analysis

2.2.1. Renewal and extension of the collection means

As it was said in the comments of the initial pre-feasibility study, purchasing of trucks, trailers and containers only without linking such an investment to improved waste disposal facilities is senseless, as this would lead to "business-as-usual" dumping. It should however be noted in this context that issues concerning mobile equipment could be linked with the set-up of for regional landfills, either in the framework of the “DRCWT” dealing with the area serviced with a new landfill, either in case of creation of an union of cities. This could be presented as a general modernisation of the waste management in the concerned area.

The issue of leasing waste collection equipment for municipalities unable to finance through their budgets the purchase of waste trucks and containers deserves to be discussed. Funds needed to purchase trucks in a given town come out too small to attract individual finance from an IFI. The procurement of mobile equipment, whatever the kind of contractual framework (leasing or direct purchase) selected, is generally not favoured by IFIs, independently of a reasonable waste management plan.

In the framework of the Donetsk 1 study it was suggested the leasing solution as a way to solve the question of the investment in new trucks. This subject is too vast to be dealt with in the framework of this short review of institutional solutions. Several projects of technical assistance are presently under completion to solve this issue. The IFC branch of the World Bank has recently launched a Ukraine Leasing Development Project. US AID support too a study o this topic. Major Ukrainian and foreign banks working in Ukraine are interested in this topic. Nevertheless the present situation in Ukraine in this field is far from being in favour of this solution Obstacles and bottlenecks are today preventing any move in this field.

2.2.2. Maintenance of the vehicles

The on going practice for the maintenance is inherited of the endemic penury situation in former USSR. Municipal companies use to repair everything by themselves and, at last resort, to cannibalise the vehicles.

The service of leasing is mainly the put at disposal of a good for a rent. The service may include maintenance and repairs. In such a case, the contract should dispose how is organised the maintenance, and its cost, and how is organised the continuity of the service in case of break down of the equipments.

2.3. Context

2.3.1. WB project and Ukraine's policy

IFC round table discussion, Kiev 6 June 2006 (Biblio 4)

1. During 2004-2005 the number of leasing companies increased by 47%. This increase was due to several factors: a growing demand for leasing (mainly in the sphere of car leasing), increasing awareness of leasing, and an increasing participation of foreign vendors and investors in the Ukrainian leasing market;

2. The total value of the leasing portfolio increased by 62.3% - from USD 201 Million on January 1, 2005 to USD 339 Million on January 1, 2006;

3. The largest portion of the leasing portfolio (about 29%) consists of aircrafts (USD 100 Million), due to the high cost of these assets. Cars (28.3%) rank second (USD 98 Million). 21% of the whole leasing portfolio is represented by trucks (USD 73.5 Million). Most leasing companies in Ukraine are currently involved in car leasing activities;

4. The results of the survey have proven that the access for sources of financing is still the major obstacle for leasing companies in Ukraine. During 2005 the leasing companies financed their lease agreements mainly by using bank credits: resident banks (74.3%) and non-resident banks (10.3%);

5. Most lease agreements have a term of 2-3 years (66.7%), followed by those with a term of 1-2 years (20%). Only 2.2% of the lease agreements have a term of 5 years or longer.

Unfortunately legal changes, which were implemented during 2005, are not favouring to the development of a stable legislative and tax environment for leasing in Ukraine. As experience in other countries proves, government officials, business and non-government organizations should continue their dialogue to develop financial mechanisms to attract investments. We believe this is crucial for the development of the Ukrainian economy and in particular for the leasing market in Ukraine.

2.3.2. Finances management of municipalities and rayons

The municipalities cannot borrow credits from foreign financing institutions. The Ukrainian banks conditions are not favourable for municipalities. Moreover, most of them have not real experience and skills in finances management. Their only way to invest is to expect State subventions.

2.4. Organisation of a leasing company

The procurement of mobile equipment, whatever the kind of contractual framework (leasing or direct purchase) selected, is generally not favoured by IFIs, independently of a reasonable waste management plan. Moreover the present situation in Ukraine in this field is far from being in favour of this. Several issues have not found a solution:

- VAT issue: monthly payments are not exempted of VAT, so municipal waste companies which are usually of small size and do not recover VAT, pay it twice;
- Recovering in case of non-payment: leasing companies have very low prospects of recovering the equipment in case of non-payment, due to low efficiency of enforcement of tribunal decision;
- Absence of a fluid market for waste trucks: the market for second-hand waste trucks is not developed due to limited volume, so anticipations of re-sales at a fair value.

2.5. Conclusion

Leasing is a very good solution for a quick renovation of the waste collection tools. But the situation is not yet mature. IFIs can join their efforts to the WB project in aim to get the necessary reforms. Then, a sound ground may allow to create a leasing municipal fund.

3. Carbon Credits

3.1. Question

Ukraine is relevant to the procedure of JIP (Joint Implementation Projects). The collection and incineration of LFG (Landfill gas) is a topic for JIP. The Regional Sanitary Landfills Programme is eligible to JIP.

A lot of actors are interested by JIP in Ukraine: Carbon Funds, Carbon Buyers, brokers, and so. Everyone considers it's a gold mine. But the procedure is long and hard. Before any negotiation, it's necessary to clarify the game rules.

What is feasible in Ukraine?

Who are the interesting actors?

What are their particular conditions?

3.2. Ukraine's situation and programme about implementation of Kyoto Protocol and JI projects

On 14th October 2006, M Svatoslav Sergeievitch KURULENKO, Prime Vice-Minister of Ecology and Natural Resources, declared us that the implementation of Kyoto Protocol suffered delays during the last period but now the process is fully sustained by the former government and the new one was making up for lost time.

All requirements are fulfilled as:

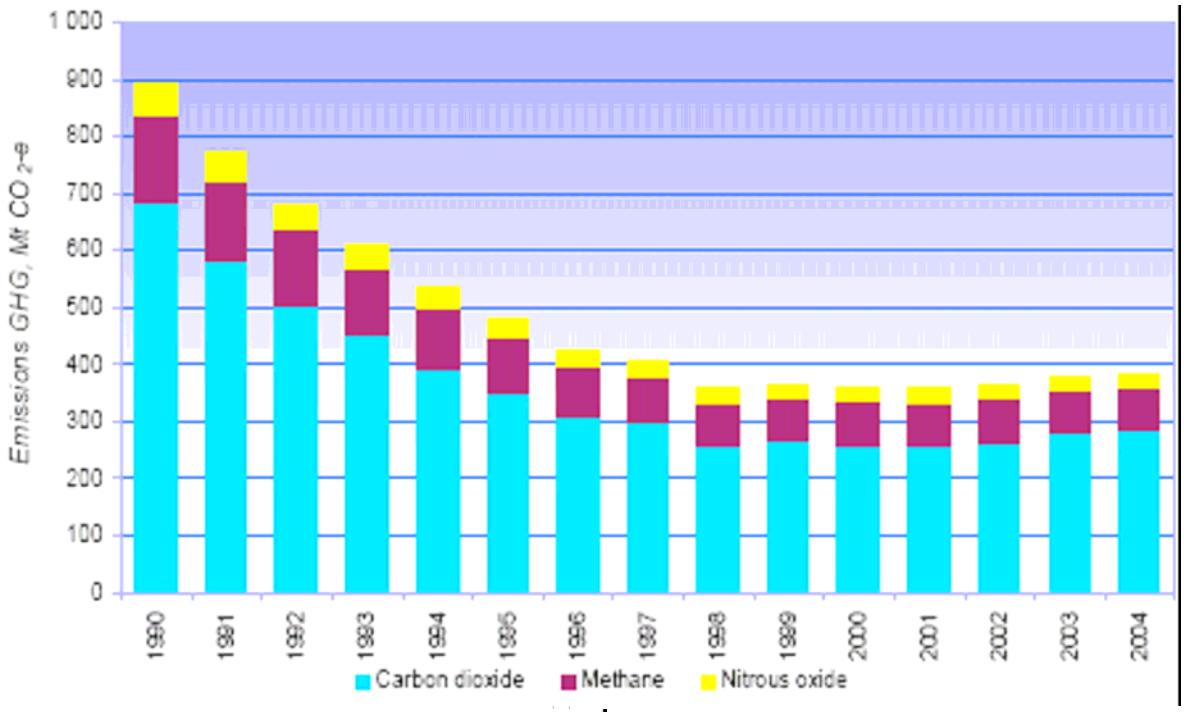
- Ratification of the Kyoto Protocol.
- Calculation of assigned amount, as referred to in Articles 3.7 and 3.8 and Annex B of the Protocol in terms of tonnes of CO_2-equivalent emissions.
- Implementation of the national system for estimating emissions and removals of greenhouse gases within their territory.
- For the National Registry (recording and tracking the creation and movement of ERUs, CERs, AAUs and RMUs and annual reporting to the secretariat) it's on going and should be done for the end of the year.
- About the Monitoring (systematic examination of greenhouse gas emissions information, using audit-based skills by an independent third party), it's not yet completely organised but it should be in November.

So all the legal base for JI projects is done and the projects get the necessary support. The Ministry, as National Authority, has already delivered 30 letters of Approval of Projects and 5 more are under preparation.

3.2.1. JI opportunities in Ukraine

JI is of high interest to Ukraine. Ukraine is an Annex 1 party but does not belong to the EU. Thus JI is the only flexible project based mechanism which can be implemented in Ukraine: CDM is not applicable (project must be hosted in non Annex 1 party). EU ETS is not relevant with Ukrainian market.

Results from GHG inventory showed that in 2004 the emissions made up 45% of the 1990 level. Basic forecasts indicate that in 2012 emissions will not exceed 1990 levels. **Consequently, Ukraine may not need to undertake any specific measures to fulfil its commitments to the Kyoto Protocol**. However, Ukraine offers many cost effective ways to mitigate emissions, particularly in industrial sectors. These sectors have a large potential for modernization and efficiency improvements. The potential for JI projects is due to energy intensive economy, obsolete equipment and limited financing availability.



Greenhouse gas emissions in Ukraine, 1990-2004, mtCO$_2$-e. | *Report on demonstrable progress under the Kyoto Protocol*

Ukraine has one of the most energy-intensive economies in the industrialised world. Energy consumption has dropped since the country's independence. The dependence on energy importation leads to an energy policy driven by a strong desire to improve domestic energy security. Key priority areas for action are connected to energy efficiency, cost-reflective pricing... Efficiency is the best opportunity to improve energy security and is vital for the country's growth and development.

So there are possibilities to find significant amount of medium and large-scale JI projects and thus reduce transaction cost. Investor usually see Ukraine as a country with where approval for JI project could be fast, as all validation procedures are developed and are to be confirmed soon. At the same time, it is necessary to ensure that transfer of a part of the national assigned amount does not contradict the needs of the economic growth.

Ukraine will not become a member of the EU anytime soon that otherwise could reduce the additionality of a large number of potential JI projects.

3.2.2. State of the eligibility inputs

The use of the Kyoto Protocol mechanisms is subject to eligibility criteria. The Kyoto Protocol is based on the idea that GHG emissions in developed countries must be reduced immediately and as quickly as possible, and on the principle that countries have an equitable share in achieving this objective.

Annex 1 countries must meet certain criteria before they are allowed to use the flexible mechanisms:

- They must have established a national accounting system for emissions;
- They must comply with the standardised accounting methods prescribed by the IPCC;
- They must draw up and send an annual emissions inventory to the UNFCCC Secretariat;
- Finally, they must determine the quantity, in terms of their annual GHG emissions in tonnes, to be assigned to them for the 2008-2012 commitment period.

Subsequently, a country that fails to meet its quantified objectives will be penalised by the Compliance Committee set up by the Marrakech Agreements. Penalties involve making restitution for the shortfall in CO_2 reductions over a given commitment period, measured in tonnes and multiplied by a coefficient acting as a decisive deterrent.

Ukraine signed the Climate Change Convention on 11 June 1992 and is Party of UNFCCC since its ratification on 13 May 1997. Ukraine ratified Kyoto Protocol by on 12 April 2004 (source: http://unfccc.int/).

After the Protocol's coming in force in February 2005 Ukraine is a Party to it, must fulfil relevant commitments and has an opportunity to participate in the flexibility mechanisms envisioned by the Articles 6, 12 and 17. The establishment of regulatory, institutional and procedural basis is necessary to manage the implementation of the Kyoto flexibility mechanisms. The National Plan of Measures on Fulfilment of Provisions of Kyoto Protocol achieved of the following main results:

3.2.2.1. National inventory system

Ukraine regularly prepares and submits within required timeframes annual national inventories of GHG emissions and removals. The Ministry of Environmental Protection is in charge of the preparation and submission of theses inventories. Besides, the issues of the national inventory system operation are also addressed of the Cabinet of Ministers establishing the rules for coordination of measures to implement Ukraine's commitments under the UNFCCC and Kyoto Protocol.

The National Action Plan of the Implementation of Kyoto Protocol was approved by Government on18 August 2005. Identification of priority sectors for implementation of measures is possible, thanks to the analysis of key emission sources, sinks and trends.

3.2.2.2. National registry

Ukraine is going to put into operation the national GHG registry.

The informatics tools are under test. Centre on Climate Change under the Ministry of Environmental Protection has been appointed as registry administrator. The Process would be complete and the registry will be in operation before the end of 2006.

3.2.2.3. Joint implementation mechanism

Participation in the JI mechanism is additional to emission mitigation efforts taken by Ukraine on its own. Due to the quantity of projects expected, JI mechanism under track 2 may not be adequate. So the strategic priority for Ukraine is to fulfil, as soon as possible, conditions for participation in the Track 1 mechanism.

- Main national procedures regulating activity on JI projects in Ukraine have been developed and adopted:
- Order of 17 July 2006 No. 341, related to the application for the letter of endorsement;
- Order of 17 July 2006 No. 342, related to the application for the letter of approval;
- Order of 1 June 2006 No. 273, methodological guidelines concerning development and submitting of JI projects.

Up to October 2006, Ministry of Environmental Protection has issued 43 letters of endorsement and 4 letters of approval for JI projects. Inter-government memoranda of understanding are already signed with Canada, Denmark, Netherlands and the World Bank, and are being prepared for signing with France, Austria, Italy and Portugal.

3.2.2.4. Emissions trading

A domestic emission trading system does not exist in Ukraine and the development of such system is not considered as a priority or an economic necessity. Implementation of an Ukrainian ETS is not excluded, as it could benefits to energy efficiency policy and increase economic return from participation in the JI mechanism.

3.2.2.5. Institutional issues

The Ministry of Environmental Protection coordinates the development and the implementation of the Climate Change Policy in Ukraine, including the implementation of UNFCCC and Kyoto Protocol decisions (Decree of the President of Ukraine on 12 September 2005 N° 1239). The Ministry of Environmental Protection is the DNA of Ukraine.

Other Institutions are involved: Ministry of the Industry Policy developed Guidelines for calculation GHG emission amount by the entity of mining and steal industry, Ministry of Municipal Building developed

Guidelines for calculation dangerous pollution from energy and heating supplying installations of municipal services...

Ukraine almost achieved all requirements for JI track 1 procedure. It is expected that track 1 would be the usual framework for JI project from beginning of 2007.

3.3. Opportunities opened by the new landfills program: LFG collection

Recovery of landfill gas (LFG), mostly a mixture of methane (CH_4) and CO_2, is an effective way to reduce the emissions released by a landfill.

The main GHG from landfills is methane. Following the International Panel on Climate Change (IPCC) approach in their Inventory Guidelines, the methane originates from organic material that can be classified as biomass. The CO_2 emissions resulting from the burning of this methane therefore do not have to be accounted for in the national GHG Emission Inventory of the host country, but have to be reported only.

Landfill gas collection and valorisation is highly efficient in terms of emission reduction, due to the methane high global warming potential

The baseline study starts with a description of general project characteristics. Several factors play a role such as the history of the landfill, surface, depth, age composition of the waste materials, the layer structure of the landfill etc. The amount of methane emitted from the landfill without the project and without alternative projects has to be determined site-by-site, year-by-year by using estimation formulas. A simple first model decay model can be used for the estimation of methane to be emitted through time.

In Ukraine, like in many countries, landfills offer a sustainable way of diminishing harmful emissions to the atmosphere. By installing landfill gas collection systems and either a flare or an energy recovery system, methane emissions can be reduced substantially. In particular, landfills in developing countries or with economies in transition provide many opportunities for possible CDM/JI projects as harmful landfill emissions are increasing in these countries for reasons such as population growth, rapid urban growth, absence of clear environmental standards or the organic content of the waste. However, not every country offers suitable circumstances for CDM landfill gas projects, a frequent problem being the quality of Municipal Solid Waste (MSW) management.

The following key factors are usually requested to be analysed, as to determine if the LFG project will acceptable in regard of flexibility mechanisms conditions of eligibility:

- **legislative development**. In the case of the *"Donetsk Oblast Regional Landfills Programme"* , landfill gas collection is not a legal point. Analysis of the most recent regulation, Norm DBN B.2.4-2-2005, shown that DBN quotes some parameters of the biogas production and proposes a model of calculation of expected quantities. DBN is a norm and not a regulation, though administrations would refer to the norm to permit landfill project. Reasonably, the Donetsk Project should be considered by Ukraine as a pilot project (see TACIS BSIF Complementary Study for EIB: *Comments on Ukrainian Norm DBN B.2.4-2-2005 and EU Directive 9931, October 2006).* This norm says that it is *advisable* to preview a system for utilization of biogas. This not clearly implies that biogas extraction is obligatory: the norm tends to induce project designer to prepare gas collection network, but does not give any objectives to be reached. **Current Ukrainian legislation does not require mandatory degassing of the landfills**. Moreover, there is no known project in Ukraine in which LFG extraction is taken into account from the design studies. Ukraine is not member of EU, neither it foresees to join in the near future. It does not have to comply with any existing or foreseeable EU legislation.
- **rate of return**. Cost of LFG collection network is high. Standard landfill would not imply electricity production from LFG collection. Due to the low power sales tariffs, electricity sales revenues will be low compared to the investment needed for power production. The flaring of LFG would be an option (and more than likely the preferred one for small landfills). In general, it is assumed that LFG utilization is not financially viable under Ukrainian conditions without JI mechanism. With LFG capture projects, ERU sales plus power sales allow reaching financial feasibility of LFG–to-electricity projects in Ukraine, with IRRs of 14-20% and payback periods around 4 years. Nonetheless, sales of electricity from landfill gas would not make an investment extremely profitable by itself, thus LFG utilization cannot be assumed as baseline scenario. In Donetsk project, this IRR would be even better. Then it is obvious that the LFG capture and utilization would comply with additionality criteria.
- **available local technology**. Bad technical conditions and a lack of reliable technical data at landfills restrict possibilities of developing such technologies and competence in Ukraine. The state of art in landfill designing is lower than it is EU or OECD, knowing that other priorities appeared since 1990's

economical crisis, and priority was not to catch up of the technical progress of the Western sphere. Even very new regulation (*Ukrainian Norm DBN B.2.4-2-2005),* if insisting on the landfill gas capture system designing, it do not seem to focus on the most appropriate points. DBN describes only one way to implement the biogas collection, and by this overshadow sites context and local specificities. Skills and accurate knowledge do not seem to be available in the country, and no landfill had been designed on EU standards, which can be considered as Best Available Techniques.

- **social effects and local support**. The implementation of these landfill gas projects is in full accord with the policy on sustainable development and Renewable Energy of the government of Ukraine. The project will enable the development of new activities and the transfer of technologies (landfill designing, LFG collection network designing and operating…). This is likely to contribute to the creation of new job and high value activities. Development of renewable and local energy sources contribute to local development and reduce the country energy dependence. It reduces the oil and gas transportation as well as coal mining, which are a source of pollution and environmental risk. The project is designed in accordance with the Region Government and following the Regional Strategy recently approved. The Project had strong support from local authorities.

3.4. Panel of Carbon Funds targeting Ukraine and landfills biogas

3.4.1. Inventory of Carbon Funds

See Annex 1.

3.4.2. Analysis of the Carbon Funds' programs

Based on the result of the survey, 5 carbon fund or buyers can be highlighted:

- 1 public carbon buyer : **Senter Novem** (The Netherlands);
- 1 public private partnership carbon buyer: the **Testing Ground Facility** (TGF) funded by the Baltic Sea Region Countries organisation;
- 2 private funds : European Carbon Fund (ECF) and Asia Carbon Fund (ACF);
- 1 industrial private buyer : **EDF Trading** (EDFT).

All of them had shown great interest in the program.

Size of projects targeted

Senter Novem is seeking project even if small ERUs are provided (from 20,000 ERUs p.a.). Other funds seeks greater project to big scale ones (up to 1,000,000 ERUs p.a. or 5,000,000 in the commitment period for the European Carbon fund). In all cases, the project, with annual average revenue of 163,600 ERUs and 818,000 ERUs during the commitment period, is in line with the funds targets.

None of them has requirements with the total cost of the project, while it is conform to local regulation.

Timescale limits

For all funds, it is obviously better if the project will operate in 2008 and gives ERUs in the first year of the commitment period. What seems to be more important is that the project creates a sufficient amount of ERUs during the commitment period. Only the Asian Carbon Fund requires that the first landfill start operation early 2008, and delivers ERUs early 2009. This does not seem to be possible, but such statement is probably negotiable. No one considers that a yearly variable amount of ERU is an obstacle. Once again, global amount in the commitment period is the key point.

Finance

There is no requirement about a connection between the total investment cost and the ERUs income. One of the key points is stated by Ukrainian regulation, as it is asked *the amount of outgoings which must be received for the transferring of ERU to the external buyer, must not be less than 10% of the total cost of the project*.

There are great differences between carbon buyers when it is a matter of URE trading scheme.

European Carbon Fund and EDFT both work with fixed or variable price, and are likely to discuss any method to establish the price variability. This could enable interesting scheme, as ERU price indexed to the market or some bonus price if the landfills generate more ERU than previously planed. The Asian Carbon fund preferably trade ERUs on the Asian Carbon Exchange, which obviously lead to variable price (though fixed price can be arranged). Senter Novem (the Dutch governmental agency) preferably works on a classical fixed price scheme and want the transaction rules as simple as possible. NEFCO claim for fixed price only.

All funds do not have the same vision on the uncertainty with post 2012 scheme. For Asian CF, TGF and ECF, extension of the contract after 2012 or clause on possible option for the second commitment are not likely to be an option. EDFT foresee such agreement on later stage. Senter Novem is much more open on such deal and stay open to discussion. This is important as the project would deliver much greater amount of ERU on the following commitment period. This could be a decisive point to negotiate better value of ERUs in first period based on great potential for the second commitment period.

EDFT is the only buyer unlikely to offer prepayment, though this must be negotiated. First of all, it must be determined if pre payment are needed or not. Prepayment might be a reason to diminish ERUs price (thought it would reduce loan interests). TGF and Senter Novem would offer prepayment up to 50 % of the project costs.

A guarantee (bank) is usually required and difficult to obtain for local authorities project in Ukraine. This is surprisingly not the case for most of the carbon buyers in this survey. If European Carbon Fund and NEFCO would probably ask for such financial guarantee, the 3 others would assess the company liability and financial structure.

Investment decision tools (as ROI, IRR,…) do not seem to be decisive, as no Fund applies threshold or refers to minimum economical efficiency. The only exception is the Asia Carbon Fund, which set a threshold for target equity IRR >15% (excluding ERUs). This means in fact that projects are assessed on a case by case basis and Carbon buyers do not have such strict rules.

Funding and project development:

Carbon funds offer various level of assistance in the preparation of JI documentation. EDFT would rather prefer doing the implementation of the documentation with its own resources. Asia Carbon, with its subsidiary “Asia Carbon Asset Development Facility” offer such service as well. This is not “free of charge” but fees and costs will generally be recovered from sale and delivery of Emission Reduction. Project owner do not have to make direct and advance payment for it.

TGF, Senter Novem and ECF generally do not offer such services. They primarily expect project owners to mobilize the resources needed for preparation of technical documentation (PDD) as well as facilitating the validation and registration process.

In individual cases support may be extended (TGF, Senter Novem), from their own or from other facilities. Senter Novem would contribute up to €37,500 for PDD and validation. Advance payment can also be a way for financing this step of the project. At minimum, Funds will provide help in the choice of the consultants.

In any case, it must be kept in mind that the choice of the consultants and development team and the quality of the work (PDD, technical studies,) are part of the risk analysis. The greater quality the work, the higher the price for ERUs…

The assessed Carbon Funds do generally not wish to have investments in the projects or act as banking partner. Securing project finance remains possible through the funds of Financial Institutions, as stated by Asia Carbon. Nevertheless, TGF offers very specific opportunities as the Nordic Environment Finance Corporation (NEFCO) can participate in a project through:

- Subscriptions of equity and shares in the operating company in charge of the project.
- Medium and long-term loans and guarantees.
- Grants from a special Nordic facility for concessional financing of selected environmental projects.

Once again, it must be determined if the project needs finance from the carbon fund or if the business plan can be achieved without, then this criterion may be very relevant or not.

Except TGF, Funds are not likely to intervene on the technical side of the project. Senter Novem, through high records in JI / CDM project, can have offer expertise and advise to optimise the project efficiency.

Additional conditions

Evaluation of the project (which is condition for pursuing negotiations and to determine the price of ERUs) lays on various criteria, such as Institutional, Technical, and Financial risk. Criteria would be close from one fund to another. TGF specifically insist on environmental feasibility. Additionality and potential of delivering of ERUs are pointed out by TGF and EDFT.

Only TGF and EDFT insist on the choice of the providers of the equipments, which is part of the risk analysis. This is directly linked to the quality of the project criterion.

TGF and Senter Novem particularly insist on the respect of the *Best Available Techniques* and international standards for the design of the project.

Carbon Buyer	Questionnaire sent	Answer	Follow up	Answer
Prototype Carbon Fund	31/10/2006		22/11/2006	
Italian Carbon Fund	31/10/2006		22/11/2006	
Netherlands CDM Facility	31/10/2006		22/11/2006	
Netherlands European Carbon Facility	31/10/2006	06/11/2006: Not interested yet - work with private sector	/	
Multilateral Carbon Credit Fund (MCCF)	31/10/2006		22/11/2006	30/11/2006: MCCF purchase credits from projects financed by EBRD only
Danish Carbon Fund	31/10/2006		22/11/2006	
Spanish Carbon Fund	31/10/2006		22/11/2006	
Umbrella Carbon Facility	31/10/2006		22/11/2006	
Japan Carbon Finance	31/10/2006		22/11/2006	
Austrian JI / CDM Programme	31/10/2006		22/11/2006	
Belgium Federal JI / CDM Tender	31/10/2006	07/11/2006: CER bought on tender only	/	
Danish Carbon Tender	31/10/2006	Not interested - work on other project in Donetsk area	/	
Finnish JI / CDM Pilot Program	31/10/2006		22/11/2006	
Flemish Government JI / CDM Tender	31/10/2006		22/11/2006	
Rabobank	31/10/2006		22/11/2006	
SICLIP (Sweden)	31/10/2006		22/11/2006	
KFW Carbon Fund	31/10/2006		22/11/2006	
Testing Ground Facility (NEFCO)	31/10/2006	02/11/2006: show interest in the project	/	
Canada's CDM & JI Office	31/10/2006		22/11/2006	
Greenhouse Gas Credit Aggregation Pool	31/10/2006		22/11/2006	06/12/2006: Ask for more info
European Carbon Fund	31/10/2006		22/11/2006	24/11/2006: show interest in the project
ICECAP	31/10/2006		22/11/2006	
Asia Carbon Fund	31/10/2006		22/11/2006	04/12/2006: show interest in the project
Senter Novem	31/10/2006	07/11/2006: show interest in the project	/	
EDF Trading	31/10/2006	17/11/2006: show interest in the project	/	
Endesa Climate Initiative	03/11/2006	09/11/2006: Ask for more info	22/11/2006	No answer yet

5 carbon funds or buyers filled and sent back the questionnaire, providing interesting data on their operating scheme : **Senter Novem** (The Netherlands), **Testing Ground Facility** (public - private partnership from the BAltic SEa REgion Countries), the **European Carbon Fund** and the **Asia Carbon Fund** (both private funds) and **EDF Trading** (an arm of an industrial private buyer, the French electricity utility EDF).

Other funds shown interest in buying URE from the Donetsk Landfill gas program, though they did not fill the questionnaire: the **Belgium Federal JI / CDM Tender** (buying carbon credit on a tender scheme), the **Multilateral Carbon Credit Fund** (ERBD fund), the **Endesa Climate Initiative**, (arm of a Spanish electricity utility Endesa) and the **Greenhouse Gas Credit Aggregation Pool** (managed by the emissions and renewable energy asset management firm Natsource Asset Management).

3.5. Institutional framework

3.5.1. Agreement of the National Authority on Donetsk Oblast Project

PIN must be completed with the result of the finance analysis and partners. Financial data must focus on the methane collection and utilization, though it should be shown in regard to global cost of the landfill building. Analysis must be detailed for the 5 landfills that will be part of the project “bundled” project.

A letter of Endorsement must be requested to the Minister of Environment as soon as possible with the completed PIN.

3.5.2. Project Idea Note

See Annex 2.

3.5.3. Project Design Document (draft or framework for PDD)

See Annex 3.

3.6. Economy and finances

3.6.1. Principles

The current carbon market is still new and building, and there is no transparent pricing mechanism for carbon credits. It is not clear at present that the price reflects the cost of making the emissions reductions. There has been some speculation and concern that the price of carbon Credits remains low because of over estimation in the National Allocation Plans.

There are different kinds of credits:

- **Assigned Amount Units- AAUs**: it is the expression of the amount of greenhouse gas that a country is allowed to emit. AAUs are issued by governments that have emission reduction commitments, and can be traded between countries pursuant to international emissions trading.
- **Certified Emission Reductions - CERs** are generated from CDM projects, and are verified by external accredited third party. CERs can be used for compliance with Kyoto Protocol obligations or to meet emissions caps under the European Union Emissions Trading Scheme.
- **Emission Reduction Units - ERUs** are generated from Joint Implementation, verified (by accredited third party or by host country agency) and issued by the host country.

CERs / ERUs are based on the expected performance of a project (the amount of emissions reduced). Their prices will be affected by the risks associated with the project. ERU is the unit that will be performed by Ukraine’s Kyoto projects. No ERU will be available in the market place until at least 2008, and **only if the host country Party meets the eligibility requirements for trading**.

Risks currently reflected the price at which ERUs are transacted, among which we can find:

- uncertainty around JI, through this is now very low as JISC and procedures are now implemented. The lack of certainty on the second commitment period still remains;

- the political, economical, security,… situation of the country where the project is located is part of the risk assessment and influence the price of the emissions reductions;
- for JI projects undergoing the Track 2 process, the risks will be similar to those for CDM projects (will the project meet the determination requirements), adding project rejection risks, then lowering the price of ERUs. Then, **implementing requirements for eligibility under track 1 process is a priority**, and will add value to the ERUs transaction;
- if the project is not registered, if a PDD has not been developed, if the project design does not reflect the state of art in its sector of activity and does not imply efficient and reliable technologies and designing knowledge, …, the risk level can be considered high (or very high). **Then it is important for Donetsk Landfill program to work under EU standard and with the help of western experts**;
- the degree of risk also depends on what is being contracted. If ERUs (i.e. verified units) are contracted, then risks are reduced since the project developer takes the institutional risks (procedure and verification costs). If emissions reductions "only" are contracted, then the purchaser takes on this risk. **The later in the process the Emission Reductions are sold, the higher the price might be (depending on market evolution).** Once Kyoto units are issued and available they are likely to command a higher market price as the risks associated with the projects become weaker.

For example, price category had been established by Point Carbon, based on risk sharing (Point Carbon, 2006):

Type of ERUs contract	Description	Estimated price range
Category 1	the seller will supply variable amount of ERUs, whereas the buyer undertakes to buy the credit even if not verified / verifiable	**CER: 5 - 7** **ERU: 5 - 6**
Category 2	the seller will supply variable amount of ERUs, whereas the buyer undertakes to buy the credit only if verified. Contract includes delivering and verifying clauses.	**CER: 6 - 13** **ERU: 6 - 9**
Category 3	the seller will supply a fixed amount of ERUs, whereas the buyer undertakes to buy the credit when verified. Contract includes delivering and verifying clauses.	**CER: 13 - 15** **ERU: 6 - 12**
Category 4	the seller will supply a fixed amount of ERUs, whereas the buyer guarantees the purchase of the credits delivered.	**CER: 15 - 19** **ERU: Not applicable**
Gold Standard	registered projects	**up to 15 Euros/CER**

3.6.2. Market

Anyhow, ERU prices are not expected to reach the prices associated with units under ETS. Current transactions related to JI entail assuming risks related to project viability and deliverability that do not exist when transacting EUAs. In the second half of 2006 EU companies bought carbon credits at around €20 – 30 per tonne of carbon dioxide, when CER / ERU have been sold for only €5-10. The EU Credits give an automatic right to emit carbon dioxide because they are emissions allowances. CERs / ERUs are subject to verification there are some risks for operating in those host countries and dealing with small companies or local governments. Moreover, there is no "stock exchange" for CERs / ERUs yet. CER's are bought and sold in private deals where prices are not revealed, so a fair price is difficult to arrive at.

The graph below shows daily bid-offers.

EUA prices.

Source: www.pointcarbon.com, *30 November 2006*

Carbon price (EUAs) reached his highest level during spring 2006. In late September, the European carbon market experienced a new jolt when the spot price of the EUA (European Emission Allowance) lost 25% of its value between September 19 and 26, falling to 12 euros, after a five months stable phase. Allowances allocations of some countries were overly generous requested and significantly greater than 2005 emissions. The oil price decrease in the same period.

Carbon prices still remain dependant on uncertainty on:

- EU ETS: there is uncertainty on the level of allocations for the 2008 – 2012 period as EU Commission rejected half of the allocation plans submitted;
- Post-2012 JI: no decision had been taken yet on the use of the scheme for the second commitment period. Negotiations are on early stage, so there is a limited visibility on the post 2012 carbon market;
- Use of flexibility mechanisms by Annex I countries to fulfil their target: *European Environment Agency* recently published a report in which it is estimated that measures taken by EU states will allow only 0.6% emission reduction. As it was planed to reach 4.6%, EU countries will probably have to buy credits from CDM / JI projects.
- Sale CO_2 emissions: It seems those who control their emissions and have credits in excess do not hesitate to sell them. Recent studies by *New Carbon Finance* and *CO_2e.com* shown that selling activity in the EU Emissions Trading Market is likely to pick up in 2007 and will have important implications for carbon prices in the rest of Phase I (2005-2007). 63 % of surplus emissions from respondents will very likely be sold and a further 33% will possibly be sold.

In the case of the Donetsk landfill gas project, as for most JI projects, it would not be advised to negotiate and sell credits on early stage. It would be a greater deal.

3.6.3. Perspectives

As the project would be more advanced, well designed and based on the most accurate data, negotiation on ERU price would start on solid basis. Risks linked with uncertainty of JI process and post 2012 operation would be much lower. In the specific case of landfill gas, the quantity of produced landfill gas per landfill depends on the characteristics of the landfill itself, on the characteristics of the waste as well as the way the landfill is operated by local staff. Here again, the use of western up to date technologies, the fact the landfill will be totally new (i.e. there is no influence from former misuse of the land, …) will give good guarantees on the level of methane production. The uncertainty remains in the landfill operating quality. Staff training would be absolutely necessary.

Finally, the decisive point would be: is carbon finance the key point in the project finance?

If yes, that is to say prepayments of carbon credit or sale of ERUs are required to balance the overall financing, negotiation have to start and agreement have to be found as soon as possible. The buyer would help the project developer to accelerate JI procedures.

If no, the project can start with or without carbon finance, which is additional finance. Then JI process must start in course with project development. Letter of Endorsement have to be requested the soonest, and PDD must be prepared with help of expert. The more advanced the process will, the greater the revenue will be.

Business plan and primarily discussions with investors shown that carbon credit costs can be covered by local, national and international finance. The increase of waste management fees plus sales of electricity and material would cover the main part of operation costs.

Thus, it is advised to start the JI procedure from now and to develop complete documentation, which would help in negotiation with carbon buyer on later stage. Based on the state of nowadays market, it is reasonable to expect ERUs price in the range of €10 - 15. If price start increase and to reach formers level, the ERUs could be negotiated at a price up to €20. Nevertheless, it must be kept in mind that market is constantly changing and ERUs price can drop once more. Waiting for selling ERU and moving the project forward in the approval process is synonym of high transaction cost, which could be considered to give a safety margin against slow decrease in the carbon value.

3.6.4. Potential incomes from biogas: energy sales, CO_2e fees

Carbon Funds can greatly help the Regional Landfill Programme, though it does not seem to be a necessary condition for implementation of the program.

In regard of the landfill building program, investment for landfill gas collection represents 49%[2] of the investment costs. The relative cost for gas utilization is much greater. It must be reminded that such operation is not required by Ukrainian law and has been decided with a view of improving standards in the Ukrainian state of art for landfill designing, higher energy and environmental efficiency and to reduce greenhouse gas emission. Speaking in Kyoto Protocol terms, the project is additional.

Overall costs must be covered by the Regional Company's revenues: fees of the inhabitants, fees of the enterprises, sales of recyclable, sales of electricity, …

ERUs from landfill gas collection can be seen as additional revenue that makes the investments more acceptable for public finances.

Year	Production CH_4	Collection CH_4	CO_2e	Thermal Power	Potential Production of Electricity	Projected Production of Electricity
	1000 m^3/an	m^3/h	t/y	kW	kW	MWh/y
2007		0	0	0		
2008			0			
2009	1,847	211	29,173	2,103	701	6,141
2010	7,278	831	114,858	8,286	2,762	24,195
2011	15,708	1,793	247,670	17,883	5,961	52,218
2012	26,546	3,030	418,968	30,222	10,074	88,248
TOTAL	51,379		810,669			170,802
Average 2008 - 2012	10,276	1,173	162,134	11,700	3,900	34,160

The revenue from carbon credit sale can be estimated following 3 hypotheses:

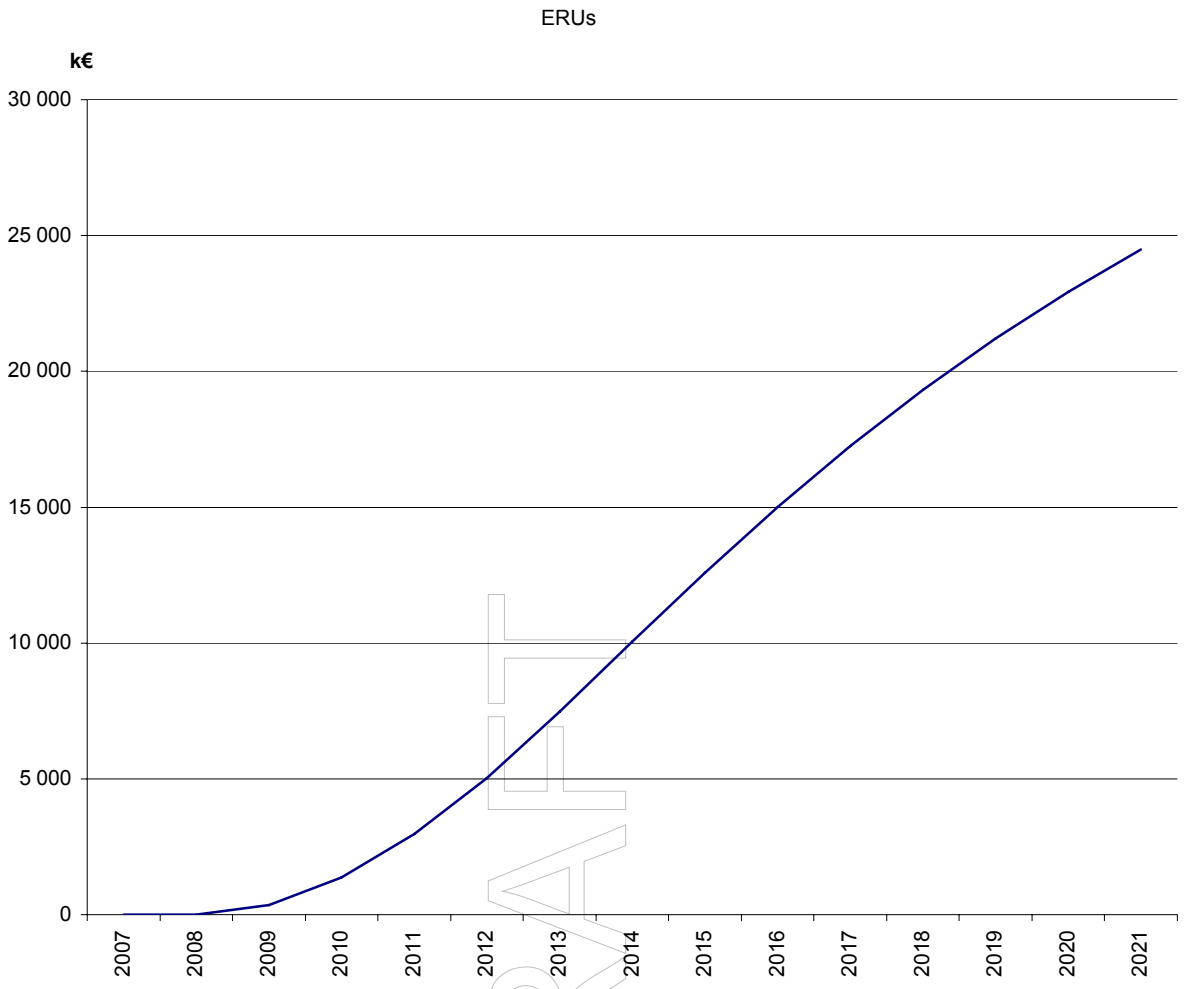
[2] The total investment on the 11 landfills for 2007-2021 is estimated 1518 mln UAH, including 739 mln UAH for biogas collection and valorisation.

- Basic price: if carbon revenue is absolutely required to push up the program implementation. The price has to be negotiated on early stage (the coming month) with required pre payments. Carbon price would be very low, (4 €);
- Low risk price: if program is advanced and a PDD can be submitted to the National Authority, the level of risk is quite low and the price can be negotiated under condition of validation of the Emission Reduction. This would be negotiated in mid-2007, then it is not expected that the carbon price will increase significantly.
- High risk price: this supposes that the project had been through most of the JI process, and that there would be some guarantees about the amount of ERU that will be delivered: the landfill is built, the waste are brought to the landfill in equivalent quantities than planed in the strategy. This price supposes there will not be another drop in the carbon price. The PDD and project must be approved at the end of 2007.

Year	CO_2e (t/y)	URE revenue "basic price" k€ (4 €/t)	URE revenue "low risk price" k€ (12 €/t)	URE revenue "high risk price" k€ (20 €/t)	Electricity revenue k€	Fees k€
2007	0	0	0	0	0	
2008	0	0	0	0	0	12,512
2009	29,173	117	350	583	387	14,608
2010	114,858	459	1,378	2,297	1,646	14,632
2011	247,670	991	2,972	4,953	3,836	16,882
2012	418,968	1,676	5,028	8,379	7,002	17,217
TOTAL	810,669	3,243	9,728	16,213	12,871	75,850
Average 2008 - 2012	162,134	649	1,946	3,243	2,574	15,170

Table 4 Revenue of Carbon credit (in k€)

For the 2008-2012, the revenue is not important because it's the beginning of the production of the biogas. If there's a future for JIP after 2012, the Graph 3 shows the evolution of the incomes from ERUs at 12 €/t.



Graph 3 Incomes of ERUs at 12 €/t

Whatever the Carbon strategy will be, it is important to include ERUs revenue in the business plan. This will reinforce the additionality of the project.

3.7. Conclusion

Such project is eligible to JIP mechanism. Normally Ukraine is ready for Track 1 procedure. So it should be relatively easy to build a project.

The main interest of Carbon Funds is the cash advance that can help for the funding of investment. The project is not really dependent on this funding. It should be advisable to negotiate directly with big Carbon Buyers for a better price of the ERU.

The Carbon Credits are not determining for the economy of the project. During the first years (average 2008-2012), ERUs should make 10% incomes, electricity sales 15%, fees 75%.

4. Economy of the Regional SHWM Plan

4.1. Question

The Solid Household Waste Management is considered as a whole: collection and disposal from the bin to the landfill, all over the territory of the Oblast. The usual incomes are the fees paid by the inhabitants (for household waste) and by the organisations (for assimilated waste).

The 5-year objective is to collect and to safely dispose of 100% of the waste.

The disposal in sanitary landfills means that the biogas will be collected. This biogas can provide 2 sources of additional incomes: sales of electricity (by conversion of the biogas) and carbon credits (sales of ERUs according to the JIP procedure of Kyoto Protocol).

The construction of the new sanitary landfills and the relevant transfer stations will be spread over 5 years. The scheme of funding is done with 10 years maturity. Ukraine, over the 15 years period (2007-2021) should see a strong evolution of inflation, wages, energy and quotation of carbon credits.

Is the Programme bankable? Obviously Yes

Is the Programme bankable without carbon credits? Yes, but more “costly” for those paying the fees.

What is the sensitivity of the Programme to the level of wages and the prices of energy? See model

4.2. Variables

4.2.1. Inflation and Indices

The following parameters have been used in modelling the whole system from Transfer Stations (40) to the 11 landfills recommended. Most of the data that are presented below are concentrated in the model in the sheet “charts” where they can be modified and thus automatically modify the results. The figures in blue are those that can be changed. All prices are assumed with the point zero for inflations being the mid-2006 year (07/01/2006).

World Inflation	2.0%	/y	
Ukrainian inflation	UI	/y	
Landfill fees index	3.0%	/y	
If fees index = inflation	99.0%	/y	(= UI)
Labour cost bias	LB	/y	
Energy cost bias	EB	/y	
Growth of SHW	tons/y		
Carbon credits index	CC	/y	

	UI	LB	EB	tons/y	CC
2006	12.0%	20.0%	8.0%	2.0%	0.0%
2007	10.0%	20.0%	8.0%	2.0%	140.0%
2008	9.0%	10.0%	8.0%	2.0%	0.0%
2009	8.0%	10.0%	8.0%	2.0%	0.0%
2010	7.0%	10.0%	8.0%	2.0%	0.0%
2011	6.0%	10.0%	8.0%	2.0%	0.0%
2012	5.0%	10.0%	8.0%	2.0%	0.0%
2013	4.0%	10.0%	5.0%	2.0%	100.0%
2014	3.0%	10.0%	5.0%	2.0%	100.0%
2015	2.0%	10.0%	5.0%	2.0%	50.0%
2016	2.0%	10.0%	5.0%	1.0%	0.0%
2017	2.0%	10.0%	5.0%	1.0%	0.0%
2018	2.0%	10.0%	5.0%	1.0%	50.0%
2019	2.0%	10.0%	5.0%	1.0%	0.0%
2020	2.0%	10.0%	5.0%	1.0%	0.0%
2021	2.0%	10.0%	5.0%	1.0%	0.0%
2022	2.0%	10.0%	5.0%	1.0%	0.0%

4.2.2. Prices

As previously stated, all prices assumed are those of the mid-2006. Inflation and/or bias apply from that date. In particular, exchange rates are based on the following figures displayed in the table below. The future exchange rates are estimated on the basis of the Purchasing Power Parity (PPP) method.

1/7/06	Exchange Rate =	6.33	UAH/€
1/7/06	Exchange Rate =	1.25	US$/€

Furthermore, investment costs have been assumed VAT included, but import duties exempted. Should the converse case arise, three types of duties have been assumed. Once the rates are given, the type of investment on which they apply has to be designated in the sheet “Inv. Cstt Prices (CP)” for the typical items of the first transfer station, landfill and the head-quarter.

VAT	20.0%	
Is VAT paid for Investment?	1	
If yes, put 1 in cell	above	
Duties paid for investment?	0.0%	Type A
If yes put rate in cell	above	
Duties paid for investment?	0.0%	Type B
If yes put rate in cell	above	
Duties paid for investment?	0.0%	Type C
If yes put rate in cell	above	

4.2.3. Prices of energy

Energy prices used are the current one at the date of the 1st July 2006. They serve as base values on which apply the above displayed energy bias index EB. This index applies instead of the Ukrainian inflation UI.

Cost of the diesel for trucks	4.00	$UAH_{mid-2006}$ / litre
Cost of the LPG	1.60	$UAH_{mid-2006}$ / m3
Cost of kWh (industry LV)	0.340	$UAH_{mid-2006}$ / kWh
Cost of kWh (industry MV)	0.340	$UAH_{mid-2006}$ / kWh
Selling price of kWh	0.050	€/kWh

4.2.4. Wages

Wages are estimated on the bases of the current practice for base values on which is applied the above displayed labour bias index LB. This index applies instead of the Ukrainian inflation UI.

The wage rates assumed range from 1,500 UAH per month for the most basic workers and up to 5,000 UAH for the directors of the Landfills, and 10,000 UAH for the General Manager at the head-quarter.

4.2.5. Quotation of the CO_{2e}

Carbon credits are based on the current figure of 5 Euros/ton, the evolution of that figure being based on Kyoto Agreement revaluation schedule (column CC in chapter 4.2.2 above). Sensitivity to that particular possible revenue is included in the model. The value zero will also be considered for robustness analyses of the results.

CB	Carbone Rights	5.00	€/ t

4.2.6. Production of waste

It is supposed that the production of waste by the households will grow of 2% per year until 2015 and then of 1% per year.

4.3. Programme

4.3.1. Extension of the collection - Renewal of existing collection means

A previous study shown the existing technique is the cheapest per collected tonne. It's based on local trucks with 1 driver and local containers disposed on concrete platforms. The refuse chutes should be put out of use and replaced by the usual containers on platform.

The "Western" collection is too expensive for the moment. It's based on a high volume 26 tonnes truck and roll containers. The implementation of this technique supposes that: all the existing concrete platforms should be re-built (roll containers cannot afford steps and kerbsides); all the lanes of the yards should be reinforced in aim to afford the efforts of manoeuvre of a 3-axles 26 t truck; number of yards can be accessed only by a carriage gateway that is not enough large for Western trucks.

4.3.2. Implementation of sanitary landfills and transfer stations

The Programme is to build 11 regional sanitary landfills. Each landfill is associated to transfer stations in the cities deserved. A park of transfer trucks is allocated according to the distances and tonnages.

Site	Landfill	*Transfer Station*		Population	t/y
5	*Site Tcherevkovka (Slavianskiy Rayon)*				
	1	***Kramatorsk***	***(City council)***	211.2	84,480
	2	***Krasniy Liman***	***(City council)***	51.8	20,720
	3	***Slaviansk***	***(City council)***	144.1	57,640
			Total for the landfill	**506.6**	**188,040**
9	*Site Belozerskoie (Dobropolskiy Rayon)*				
	4	***Dobropolye***	***(City council)***	69.4	27,760
			Total for the landfill	**124.3**	**41,080**
11	*Site Artema (Konstantinovskiy Rayon)*				
	5	***Artemovsk***	***(City council)***	98.0	39,200
	6	***Druzhkovka***	***(City council)***	73.7	29,480
	7	***Konstantinovka***	***(City council)***	91.0	36,400
			Total for the landfill	**262.7**	**105,080**
12	*Site Troïtskoe (Yasinovatskiy Rayon)*				
	8	***Debaltsevo***	***(City council)***	50.6	20,240
	9	***Dzerdzhinsk***	***(City council)***	83.3	33,320
	10	***Yenakievo***	***(City council)***	153.9	61,560
	11	***Gorlovka 1***	***(City council)***	305.2	61,040
	12	***Gorlovka 2***	***(City council)***		61,040
	13	***Khartsizsk***	***(City council)***	70.5	28,200
	14	***Kirovskoye***		30.0	12,000
	15	***Zhdanovka***	***(City council)***	14.2	5,680
			Total for the landfill	**730.5**	**288,140**
13	*Site Kamenka (Yasinovatskiy Rayon)*				
	16	***Makeyevka 1***	***(City council)***	421.5	56,200
	17	***Makeyevka 2***	***(City council)***		56,200
	18	***Makeyevka 3***	***(City council)***		56,200
	19	***Yasinovataya***	***(City council)***	37.0	14,800
			Total for the landfill	**488.1**	**189,320**
14	*Site Novoelizabetovka (Krasnoarmmeyskiy Rayon)*				
	20	***Dimitrovo***	***(City council)***	54.6	21,840
	21	***Krasnoarmeysk***	***(City council)***	69.8	27,920
	22	***Novogrodovka***		16.8	6,720
	23	***Selidovo***	***(City council)***	26.4	10,560
			Total for the landfill	**203.8**	**74,280**
17	*Site Severnoe (Yasinovatskiy Rayon)*				
	24	***Avdeyevka***	***(City council)***	36.6	14,640
	25	***Donetsk 1***	***(City council)***	510.6	68,080
	26	***Donetsk 2***	***(City council)***		68,080
	27	***Donetsk 3***	***(City council)***		68,080
			Total for the landfill	**552.4**	**220,960**
19	*Site Dolneie (Maryinskiy Rayon)*				
	28	***Selidovo***	***Urban area***	32.9	13,160
	29	***Ugledar***	***(City council)***	16.6	6,640
			Total for the landfill	**180.4**	**45,980**

Site	Landfill	*Transfer Station*		Population	t/y
23	*Site Dokutchaievsk (Starobeshevskiy Rayon)*				
	30	***Dokuchaevsk***	***(City council)***	24.8	9,920
	31	***Donetsk 4***	***(City council)***	510.6	68,080
	32	***Donetsk 5***	***(City council)***		68,080
	33	***Donetsk 6***	***(City council)***		68,080
			Total for the landfill	**673.4**	**242,800**
25	*Site Kumanovo (Amvrosievskiy Rayon)*				
	34	***Khartsizsk***	***(City council)***	40.7	16,280
	35	***Shahtersk***	***(City council)***	68.3	27,320
	36	***Snezhnoye***	***(City council)***	78.8	31,520
	37	***Torez***	***(City council)***	91.2	36,480
			Total for the landfill	**395.8**	**134,960**
37	*Site Priazovskoie (Pershotravneviy Rayon)*				
	38	***Marioupol 1***	***(City council)***	506.6	67,540
	39	***Marioupol 2***	***(City council)***		67,550
	40	***Marioupol 3***	***(City council)***		67,550
			Total for the landfill	**604.1**	**222,140**
			Total for the Donetsk Oblast	**4,722.1**	**1,752,780**

4.3.3. Recycling facilities and packaging waste collection

For the moment a private system exists and is very efficient. So the Programme doesn't include investments in the selective collection and the recycling.

4.4. Links between Programme and Variables

A financial model has been built taking into consideration the whole Regional SHWM solution described and recommended. It considers a system made of fourty transfer stations, eleven landfills and one headquarter. The model includes a first sheet named “Charts” where the important parameters are displayed. Most of them can be changed at will. The sheet is colour coded: a yellow background indicates parameter not modifiable, Lavender background is for automatic calculation (don’t touch!) and light green for changeable data. This sheet is also where the basic data on the stations and landfills are given as well as the framework of calculations (foreign shares. custom duties). The sheet also contains charts displaying the financial main indicators in graph forms. A “read-me” repeats the above information and give more details.

4.5. Business Plan of the Programme

The full investment programme is detailed in three sheets, two making various calculations and transformations at constant prices, and a last one at current prices. All of them use the Euro for valuation. That latter sheet estimates the expenditures, works in progress, gross assets, depreciations, net assets and cumulated depreciation fund. It also serves as basis for other estimations, such as fixed and non-fixed assets, taxes estimations, debt/equity ratio….

For simplification, only five cases have been considered for depreciation: most infrastructure expenditures are assumed depreciating on twenty years, heavy equipments and structures are depreciated on ten years while light equipment and structure are depreciated on seven. Cars and other specific items are depreciated on five years, including non-material investments such as studies and the like.

The fifth case concerns the rows opening and closing. Depreciations of these capital expenditures are taken on the basis of the duration necessary for a row to be filled in each landfill. Thus varying from two to nine years, in average about three/four years. Thus, depreciation follows the life and activities of each landfill.

Chemical analyses are shared between small laboratories in each landfill, a central one at the headquarter and the access to subcontracted services.

Two different cases of loan are assumed, one a sheet. A first case concerns soft loan or grants, the second one deal with the classic loans at commercial cost. In addition, a working capital overdraft is allowed.

Then the remaining various sheets deal with the operation expenses, VAT, taxes, and revenues. The main commanding sheet is where profits and losses are estimated and possible decision taken, in particular on the increase of the fees. That is also where the required final cost per ton is estimated.

4.6. Simulations and sensitivity of the Programme to the Variables

The model incorporates a particular feature so as to simulate real events in the matter of revenue collection. In the “Charts” sheet, a particular parameter allows defining the share of the revenues accruing randomly to the firm. For instance, we have elected in the model to have 95% of the potential revenues definitively collected, the remaining five percent being estimated randomly each time the computer does a calculation. Hence, the actual revenues, and per se the results of the company, vary constantly. Obviously, taxes and VAT are not subject to such variations, the State getting its full share whatever the actual turnover, except for the profit tax (fixed. but modifiable. at 25%). Sensitivity analysis is an open field, as the range of variation for each variable is not limited. In particular, we have considered the possibility that the carbon credit value is zero in combination with variations in the increases applied to the fees. The point will be to judge whether the resulting rate is acceptable or not for a given results.

Working capital is assumed to be provided by a local bank allowing an overdraft line for a limited amount which is assumed to be at the highest rate of borrowings plus one point. The bank charges are assumed capitalised. Reimbursements are taken out of the cumulated net cash flow, obviously when positive.

4.7. Risks analysis and recommendations

The main results obtained are as follows:

(1) Carbon credit at 5.0 €/t
Fees at 50 UAH/t with an increase index based on a +3% a year

The firm needs a first soft loan of 92 million Euros at a rate of 5%, maturity 10 years and a grace period of 4 years;
A second loan at 9%. duration 5 year plus 3 years of grace period of 45 million Euros, is then required before starting capital operation year by year at also 9% over 5 years but without grace period.
In such case, the firm does require no more than 2 million Euros as working capital. reimbursed within three years, no fee increases, and then can start self financing as soon as 2011, thus eliminating the recourse to commercial loans. No fee increases other than the bias are needed.

(2) Carbon credit at 5.0 €/t
Fees at 50 UAH/t with an increase index based on the inflation

The firm still needs a first soft loan of 92 million Euros at a rate of 5%, maturity 10 years and a grace period of 4 years; but the second loan at 9%. duration 5 year plus 3 years of grace period should be only of 22.5 million Euros, and then all capital operations could be self-financed;
The firm still does require the 2 million Euros as working capital, reimbursed within three years.
Meanwhile, with this scheme, no other fee increases are needed. With the help of the Carbon Credits, the required fees, which starts at 9.48 €/t, should reach about 15.9 €/t by 2010 and then decline and even become negative five years later.

(3) Carbon credit at 0.0 €/t
Fees at 50 UAH/t with an increase index based on a +3% a year

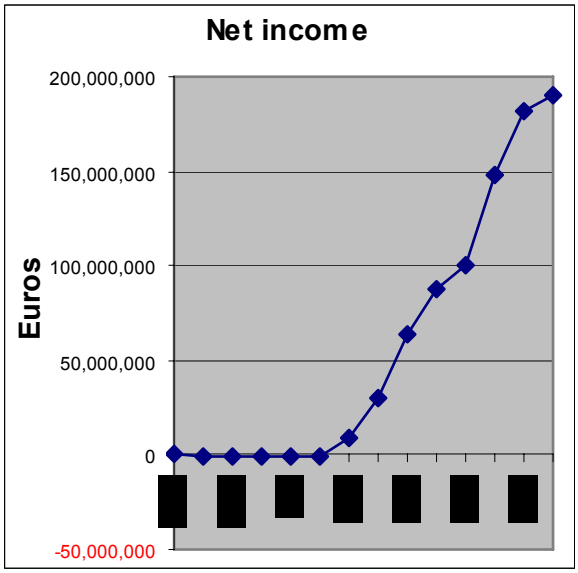
The firm needs a first soft loan of 92 million Euros at a rate of 5%, maturity 10 years and a grace period of 4 years;
A second loan at 9%, duration 5 year plus 3 years of grace period of 45 million Euros, is then required before starting capital operation year by year at also 9% over 5 years but without grace period;
And fee increases over and above the specified index at 3% a year are immediately needed in order to avoid bankruptcy.

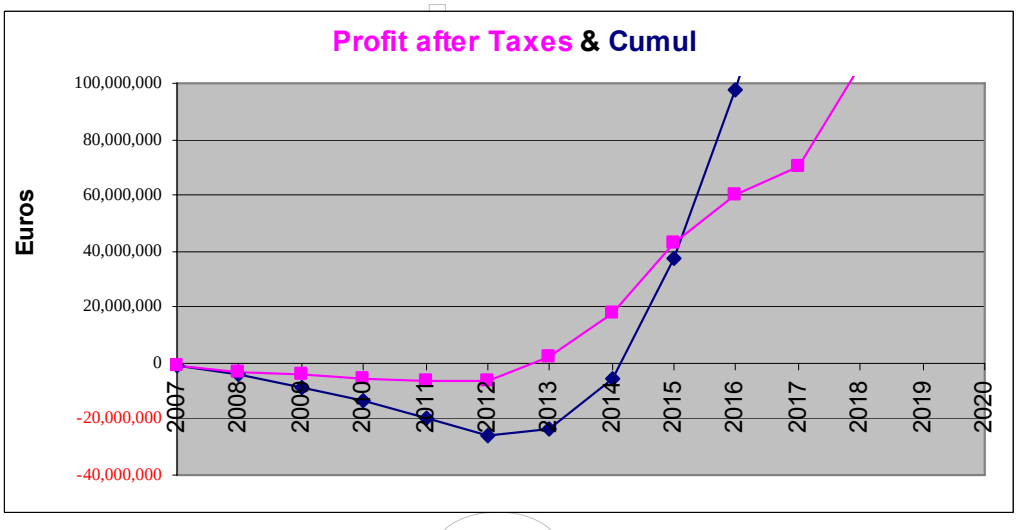
The obvious first change is to move from the 3% index to fee increases as per inflation. Then, more increases are needed. The best solution, rather than yearly heavy increases, is a first doubling of the fees in 2008 and then a further increase of 50% in 2009 making the fees three times the initial value

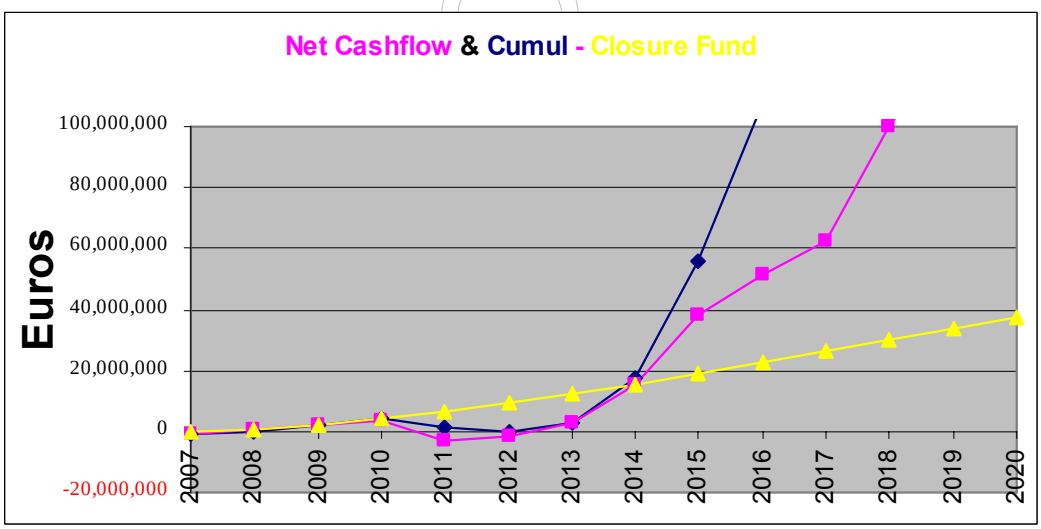
at constant money. This gives enough margins to smooth the possible vagaries of the yearly results and build the final closure fund of one Euro per ton buried.
The fees required, in Euros of mid-2006 per ton, in such case vary from 9.48 (50.0 UAH/t) to 15.34 in 2008 and reach 21.5 by 2020.

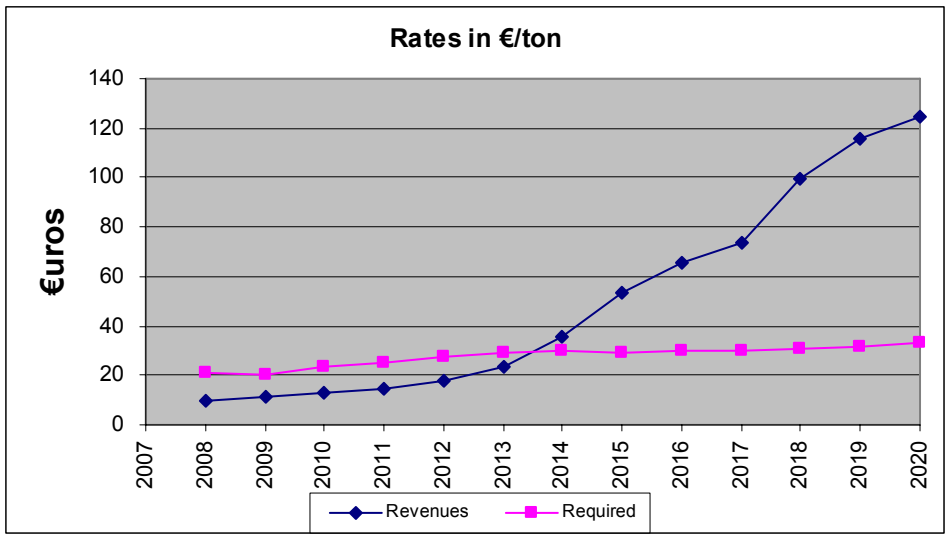
At a maximum cost of 21.5 €/t, expressed in constant price of mid-2006, this is eminently affordable.

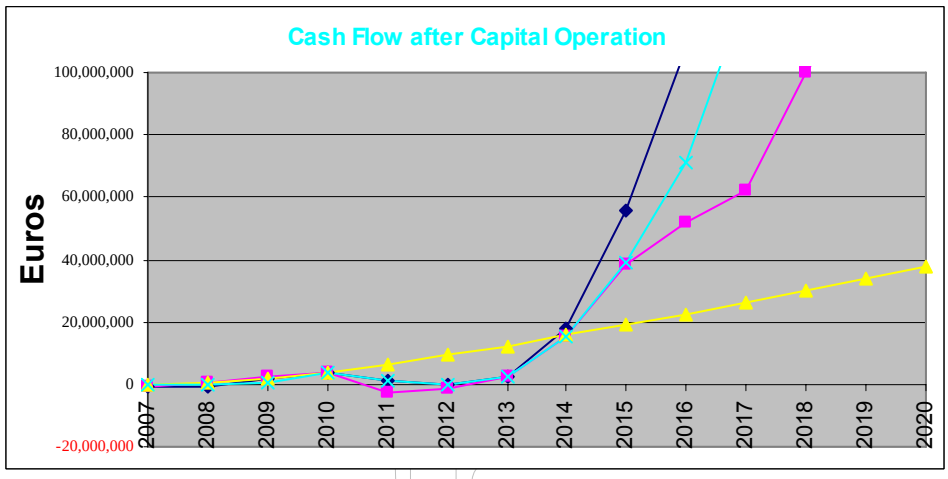
On the base of "normal" hypothesis 2, meaning a contract for ERUs at 5 €/t and two loans of 92 mln€ and 22.5 mln €, the results may be illustrated as following.

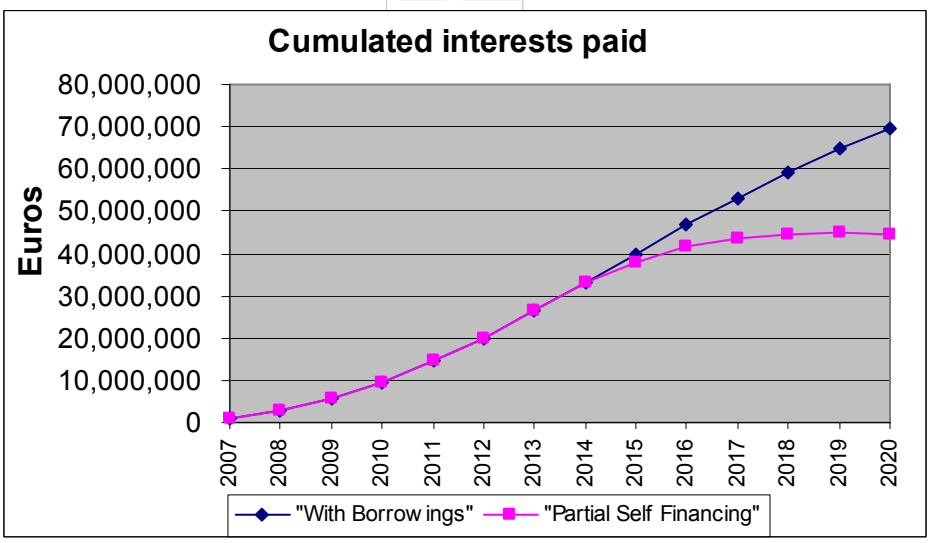

Net income
200,000,000
150,000,000
100,000,000
50,000,000
0
-50,000,000
Euros

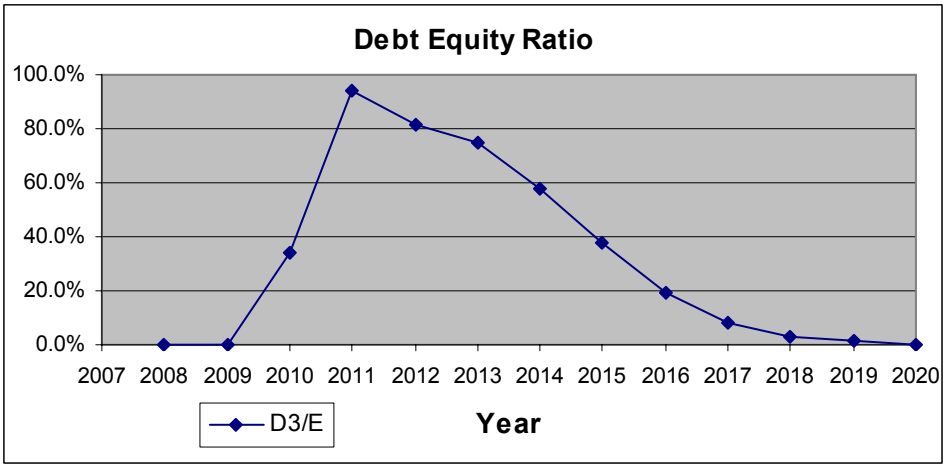

Profit after Taxes & Cumul
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
-20,000,000
-40,000,000
Euros
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020


Net Cashflow & Cumul - Closure Fund
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
-20,000,000
Euros
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020


Rates in €/ton
€uros
140
120
100
80
60
40
20
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Revenues
Required


Cash Flow after Capital Operation
Euros
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
-20,000,000
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020


Cumulated interests paid
Euros
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
"With Borrow ings"
"Partial Self Financing"


Debt Equity Ratio
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
D3/E
Year

5. Scheme of financing

5.1. Question

Today the SHWM is mainly organised within municipal companies; but some municipalities have entrusted the collection and disposal to private companies; but some rayons and cities have not any municipal companies and do not provide the service.

After a lot of studies, debates, consultations, it appeared a consensus for a sharing between municipalities for the waste collection and one regional company for the waste disposal. This regional company for waste disposal should afford the most part of the investment (sanitary landfills, transfer stations and transfer equipments).

What should be the best framework for the regional company for the waste disposal?

What is the legal framework for contracting credits?

What could be the contracts between the regional company for the waste disposal and the municipal companies of collection?

How to secure the financial scheme linking the inhabitants (paying the fees), the municipalities, the municipal companies, the regional company for the waste disposal, the state (guaranteeing IFIs loans)?

5.2. General framework

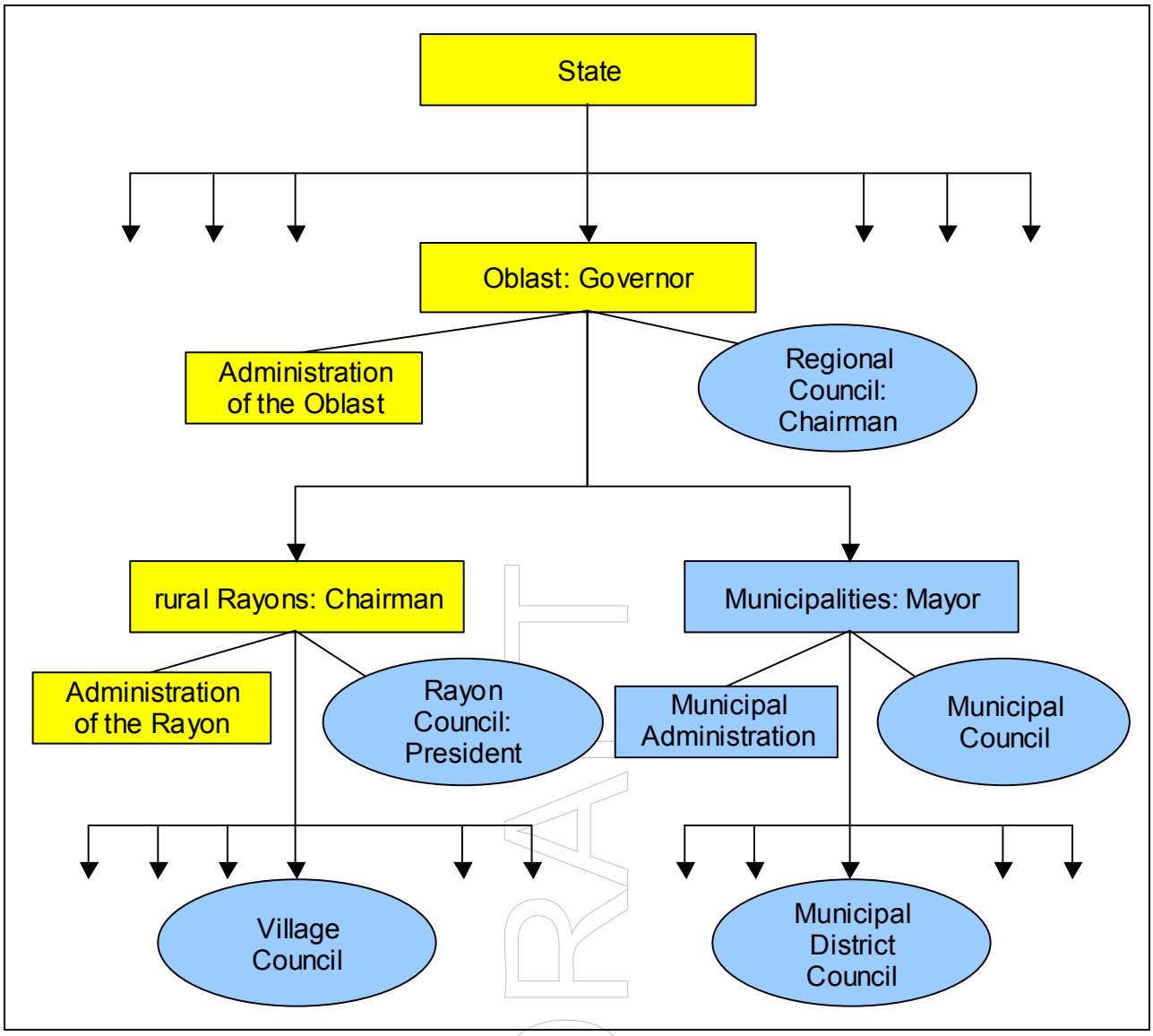
Today the responsibilities of the waste management are shared as (simplified): organisation and funding: the Regional Administration, the Regional Council, the DENR, the DHCS; investments and daily operations: the municipalities and rayons. The principle of the RSP is to organise the collection at the municipalities and rayons level (but often with inter-cities co-operations) and to organise the disposal at a regional level. This reorganisation and the huge expected investments require to build new structures for the SHWM.

There's a consensus to maintain the collection at the municipal level but a lot of municipalities are too small to manage by themselves negotiations for credits. A rough estimation is that the renewal and the extension of the park of collection trucks is something like 700 trucks. A solution is to create a regional leasing company.

The project involves all local self-government bodies (according to the Ukrainian terminology): Oblast, Cities, Rayons. The Law of Ukraine on Local Self-Government Bodies allows them to associate for projects as the solid household waste management. Even if it has progressed, a decision needs to be arrived at to decide on who (local self-government body, syndicate of local self-government bodies, inter-cities associations, private/public partnership) will be:

- the owner of the land for the facilities as regional landfills and transfer stations
- the owner of the facilities
- the operator of the facilities
- the investor of the facilities
- the borrower of the credits
- the guarantee of the credits.

For a clear understanding, local level in Ukraine is either a Local Self-Government body or a Local State Administration. Globally, authorities of LSG are elected by the inhabitants and authorities of LSA are named by the Government of Ukraine. The organisation is as on Picture 1.



Picture 1 Organisation of local administration

In order to study and propose several schemes shaped towards the needs of the region and applicable within the national legal context, are explored in this chapter the conditions for the funding of a landfill and a leasing fund for SHWM small equipments. It is examined reasons for the regional authorities to decide on the creation of one or several entities and their field of responsibilities.

5.3. Description of the Company "Donetsk Regional Centre of Waste Treatment"

One major question for the success of a loan operation is to determine the financing entities able to implement the RSP. Several options are available, depending on geographic and organisational priorities. The present orientation of the Oblast council is the recourse to a central body, through set-up of the "Donetsk Regional Centre of Waste Treatment" (further DRCWT) in charge of the implementation of the RSP. The creation of this new regional company was approved on 23 November 2006. Nonetheless even this decision does not shrink future alternative choices in specific cases. It will be necessary to examine as far as these alternative solutions can cooperate with the new company or could prevent from reaching its goals. Must be highlighted ways to reduce adverse impact of concurrent solutions.

So the set up of a regional communal company is the option chosen by the Regional administration to speed up implementation of the RSP and solve quickly ownership and practical issues as ownership of the land for

the facilities used as regional landfills, ownership of the facilities and ways to attracting and channelling funds. Other options exist and are mentioned in the next chapters.

In this scheme, this company will be in charge to implement the regional Strategic Plan adopted on 15 February 2005 and which was still without practical implementation.

Its means will first come from subventions of the Oblast and State Ecological funds in order to organise quickly first constructions of the waste facilities. Then, other financial sources for new investments will be mainly bank credits, mainly international financing institutions due to maturity issues. Once landfills built, operations will generate revenues. The Company will act as the owner of the landfills and receive revenues from three main sources: fees for waste disposal, production and sales of recyclables, biogas and electricity, and sales of carbon rights in the framework of the Kyoto protocol.

As regards operations, it could be either acting as a direct operator as well as contracting out operations to a private operator.

Another task will be to monitor the implementation of the RSP: gathering data, providing the Oblast council with analyses on waste management and fluxes. In fact, this was the initial idea for this company. During discussions with the regional authorities, the information tasks, both towards the general public and in direction of the regional leaders, was considered as quite relevant of this new structure.

5.4. About statutes of the DRCWT

The statutes of the DRCWT are annexed to this document (Annex 7). They are quite detailed and include much more potential activities than the only implementation of the RSP, which will have as main activity the construction of landfills.

Some parts of the statutes appear far from waste management as management of restaurants; it can be explained by the origin of the text. The text was a compilation of statutes, using the statutes of a former regional company for recycling of coal waste heaps. This can be explained by the genesis of the new company. During the debates in the Regional Council, some members of the Council asked to include activities of this former regional company which has been closed in September 2006 in the statutes of the new one, extending scope of the new company out of municipal waste and including prospects to processing industrial waste too. This could be a weakness for the work of the DRCWT as the priorities are not set at all in the document.

The main features of the statutes are:

- It is profit-oriented company;
- The legal statute is a communal company which is the joint property of territorial communities of villages, settlements and cities of the Oblast of Donetsk;
- The company is directly submitted to the Regional Council;
- The Director is nominated by the Chairman of the regional Council; there is no board of directors or supervision council;
- Concerning implementation of RSP, the company embraces a large scope of activities covering almost all sectors of waste management, from collection and analysis of data, preparation of plans, advice, construction and reconstruction of waste facilities, services as collection, sales of production from recyclables;
- Company is allowed to borrow funds, including foreign loans, with the guarantee of the Oblast council. Initial capital is limited 30 000 UAH.

This company is created from zero, without any actives (land, premises, equipment, data).

5.4.1. Remarks

Although initially organised to implement the RSP, the new structure called DRCWT has lost in its long list of activities any clear priority. Nowhere in the statutes are mentioned the tasks to build and operates landfills and transfer stations, which are two key-elements of the RSP. They are not excluded, but not mentioned! Selective collection of household waste is ignored too, although many references to packaging make clearer that such a way to collect packages should not be forgotten.

As a hybrid creation, this new shell may comprise any activity related to waste that gives a large freedom to develop new projects. It will be the task of the General Director and the Regional Council, together with financing institutions to clearly define priorities and avoid to spent time in more specious ideas as recovery of coal from heaps.

It should be noted that the expression “regional communal company” is not legally correct in the Ukrainian legal framework but corresponds to the essence of the company. This concept of “regional communal company” does not exist in the “Commercial Code”, only is mentioned the concept of “communal company”. This is the reason why the DRCWT statutes mention that the company status is a “joint property of territorial communities of villages, settlements and cities”, allowing a regional company to be identified as a communal company. The concept of “joint property of territorial communities of villages, settlements and cities“ solve in fact the absence of mention of the oblast ownership in the legislation. As an example, it can be added that other such companies exist: “Oblvodokanal” is a company owned by the regional council and servicing water networks in 17 towns of the oblast (see later). The difference between a Communal company and a State company lays only on the difference of owners: the Parliament in one hand, thee local council in the other hand.

5.4.2. Review of alternative solutions: Geographic aspects

The Oblast council has taken the option of one unique entity at the oblast level in charge of the complete programme of landfill construction, if priorities are respected. It must be added that this company will mix a role of planning and monitoring new facilities as well as developing by itself a part of the facilities. So this option is not contradictory with the future existence of several entities managing a landfill out of the field of the Company.

Concerning geographic aspects, a regional landfill shall service a territory with approximately 500 000 inhabitants. Except the four major cities of Donetsk Oblast in this range, i.e. the cities of Donetsk, Marioupol, Makeyevka, and Gorlovka, such a number of inhabitants means a cluster of several cities and rayons. Studies have delimited 10-12 clusters. This could mean 12 economic entities independently solving their local issues, on territories similar to a French department or an English county.

For this reason it is quite possible to make use of other geographic options to develop the new facilities planned in the RSP if the new regional company will not be able to embrace all the Oblast territory. Particularly it is not excluded that one or several unions of cities could be set up during one ulterior phase of the programme. Up to now, these unions have no clear legal status and conflict with the cultural traditions making difficult to overcome divisions between territories. This was clearly demonstrated by the difficult construction of the sorting plant of Kramatorsk, Slaviansk and Druzhkovka. Lack of co-operation resulted eventually in a transfer of responsibilities to the regional Council.

As examples of a possible cluster, several close towns in the populated Eastern part of the oblast, Khartsizsk, Yenakievo, Snejnoye, Torez and Shahtersk could decide to co-operate with the private company UkrEkologia already working in Khartsizsk and contract with it to collect waste, sort and dispose in a new sanitary landfill.

The problem of coherence between different zones using different institutional solutions will be a challenge to be regulated at the regional level, although existing tools are far to be powerful. It is not excluded that a competition could appear between different instances for waste basins.

5.4.3. Institutional aspects

Organisational aspects examine possible managerial options available to implement the RSP. The Oblast council selected for the new company the statute of a communal company, a category described in the “Commercial Code”. Other solutions could have been used. In Ukraine, development of regional landfills can be implemented by construction departments of town or oblast administrations, by public municipal or state companies or by private companies with different forms of PPP, as allowed by the Ukrainian Law “on concession”.

Two categories of public companies are defined in the “Commercial code” state companies and communal companies. A communal company can be created by a town or by the regional council, not mentioning a group of towns. A state company is under the direct control of a ministry or Cabinet Of Ministries.

A joint stock company could have fit the goals of the Oblast council too, but needs more administrative works and funds. Then both PPP or pure private initiatives are quite acceptable, although the issue of land ownership remains not solved clearly. So a vast variety of solutions are then available.

Most of these forms are able to be financing entities of the construction and exploitation of landfills in the limits defined in their statutes. It depends on their own statutes: these statutes can restraint certain activities or prevent them from dealing with specific activities as exploitation. For example, construction department of cities are not entitled for management of landfills (not mentioning exceptional situations).

Lending capacities are limited in certain cases. Towns are not authorised to receive funds from foreign financing institutions, as this is restrained to cities of 800 000 or more inhabitants. In the Donetsk oblast, only Donetsk city enters this category.

5.4.4. Comparison of various options

In this part are examined which schemes are really applicable, fit well the issue raised with the RSP and which are optimal.

As already said, a first step has been made by the Oblast council resulting on 23 November 2006.in the set-up of the communal company “Regional Centre for Waste Management” in charge of the implementation of the RSP.

It has been stressed that several other options remain available to work out new facilities planned in the RSP. It is no excluded that one or several could then used during the next phases of the programme. Several similar schemes are already functioning in Donetsk oblast or in Ukraine:

1. A local self-government body takes the responsibility to build a sanitary landfill for its own needs operated by the municipal company and possibly open it to service neighbouring communities;
2. A group of municipal companies acting on behalf of their local self-government bodies and setting up a common joint-stock company with a repartition of shares between them, (no example documented presently);
3. Another type of inter-cities association, as the one used initially to build the Kramatorsk sorting plant, based on a mutual agreement, sharing responsibilities, common finances and selecting one of the municipalities to develop the project;
4. Different forms private/public partnerships, including a mere agreement to build a private facility servicing later the city where it has been built.

The next table aims at quickly highlighting main aspects of the different available solutions.

5.4.5. Comparison of options

Option	**1: a town, a landfill**	**2: a group of towns, a common company**	**3: a group of towns delegating to one of the members**	**4: PPP**
Ownership of land	Owned by the town council and transferred for operation to the company	Owned by one of town councils and transferred for operation to the company	Owned by one of town councils and transferred for operation to the developing town	Renting the field used for landfill 50 years
Ownership of facility	The town municipal company	The company	The town building the landfill	The company
Operator	The town municipal company	The company	The company	The company
Borrower	The town municipal company	The company	The company	The company

Guarantee	By The town	By one or several towns	By one or several towns	By the owner of the company or guarantee by the town

The syndicate scheme, as known in France, is however absent in Ukraine. It has to be noted that the expression “union of towns” is mentioned in several legal texts as the Constitution. It ha been said above that the modes for managing a common activity with a group of towns is not detailed in the legal literature and remain mainly a local practise with theoretical background.

5.4.6. Some examples of institutional solutions for financing landfills in Donetsk Oblast

The recent examples of new landfills in Donetsk oblast refer to two solutions as regards institutional schemes: a town responsible for construction and a private initiative.

Three communal landfills have been recently constructed in the oblast:

- the Ilovaysk (15 000 inh) landfill in 2003;
- the Tchasov-Yar (14 000 inh) landfill in 2004;
- the Yasinovataya (27 000 inh) landfill begun in 2004, still under construction.

The respective towns were the initiators in charge of defining the project and find funding essentially from the regional and town ecologic budgets. Then the development of the project for further construction has been contracted with the regional department of construction of the state administration. This choice resulted before all from the small size of the towns, unable to carry out such a design by themselves.

For the new Grigoryevskiye landfill situated between Makeyevka and Donetsk, the private company SVD+ rented a field from its owner (State administration of the rayon of Yasinovataya) in 2003 for a 50 years term, worked out a design with a project institute, received permits and authorisations from respective bodies and began to receive waste in its facility; It must be added that this case shows a good example of private initiative and quasi-absence of controls: the design has not been respected, almost no construction has been worked out. The landfill looks like more as a simple dump-field without any equipment meant in the design, except a part of the closure wall and the entrance control.

As a rule, the three town landfills were funded at 90% or more from the regional ecologic funds. It is then easy to prevent other new constructions which could compete with regional landfills by cutting funding. This is no such way with private landfills.

These four examples have no link with the RSP, due to sooner studies. Moreover the size of the new landfills are many times lower than needed in the future and they can meet only the present needs of these small towns.

Another interesting example is given in Khartsizsk. The “private” company “UkrEkologia”[3] built a sorting plant and agreed with the Municipality to rent out the waste company (technical buildings, lorries, landfill) in order to collect waste in the town, and possibly in other towns. A project to extend the present and old landfill is under consideration, and could be funded by the private company.

5.4.7. Cooperation between Regional Council and LSG on waste management

The set up of this new company cannot solve the many insufficiencies of the Ukrainian legal framework regarding waste and LSG. Several threats on the good results expected from this initiative will have to be considered. Classical bottlenecks resulting from a weak state as low legal enforcement, permanent changes among executives, delays in funding, excessive controls and inspections are well known, not mentioning corruption.

The project encompasses the entire territory of the Donetsk oblast, this means that it involves all categories of local self-government bodies (according to the Ukrainian terminology): LSG of the lower level: cities,

[3] UkrEkologia has been bought recently by the joint-stock company “Technopark” set up by the Ministry of Coal to supply new activities in zones with closing mines. The shareholders of Technopark are not yet disclosed, but it is probably a state company.

towns, settlements, villages, as well as LSG bodies of second level, rural rayon[4] and oblast councils, covering the first ones as territorial units.

The first level is in charge of the MSW management according to the law on waste. The rayon and oblast (regional) council is in charge of coordination only.

Coherence between decisions of municipalities and oblast council does not come from their hierarchical set-up. There is no subordination between first and second level councils The oblast council is not composed of delegates of the lower LSG councils.[5] Since 2005, elections to the Oblast council is based on a direct choice of a party list. Members of the list have no more links with the local election districts as formerly.

Furthermore, the RSP is not a compulsory directive for lower LSG, but only acts as an official recommendation for them, even if each LSG agrees on the solutions proposed and has no other or limited means to develop its own solutions.

5.4.8. Inter-city cooperation

The Law of Ukraine on Local Self-Government Bodies as well as the law on Waste allows municipalities to associate for projects as the solid household waste management.

The initial idea of combining local administrations into a kind of a municipal association to be served by one regional landfill located on one of the new proposed sites is theoretically reasonable and well developed in EU. As already mentioned above, such an approach is not backed by the national legal framework. Only rare mentions of union of cities are included in the Constitution and in the law on LSG. No specific act explicitly explains procedures for enter in such unions and no financial incentives are earmarked for this purpose. For instance, budge code regulates the transfer to town budget according to the number of inhabitants, but union of cities enabling to jump in the upper category are not taken into account. At the contrary, in France with the Law on decentralisation for territorial units 1999 explicitly provide additional funding in case of union of cities.

Nevertheless a type of agreements for common management between a major town and subordinated smaller towns exists frequently. In this case, a town transfers competences for instance for education to another town, together with the financing. The transfer of finances is supervised by the budget administration, which allocated budget funds according to competencies. This cannot be done with waste management, as this activity is considered as a housing service and not a competency.

One additional question deals with willingness of municipalities to enter into such an arrangement independently of the regional administration. No such option is documented in Ukraine, except the Kramatorsk sorting plant in the Donetsk region. Unfortunately, this option has been abandoned at the end of the construction of the plant n 2004. In 1999 three mayors sign a Memorandum of Understanding on the common construction of a sorting plant for the cities of Kramatorsk, Slaviansk and Drujkovka. This initiative was strongly supported by the oblast administration, however decisions were taken indisputably at the city level. The city of Kramatorsk was designated to carry out design and construction. Finances were transferred from Slaviansk and Druzhkovka city budget to Kramatorsk budget for design costs. But changes brought by mayor election put rapidly at a low level cooperation. No common commission was set up, further finances were not transferred. Eventually, as the massive part of the funding came from the Regional Ekofund, and from state Ekofund, the Oblast council decided to require from cities transfer of construction to property on the sorting plant of the region.

5.5. Conclusion

One of the main obstacles to solve the MSW issue in Ukraine is the foremost accent put on the role given to the town authorities in the institutional framework. Towns have to solve refuse problems by themselves. This point remembers the situation known in Europe dozens years ago. Absence of any specific institution answering specifically to waste management at the regional and at the national level exemplifies the low priority given to the waste crisis in Ukraine by the past. In the Ministry of construction and local public

[4] City rayons are not mentioned here as they have no own resources and budget, limited competencies and are completely subordinated to city council authority.

[5] Elections to city council and to oblast councils are two independent elections held on the same day with their own lists of candidates. Nevertheless, the current practice is that several candidates are both on the local list for city council and on the oblast council. The law does not forbid these two functions, which is not true for members of the Parliament (Rada). The appointment of a civil servant as a member of the oblast council is not forbidden too.

services as in the corresponding services of Oblast administrations does not exist a single department dedicated to this sector.

One player is more active, the Ministry of Ecology. It is the most concerned and active Ministry in the sphere of waste management, but its role is confined only to a role of monitoring and control of construction of landfills and incineration plants and their operations. It has not any function to implement a new management system.

That is the reason why the set up in November 2006 by the Donetsk Oblast council of a specific company in charge to promote construction of new facilities in the waste sector, appears as a bright sign of change in this grey landscape. This means that the regional political actors are nowadays conscious that the disagreement often witnessed by the population on the lack of efficient solutions in the MSW field requires a new approach, streamlining efforts and coordinating them at the Oblast level. This new structure is supposed to implement the “Strategic Waste management plan” adopted by the Oblast council in 2005.

This new regional company will have to build the 10 sanitary landfills needed in the Oblast to switch from the old-fashioned way to dump garbage to the modern way adopted in EU and most developed countries. This will give excellent opportunities to protect environment and develop business from sales of CO_2 quotas to use of biogas, not mentioning waste disposal services. This company has the ability to raise funds with the support and the guarantee of the Oblast Council. This opportunity to launch a breakthrough in waste management in Ukraine should be seized eagerly as an unique example in Ukraine. Nevertheless this remains quite a challenge. This first step has to be confirmed, as we know how the best intentions are often ruined in Ukraine by personal ambitions and bureaucratic blockages, as shown during the construction of the first waste sorting plant in Kramatorsk taking two years more than expected. The bankrupt of UkrEkoKomResurcy, equivalent to Eco-Emballages an “Dual Punkt” is another miserable example of a good start and a bitter end. Strong assistance will have to be given to the new company to keep the right direction. Other institutional solutions exist: co-operation of towns in “syndicates”, PPP, determined move by Donetsk City. But this requires still more efforts and support.

6. Annexes

Annex 1 Panel of Carbon Funds targeting Ukraine and landfills biogas

Title	Waste Management Strategy and the Kyoto protocol flexibility mechanisms		
Code	Carbon management v2.doc	Date Redaction	12/12/06
Index of Revision		Emitter	Samuel GUY

Inventory of Carbon Funds

The most significant buyers of Kyoto carbon credits used to be institutional buyers, like the World Bank (through its Prototype Carbon Fund and other programs), and the Dutch Government (through its CERUPT and ERUPT programmes). They are willing to take (part of) the risk that the resulting credits are not Kyoto compliant, and price their offer process accordingly. Emerging new buyers include Austria, Finland and Japan.

However, more new buyers are entering the market. They are mainly private buyers (traders, utilities, etc). Typical reasons for participating in this market are:

- Meeting voluntary agreements or fulfilling targets under national allocation plans;
- Hedging against expected future commitments;
- Trading (speculation on price development of carbon credits).

International Emissions Trading Association recently confirmed that Japanese entities, mostly Japanese private firm, as the largest buyer of emission reduction with data represented 41% in 2003-2004, against 21% in 2002-2003. The second largest buyers are the Government of the Netherlands. The third largest buyers are Carbon Finance Business (operated by the World Bank) which represents many buyers from Europe.

Recent pledges by other European Governments, who want to prevent a failure in meeting Kyoto Protocol targets, increase the share of other buyers. The table below lists the most active carbon buyers on the market, some of them being very active on the Ukrainian market.

This list is not exhaustive. Some carbon funds have been very recently created (eg: Fondo de Carbona para la Empresa Española). Private Carbon buyers are numerous and various. They are likely to acquire carbon credits through Carbon Funds and carbon traders. Never the less, they may buy part of their needed credits directly on the market, as some of them settled Carbon credit and trade department. Thus it is not possible to list all buyers, private and industrial (EU “quotas directive” applies to more than 10,000 plants) or public (the market is growing and as deadline will approach, some countries may have to produced great efforts to fulfil their target).

Carbon Funds managed by the World Bank	National or multi governmental Carbon Funds	National or multi governmental Program	Carbon Funds (Private)	Private Buyers or traders
The Netherlands Clean Development Facility (NCDF) (Dutch gvt)	**Multilateral Carbon Credit Fund** (EBRD)	**The Austrian JI / CDM Program** (Austrian Gvt program)	**Greenhouse Gas Credit Aggregation Pool** (initiated by Natsource Asset Management)	**BNP Paribas** (Bank – Carbon trading)
The Netherlands European Carbon Facility (NECaF) (Dutch gvt)	**Russian Carbon Fund** (Millennium Partners)	**The Belgium Federal JI / CDM Tender** (Belgium Gvt program)	**European Carbon Fund** (initiated by Caisse des Dépôts and Fortis Bank + 11 banks and equity funds)	**EcoSecurities** (Carbon consultant and trader)
IFC / Netherlands Carbon Facility (INCaF) (Dutch gvt)	**KFW Carbon Fund** (managed by KfW bank for German Gvt)	**The Danish Carbon Tender** (Danish Gvt program)	**ICECAP (**Initiated by Cumbria Energy Ltd., Less Carbon Ltd. and Investec Bank Ltd.)	**Evolution Markets LLC** (broker specialized in carbon finance)
Umbrella Carbon Facility (Carbon Fund pool)	**Testing Ground Facility** (managed by 6 Nordic gvt)	**The Finnish JI / CDM Pilot Program** (Finnish Gvt program)	**Asia Carbon Fund** Carbon fund Initiated by The Asia Carbon Group of companies	**Tradition Financial Services LTD** (broker - energy)

Carbon Funds managed by the World Bank	National or multi governmental Carbon Funds	National or multi governmental Program	Carbon Funds (Private)	Private Buyers or traders
Carbon Fund for Europe (with EIB)	**Rabobank-Dutch CDM Facility** (Dutch Gvt)	**The Flemish Government JI / CDM Tender** (Belgium Flandre Gvt program)	**Japan Green House Gas Reduction Fund** (Major Japanese C^{ies} & Financial Institutions)	**Carbon credit Capital** (broker - carbon finance)
Prototype Carbon Fund (partnership between 17 C^{ies} & 6 governments)	**Corporation Andina de Foment Netherlands CDM Facility** (CAF-NCDMF) (Dutch Gvt)	**Erupt New Style** (Dutch Gvt program)	**ING** (initiated by the ING Group)	**C 6 Capital** (broker - carbon finance)
Community Development Carbon Fund (partnership between 16 C^{ies} & 6 governments)		**SICLIP** (Swedish Gvt program)	**Fondo de Carbona para la Empresa Española** (FC2E) (initiated by the Banco Santander et Instituto de Credito Oficial)	**MGM International** (Carbon consultant and trader)
BioCarbon Fund (partnership between 10 C^{ies} & 4 governments)		Canada's CDM & JI Office (**Canadian** Gvt program)		**Econergy** (Carbon consultant and trader)
Italian Carbon Fund (partnership with Italian gvt & 6 italian C^{ies})				**Factor** (Carbon consultant and trader)
Danish Carbon Fund (partnership with danish gvt &5 danish C^{ies})				**Camco international** (broker)
Spanish Carbon Fund (partnership with spanish gvt & 12 spanish C^{ies})				**EDF Trading, RWE, Endessa** (Industry / enrgy – Carbon buyers)

WB : the World Bank / EIB : European Investment Bank / EBRD : European Bank for Reconstruction and Development

This list is not exhaustive. Some carbon funds have been very recently created (e.g. Fondo de Carbona para la Empresa Española). Private Carbon buyers are numerous and various. They are likely to acquire carbon credits through Carbon Funds and carbon traders. Never the less, they may buy part of their needed credits directly on the market, as some of them settled Carbon credit and trade department. Thus it is not possible to list all buyers, private and industrial (EU "quotas directive" applies to more than 10,000 plants) or public (the market is growing and as deadline will approach, some countries may have to produced great efforts to fulfil their target).

Main business approach

A Carbon Fund is a fund that is established to implement projects aimed at reducing greenhouse emissions. The fund can be financed either by governments, companies or individuals. The projects can then generate credits that would be eligible for an emissions trading scheme. On a first approach, more than 30 Carbon funds, non-including private buyers as Trader, broker or direct industrial buyers. These can be listed in 3 sections:

- Governmental funds from Annex 1 party, buying credits to reach their national target;
- Private fund, combining manufacturers (who has to compensate their GHG emissions) and financial institutions (bank, equity fund, investors who operate in carbon trading);
- Mixed funds, combining private investors and governmental agencies. World Bank initiated some of them.

For ERUs / CERs sellers, carbon funds reduce the risk. Indeed, it assures optimised and safe priced as determined in advance and secured by contracts. In some cases, carbon finance would help to secure the global finance of a project: it offers a guarantee of revenue, which is an effective lever for raising funds. Carbon credits are negotiated and bought with strong currency (euro, dollar, yen), bringing them in the host country where they reinforce investors confidence.

Thus, projects do not always have to be based on foreign annex B country, but enable host country to develop their own project and enlarge the scale in the configuration of industrial projects.

Generally (but not systematically), World Bank and governmental carbon funds offer rather low price for carbon right. As contracted and sometime paid in advance, offering low risks and high opportunities, ERUs would not be paid a very high price. In some cases, the carbon funds would offer prepayment: part of the estimated carbon revenue is paid before the start of the construction of the projected facilities. The value of carbon credits provides the necessary financial resources for developers to invest in projects that achieve better outcomes in terms of climate protection and sustainable development, compared to investments without carbon finance. Project quality is therefore linked to the amount of additional investment available. These Carbon funds usually aim at supporting projects directly or through participation in local or regional funds and to illustrate how project-based emissions reductions can promote sustainable development in developing countries. Nevertheless, most of them are open to discussion and financial arrangement can be make, if in accordance with the fund aim or specification.

Some funds would have specific rules, related to national objectives or project-based finance:

- the **Multilateral Carbon Credit Fund** purchases credits only from projects the European Bank for Reconstruction and Development finances itself;
- The **Community Development Carbon Fund** (CDCF) provides carbon finance to projects in the poorer areas of the developing world, which combine community development attributes whereas **BioCarbon Fund** has been settled to promote sequestration or conservation of carbon in forest and agro-ecosystems;
- The **Testing Ground Facility** (TGF) from the Baltic Sea Region Countries focuses to projects that have substantial environmental effects for the Nordic region (i.e. NW Russia, Estonia, Latvia, Lithuania, Ukraine and Belarus) whereas the **Asia Carbon Fund** has a geographical coverage in Asia (focus on India and China, as well as in South East Asian countries);
- Some national fund would buy credits (and finance project) if national equipment or consulting is included in the project;
- …

A fund could also be operated with private companies investments to offset their greenhouse gas emissions. A number of banks and specialised financial institutions have established carbon funds. Carbon funds pool capital and risk in the search for safe, low-cost emission reduction credits. In fact, they are more like buyers' clubs for emissions credits, rather than financial securities like World Bank funds. Those Carbon funds will probably finance projects with a high cost-efficiency. They are unlikely to contemplate investing in a project that has not already obtained approval from appropriate authorities. Large scale projects, with low transaction costs are likely to be pass over.

Investors involved in the fund may receive carbon credits as dividends that could then traded. When private industrial businesses are part of the investors in the fund, it is likely that these funds would focus on some field of activity, generally in line with the investor market:

- the **Asia Carbon Fund** primarily claim for renewable energy projects, energy and power conservation, Chemical industry (HFC23 + PFC);
- the **Endesa Climate Initiative** has preference to large projects (1 million tons of reductions up to 2012) from the waste management, industrial or energy sector.

In the meantime, price offered by such found would be directly connected to the market price and the investors needs, though funds are generally trying to create a large portfolio in order to diversify risks. Some government fund will buy carbon credits from CDM / JI projects and resell them to other buyers seeking credits to meet emission reduction commitments, as national business or utilities.

Many countries have launched a purchase program, most of the time in parallel to their carbon fund. A purchase programs aim at buying emission reductions for the country government to achieve its commitment under the Kyoto Protocol. The programme generally involves activities including:

- the raising of awareness in the targeted countries, capacity building and technical help to make projects emerging;
- the purchase of emission reduction credits from JI or CDM projects and investment in funds and facilities;
- the financing of particular immaterial services, such as Baseline Studies etc., which are necessary in respect to JI or CDM projects;

The carbon credits may be purchased, once a project is identified, with government fund, governmental financial institution or carbon fund. National purchase program are also buying credits with the help of tenders. In such case, participants are requested to submit their projects, usually a PIN and information on project developer(s) are required. The project will be evaluated on the basis of various criteria: contribution to sustainable development, certainty of delivering Emission Reductions, price per unit requested, project finance, technical risk assessment, etc. Successful tenderers will then be invited to enter into contract negotiations. Tenders enable governments to do their shopping with most secure or more profitable projects. On the other hand, they generally offer attractive conditions (financial support, high up-front payments, technical assistance during development phase, …).

Among the private buyers, **traders** and **brokers** are offering interesting alternatives. There are several organizations that offer support services including market information, technical and advisory services, brokering services, and facilitate access to investors by acting as "investment clearinghouses". They usually have very flexible approach and are likely to offer rather high price. The Carbon Trader provides reporting, library and commercial services intermediary within the emerging carbon credit market. The Carbon Broker provides opportunity for organizations to market carbon credits.

Brokers do not necessarily actively buy and sell, or at least not for themselves. They facilitate transactions between buyers and sellers. Using a broker can save time, but it gives a realistic market perspective on CER pricing and minimise risks in the writing / negotiating of the purchase agreement, when the broker can bring its specific expertises. Service would be charged, usually on percentage of transaction (but not necessarily).

Traders in CERs operate according to the same principles as stock or commodity trading. Taking a long-term approach, they will seek to profit from market fluctuations and arbitrage opportunities over time (buy low, sell high). Private investors, companies, and CER suppliers buy and sell CERs in such regularly scheduled auctions.

In both cases, forward contracts and call options are the most common transactions at present. Recent prices for these mechanisms per tonne of carbon dioxide have ranged from as low as €0.5 to as high as €6. Using a broker would be interesting if the project is well developed and had been through the main part of approval, moreover if ERUs are already validated. Strike prices (prices for immediate purchase) have generally ranged from €1.5 to €12. No average is really meaningful, however, because these figures reflect different timeframes, different reliabilities of emission reductions, and different negotiated transactions.

Until investors get a clearer idea of how many credits might be required in the second phase, deals on new projects are unlikely to be concluded. On the sell side, developers are now finding it difficult to get more than €10 for CERs in forward delivery deals. Even if second phase NAPs place a low ceiling on the amount of CERs/ERUs that can be used by installations, European governments are likely to need large amounts of carbon credits to comply with the Kyoto Protocol. Trader or broker might help to find the best opportunities.

Finally, among potential buyers of CERs are many **large corporations** that have NAP targets or that have committed to GHG reduction targets on a voluntary basis. In many cases, these companies are investing in carbon-offset projects in developing and transitional countries where the abatement cost is much lower. While some of these companies have invested in the private equity funds or multilateral institution funds, it is likely that in the near future, they may get directly involved in the carbon market. The precursors ones had set up subsidiaries specialized in carbon trading. Most of company will buy the needed credit through carbon funds and traders/brokers. The most active companies are out of the energy/electricity business, as well as oil and gas and chemical industry.

A bibliography based survey had been carried out to list existing carbon fund and carbon buyers. The survey had been implemented with contact made at the *Second International Conference on JI projects in Ukraine "Climate Change and Business"*, IN Kiev, October 23 – 25, 2006.

As a result of it, about 40 organizations had been listed. Specific funds that are obviously not interested in the project (Community development Fund, Biocarbon, …) were automatically withdrawn from the contacts listing. The aim the survey was to list the Carbon Funds targeting landfills and Ukraine, and to determine the conditions of intervention of these Carbon Funds.

A questionnaire had been prepared with two main objectives:

- identify specificity of carbon funds
- identify those who show interest in the project

The questionnaire had been sent to 26 of these organizations. Carbon traders and broker were not include in this survey, as they are usually flexible and would intervene on further stager in the process. 11 out of this 26 answered within 1 month (note that there is only 1 contact point for the 6 carbon funds managed by the World Bank).

Framework of the interested Carbon Funds

Senter Novem

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Senter Novem is the Dutch governmental Agency for innovation and sustainable development. Since 2001 Senter Novem has contracted 23 JI projects and 4 CDM projects, representing a total emission reduction of 18 million tonnes of CO_2e and total contracted amount of € 85 million. The Netherlands has promised to limit greenhouse gas emissions to 200 million tons of CO_2e per year between 2008 and 2012.

Senter Novem had organized a JI purchase program (the ERUPT New Style program) open for all private and public legal entities (e.g. municipal owners, project developers, real estate owners and manufacturers) via project in Central and Eastern Europe. The program requires project:

- that are additional to any other option that would otherwise occur;
- that reduces a minimum amount of 100,000 tonnes of CO2 equivalent between 2008-2012;
- that are not adversely affected by the EU ETS;
- that becomes operational before 1st January 2008;
- that is operated by companies of good standing with strong balance sheet.

The ERUPT New Style program works in the following way. Though the procedure is flexible, it generally looks like this:

- when investment plan is ready and feasibility of the project has been demonstrated, project idea can be submitted to the National Authority responsible for JI project approval (Ministry of Environment). The host country will issue a Letter of Endorsement, to indicate they officially support the project.
- project idea can be submitted to SenterNovem, in the format of the so-called PIN (Project Idea Note). SenterNovem will evaluate the project idea and come back on a “first come, first served” basis.
- Senter Novem will sign a Letter of Intent for starting the negotiation. At this stage Senter Novem will request the project developer to implement and submit the following:
  - Project Design Document (PDD), which includes a baseline, the calculation of the emissions reductions, and a Determination Report;
  - business plan, containing amongst other things an investment plan and an implementation plan;
  - information on the supplier, such as annual accounts and references;
  - proof of financial closure of the project (equity and debt arrangements);
  - letter of Approval by the government of the project’s host country.
- Senter Novem will negotiate and finalise a contract, in the Emission Reduction Purchase Agreement (ERPA) format.

The Dutch governmental agency is willing to disburse payments up to 50 percent of the contract value during the construction of the project.

Testing Ground Facility

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The Baltic Sea Region Testing Ground Facility (TGF) is structured as a Public Private Partnership between Governments and private sector utilities and industrial companies in the Baltic Sea Region. It purchases AAUs and ERUs from energy related and other projects on behalf of its investors. It aims to stimulate an early follow-up of the Kyoto Protocol and to help the countries of the Baltic Sea Region to position themselves favourably in respect of fulfilling their own commitments under the Kyoto Protocol. The countries participating in the Testing Ground cooperation are Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden. Priority will be given to projects located in host countries in the Baltic Sea Region Testing Ground area, currently Poland, Lithuania, Latvia, Estonia, Russia, and Ukraine.

The Testing Ground Facility (TGF) was established by the Nordic Environment Finance Corporation (NEFCO), an international financial institution with wide experience of financing environment and energy projects in the potential host countries in the region. TGF has a total fund capital of €35 million.

Benefits to project owners and developers include:

- a defined geographic focus: an in-depth knowledge of the region in which we operate;
- direct experience of energy, environmental and municipal environmental infrastructure projects;
- responsiveness and flexibility of approach, with continuous project identification, not limited by tenders;
- potential access to project co-financing and co-purchasing of credits for larger projects.
- an ability to accept smaller projects (<250,000 t CO_2e over the crediting period).

Both private (private enterprises) and public sector (public utility companies, public-private partnerships and municipal, regional or governmental authorities) projects are eligible. Energy related projects are given priority with a focus on:

- renewable energy (biomass, small scale hydropower, wind power and geothermal);
- fuel switching;
- supply side energy efficiency and cogeneration;
- demand side efficiency and energy conservation;
- other sectors such as waste (e.g. waste to energy, capturing of methane from landfills).

All projects are subject to standard viability criteria: economic, financial, technical, institutional and environmental feasibility. An important aspect will be to determine that all financing needed for project implementation can be arranged and the project development is relatively advanced with most key agreements and permits in place. Assessment of delivery risk is key, with a focus on the supplier's financial standing and technical capacity. Particular attention is paid to securing the eligibility of the projects under the Kyoto Protocol (including host country related preconditions). Host country approval should be secured.

The TGF primarily expects project owners to mobilize the resources needed for project development. In individual cases support may be extended by the TGF for preparation of technical documentation and JI determination by independent entities. There is no preset minimum threshold limit for emission reductions but projects should be able to bear reasonable transaction costs and cost-effectiveness will be a criterion in the assessment of project proposals. It is expected that payments will normally be made upon delivery of the ERUs.

NEFCO may provide co-financing and can seek co-financing arrangements with other financiers, including IFIs such as the NIB, EIB and EBRD as well as commercial financiers and private investors.

NEFCO can participate in a project through:

- Subscriptions of equity and shares, facilitating mobilization of the necessary equity base for a project. NEFCO then participates as a partner in the project.
- Medium and long-term loans and guarantees, which are usually provided on market terms. In some cases subordinated loans and loans with equity features may be provided. Often the loans are extended in addition to NEFCO's equity participation in the project.
- Since 1996 NEFCO also administers a special Nordic facility for concessional financing of selected environmental projects within the neighbouring region. Through this facility projects can be supported by grants.

European Carbon Fund

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The ECF finances the carbon component of environmentally friendly projects and provide liquidity to the European carbon market. Initiated by two European banks (*Caisse des Dépôts* and *Fortis Bank*) in April 2005 and managed by IXIS Environnement & Infrastructures, ECF raised €142.7 million from several investment grade financial institutions.

Since January 2006, the ECF management team has contracted 12 million tons of emission reduction. It has concluded 8 deals, within various technologies (renewable energy, energy efficiency, waste management). It expects to purchase carbon assets from 15 to 30 projects in various locations and various technologies in order to build and manage a diversified portfolio. The fund offer is based on the following principles:

- competitive prices;
- project finance expertise with knowledge of carbon products and experience of environmental and sustainable development issues;
- large investment capacity;
- mastery of banking techniques and financial engineering with extensive experience of conducting transactions in developing or transition countries.

The European Carbon Fund has designed a buying policy in order to provide transparency, security, liquidity and profitability to sellers and investors alike. Transactions pursued by ECF have the following characteristics:

- carbon stream vintages: 2005-2012;
- quantities per project: from 50,000 to 1,000,000 t CO_2 equivalent per annum;
- flexible price structures: fixed and EU ETS indexed prices;
- payment on delivery, with potential for advance payments;
- not subject to public procurement rules: free of VAT;
- bankable contracts;
- management of the CDM/JI fees and procedures;
- spot and futures contracts, including options;
- confidentiality and quick execution.
- no penalty in case of project technical failure to deliver CERs/ERUs.

The Procedure for submitting an offer to sell ERUs to the European Carbon Fund works in the following way:

- each entity wishing to sell Carbon Credits to the ECF shall be responsible for making its own opinion in assessing the risks and rewards associated with each offer to purchase Carbon Assets made by the ECF.
- In order to submit a project and initiate negotiations with the ECF, each Applicant should complete and return to the ECF the following two documents:
  - the Initial Information Note;
  - an official letter from the Chief Executive Officer of the confirming that the he wishes to sell all or part of its Carbon Assets, nominating an authorised representative for this purpose, and naming the Applicant's consultant/broker and lawyer if applicable.
- Once completed and duly signed, the above documents should be sent to ECF. Upon receipt, the clearing committee of the ECF will review those preliminary documents and make a decision either:

- to pursue due diligence of the project in order to start negotiations that would eventually lead to a purchase offer;
- not to proceed further.

N.B.: the European Carbon Fund is exclusively dedicated to the purchase of carbon credits, mainly on a forward basis.

Asia Carbon Fund

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The Asia Carbon Group of companies is headquartered in The Netherlands. Asia Carbon was founded in February 2003. Its primary objective is to mitigate global climate change and initiate sustainable development through the application of the Kyoto Protocol financial mechanisms. Asia Carbon has been looking at funding primarily power generation plants (both small and large scale), utilizing Renewable Energy Technologies (biomass, bagasse, wind-power, hydro-power, solar power).

The Asia Carbon Fund invests into sustainable development projects globally. The investments into such projects are done holistically (including project finance) and not just for the purposes of carbon financing. Asia Carbon feels that this type of fund will be sustainable as opposed to how most live carbon funds (currently) operate. The Asia Carbon Fund is structured to optimise regulatory efficiencies.

The Fund size is €200 million, with 8-year closed-end fund. Asia Carbon aims to invest in 2 - 5 years. The first close would be €30-50 million. The Asia Carbon Fund primarily claims for renewable energy projects, energy and power conservation, Chemical industry (HFC23 + PFC) and has a geographical coverage in Asia (focus on India and China, as well as in South East Asian countries).

The fund is based on the following principles:

- target equity IRR > 15% (excluding ERUs);
- primarily renewable energy projects that are eligible to generate Carbon Credits under the Kyoto Protocol & EU ETS;
- there will be clearly defined exit strategy – exit, with a right of first refusal to the co-promoter within a period of 7 to 8 years;
- carbon Credits are to be distributed among the investors in proportion to their investments. The fund shall try to facilitate a fair a transparent mechanism to take care of the requirements of the investors;
- not more than 10% of the total corpus shall be invested in emerging technologies, including solar power. The focus of the investment would be in favour of projects based on established technologies and business models;
- due diligence: by outsourcing to relevant experts in each field of technical, market size & corporate position and financial;
- target closing date – December 2006.

The Asia Carbon's Carbon Advisory Services team offers companies, the public sector and private entities a range of solutions for optimising returns for projects that reduce Green House Gas emissions (**Carbon Due Diligence, CDM Project Development, Project Idea Note (PIN) and Project Design Document (PDD) preparation).**

The Asia Carbon Asset Development Facility (ACaDF) is an initiative developed by the Asia Carbon Group of companies to assist project developers in producing CDM projects through the development of the Project Design Document (PDD) as well as facilitating the validation and registration process. The PDDs are developed at significantly reduced costs as compared to other carbon advisory services available in the market. Upon successful registration of the CDM project with the Executive Board, the ACaDF will recover the costs of producing the PDD.

Advantages to Project Developers are:

- The ACaDF provides a means to Project Developers of building their projects under the CDM /JI without any risk of incurring high transactional costs on PDD development, validation and registration, in case the project is not registered.
- The ACaDF cost of recovery, plus the premium on successful registration and sale of ERUs is relatively low;
- The ACaDF is linked to a network of ERUs Buyers and has a good possibility of obtaining the best CER price for the project developer. In addition, the ACaDF may trade the ERUs on the Asia Carbon Exchange which allows for the most transparent price discovery mechanism, giving the much desired option to the seller to accept the highest bid.
- The ACaDF works with its network partners who apply for governmental finance in funding Feasibility Studies and PDD Development. This application process usually takes 3-6 months to obtain approval. The ACaDF can therefore be utilized as a form of "Bridging Carbon Finance" to kick-start PDD development, with a view to developing the JI project quickly, to be reimbursed later by the governmental finance, should the governmental application be successful.

EDF Trading

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EDF is the biggest power utility in Europe and has a first class credit rating. The EDF Group, with an annual EU ETS allocation of around 100million tonnes, has a very significant compliance position and so has a compelling reason to be significantly involved in the carbon market.

EDF Trading is the wholesale markets counterpart and primary risk manager of EDF. EDF has a great technical and financial strengths and a significant international presence, which benefit to its subsidiary. EDF Trading has been involved in the CDM and JI market since mid 2004, with a wide ranging portfolio of Carbon Emission Reduction purchase agreements already signed and others under negotiation with numerous counterparts around the world.

EDF Trading works on multi-commodity trading market: physical & financial (oil, power, gas, coal, freight, emissions allowances). The level of Emissions allowances traded was 60.3 Mt (beginning of 2006). Portfolio of CO_2 reduction emission primarily comes from the optimisation of EDF assets, the hedging products provided to industrial customers and the proprietary trading activity.

EDFT buys Certified Emissions Reductions from any projects, the pricing structure being established to fit the project developer's risk profile. EDFT team will assist the developer in the development of the project documentation (PDD, PIN) and in the project investment scheme as well as in the search for funding partners.

Advantages to Project Developers are:

- as part of the EDF Group, EDFT benefits from the strength of an international company, with great experience in the energy related project and would be a long term partner;
- the experience of a team dedicated to flexibility mechanisms projects with a significant track record.
- the ability of EDFT to structure customized solution to deliver value to projects thanks to flexible and creative and complementary approach.

Belgium Federal JI / CDM Tender

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The **Belgium Federal JI / CDM Tender** is the buying program set by the Belgian government, which is buying carbon credit on a tender scheme. The first tender is closed, a second one will be launched beginning of 2007. There is no reason for which Donetsk landfill gas program could not participate to the tender and the Belgium not be interested in the ERU created by the project.

Belgium ratified the Kyoto Protocol in 2002, committing itself to cut its greenhouse gas emissions by 7.5% in the 2008-2012 period.

As part of its national climate strategy, the Belgian State decided to purchase Emission Reductions generated by JI (Joint Implementation) and CDM (Clean Development Mechanism) projects.

A first tender with a budget of 9.3 million euros has been successfully launched in May 2005 (tender is now closed). Moreover, the federal government approved an additional budget of 50 million euros for acquiring Emission Reductions from JI and CDM projects, both by investing in carbon funds and by launching a second tender. More information on this second tender will be available in January 2007.

Procedures for the JI/CDM Tenders (first tender)

The Belgian tenders follow a two-phase approach:

- **During the First Phase, Candidates will be selected on the basis of an "Expression of Interest",** formally expressing their interest in selling Emission Reductions and justifying their administrative, technical and financial capacity to deliver these Emission Reductions.
- **During the Second Phase, Candidates selected during the First Phase will be invited to submit a "Proposal"** with a Validated Project Design Document. The projects will be ranked according to their contribution to sustainable development, their certainty of delivering Emission Reductions, and their price.

In principle, Belgium Federal authorities are interested in buying ERUs from Donetsk landfill gas project. Until now the concrete modalities of the new tender are not yet final, so information on contracting condition cannot be given yet.

The Belgium Federal JI / CDM Tender offer a financial contribution for making up the PDD and the determination report, and is open for paying prepayments. It is likely that a minimum size would of 60,000 ERUs per contract.

Further information will be given in due course.

Four good reasons to go for the Belgian Tenders (first tender)

- Financial contributions of around 40,000 euros for preparing the documents.
- Up-front payments up to 50% of the Contract value.
- Flexible procedure: multiple opportunities to submit *Expressions of Interest* (first phase) and *Project Proposals* (second phase), timely response, ERPA tailored to the project specific needs.
- comprehensive assistance and a close dialogue will be provided.

Multilateral Carbon Credit Fund

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Multilateral Carbon Credit Fund (MCCF): the MCCF will buy ERU from the project only if ERBD have takes part in the funding of the project. This is stated as a key condition. As the financial plan is not fully complete now, it is not sure if the project will be funded by EBRD or not. Selling ERU to the ERBD fund remains a possibility, but the EBRD did not sent back the questionnaire, so it is difficult to analyse if the Donetsk landfill program is in line with MCCF objectives.

The main role of the European Bank for Reconstruction and Development in the field of carbon finance is to act as financier of emission reduction projects. However, in keeping with its principle of 'additionality' - supporting and complementing the private sector rather than competing with it - the Bank can play a number of additional roles. The Bank can help Governments and companies in its region of operations overcome obstacles in emission trading by providing technical advice funded by donor governments.

The EBRD is well positioned to purchase, for the account of third parties, carbon credits from GHG emission reduction projects. The European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) have established a joint Multilateral Carbon Credit Fund (MCCF) as a key instrument in their strategy for combating climate change. The MCCF is designed to develop the carbon market in countries in transition to market economies.

The Multilateral Carbon Credit Fund (MCCF) became operational in 2006. The fund buy carbon credits from investments under the European Union scheme as well as the Protocol's Joint Implementation and Clean Development Mechanism. It also aims to facilitate the direct trading of carbon credits between some of its shareholders (so-called Green Investment Schemes).

The MCCF helps its shareholders and other parties to meet their mandatory or voluntary greenhouse gas emission reduction targets. The fund sources and purchases carbon credits from projects financed by the EBRD and/or EIB in the countries in transition eligible for EBRD operations.

The size of the fund will be capped initially at € 150 millions for the project-based carbon credits. The MCCF is open to both private and public sector participants.

The following countries in transition are eligible for participation in the MCCF: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Russia, Kazakhstan, Serbia and Montenegro, Kyrgyz Republic, Latvia, Lithuania, FYR Macedonia, Moldova, Poland, Romania, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, **Ukraine** and Uzbekistan.

How the MCCF works

The identification, preparation, negotiation and monitoring of project-based carbon credit transactions is conducted by up to three Carbon Managers. These are private sector firms with specific skills in carbon purchasing. Carbon Managers works under the supervision of the MCCF Secretariat.

Carbon credits purchased from projects by the Carbon Managers are acquired by the EBRD acting for the account of sovereign participants, and by private participants directly. Participants have the opportunity to approve, and decide whether to participate in, each carbon credit transaction submitted to them by the MCCF Secretariat. Project-based carbon credits will then be allocated amongst participants pro rata to their contributions.

Endesa Climate Initiative

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TACIS team had had exchanges with the **Endesa Climate Initiative**, which asked for further information on the project and its development stage. Unfortunately, no feed back or precise detail on Endesa business approach had been finally provided.

Endesa is the leading utility in Spain and a major electricity utility in the European Mediterranean region and in Latin America. It has a growing presence in the natural gas market segments in Spain and Portugal. Endesa's Spanish installations have been able to reduce their CO_2 emissions by 22.7% in the period 1990-2005, while more than doubling the electricity output. Endesa's specific CO_2 emissions in 2007 will be 35% below 1990 levels.

Endesa's significance as an international energy operator is enhanced by its presence in other related services that complement and add value to its core business. Endesa has considerable experience in

research and technology development. It has played a leading role in some of the most important achievements in the Spanish electricity sector (wind farm, pressurized fluidised bed combustion plant, integrated gasification combined cycle plant...).

Contracting Carbon Credits for the first round of the Endesa Climate Initiative is expected to be completed by December 31, 2006. This first round of procurement under the Endesa Climate Initiative aims at buying 5 million CERs before 30 April 2008 and 10 million CERs and ERUs before 30 April 2013.

Endesa does not have any preference for specific project types or geographical regions, Endesa is committed to providing additional value to project developers as sellers of emission reductions, and offers carbon project finance with competitive prices for emissions reductions and tailor-made contracts.

The offer is based on:

- Industry expertise with understanding of how business works;
- Reliable and sound counterparty;
- Possibility to support project development in electricity sector;
- Support in obtaining host country approval;
- Experienced Management Team;
- Flexible and speedy approach: carbon transaction costs are possibly financed (validation, registration, verification), and refundable through emission reductions.

The Endesa Climate Initiative gives preference to large projects (1 million tons of reductions up to 2012 or 100,000 tons per annum), within the waste, industrial or energy sectors. Projects have to be eligible under the EU Emissions Trading Scheme. Payment of ERUs is negotiable in relation to project risks. Endesa can intervene at different stage of the project, thus spot and forward contracts are possible. Endesa is willing to offer options on surplus emission reductions and buying the post 2012 credit is possible. It may be agreed with the project developer on project support mechanisms in order to enhance project feasibility and speed up implementation:

- Prepayment of up to 25 percent of the total contract value;
- Advancing the costs of the development of the PDD, Validation, Verification and Registration.

The Endesa carbon contracting procedure is of 5 steps:

- the first step consists of an initial screening of the project (evaluation within 2 weeks);
- If the project offers reasonable prospects of delivering Carbon Credits, Endesa proposes formalizing the cooperation through an Exclusivity Agreement. The aim of it is to ensure the exclusivity of the relationship between the project developer and Endesa (aim to conclude within 1 month);
- after having concluded an Exclusivity Agreement, Endesa conducts its appraisal of the project. During this process, the project developer continues preparing the underlying CDM/JI documentation (aim to conclude within 1 month);
- once the parties have concluded their due diligence, they convene to negotiate a Carbon Credit Agreement (aim to conclude within 1 month);
- Contract implementation

Endesa aims to assure a quick procedure throughout the contracting process with a total time from initial submission to signing of contract of less than 6 months.

Greenhouse Gas Credit Aggregation Pool by Natsource Asset Management

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Natsource lately took contact with the TACIS team. Unfortunately the program did not enable to wait for more information about Natsource business operation. Brief feed back is given here.

Natsource LLC. is a global provider of asset management services, transaction services and advisory and research services in emissions and renewable energy markets. The Greenhouse Gas-Credits Aggregation Pool (GG-CAP) was created by Natsource Asset Management (NAM) Corp. to provide buyers with high quality greenhouse gas (GHG) emission reductions (ERs) that can be applied against their GHG emissions limitations. Similar to a mutual fund, the Pool aggregates individual buyers' demand and diversifies risk by acquiring a portfolio of instruments.

GG-CAP is soliciting candidate projects that create ERs from 2005 to 2012 and conform to the rules that create compliance instruments under the European Union Emissions Trading Scheme (EU ETS).

Selection Criteria

All projects will be scored and evaluated using Natsource. The candidate project activities must conform to the rules that create compliance instruments under the EU ETS. Projects must meet the minimum criteria that follow to be eligible for screening:

- provide real, measurable and long lasting benefits related to climate change mitigation, and achieve permanent emission reduction from sources;
- have started no earlier than 1st January 2000;
- generate ERs that are additional to the reductions that would occur in the absence of the project and the additionality must be proven, including analysis of alternative scenarios that comply with regulations in place and/or current practices;
- be financially sound, i.e. show evidence of solvency, guarantees, etc;
- preferably demonstrate host country approval in the form of suitable confirmation from appropriate in-country agency or letter from regulatory authority;
- show the potential for approval by the Executive Board (based on decisions made for other projects and sectors);
- take into consideration requirements established under the EC Acquis Communautaire as part of their baseline if related to JI projects undertaken in countries that have signed an Accession Treaty with the EU;
- for projects involving power generation from biomass: (1) present an appropriate biomass reposition schedule, duly verifiable and certifiable and prove not to place undue pressure on biomass stocks and end up resulting in a switch back to fossil fuels (on- or off-site); and (2) have a negligible impact on the average grid emissions factor and the grid average carbon emission factor (CEF) must be lower than the CEF of the most likely operating margin candidate.

The GG-CAP is a "buyers pool" that will combine the purchasing power of the 26 participants to acquire and manage the delivery of a large volume of compliance instruments created by the project-based mechanisms included in the Kyoto Protocol.

The 26 participants in GG-CAP are among the largest consumer product, manufacturing, steel, energy and utility companies in Europe, Japan, and North America. Participants include: The Chugoku Electric Power Co., Inc.; Cosmo Oil Co. Ltd.; Electricity Supply Board (Ireland); Endesa Generacion; E.ON UK; EPCOR; Hokuriku Electric Power Company; Hokkaido Electric Power Co., Inc.; Iberdrola; Norsk Hydro ASA; The Okinawa Electric Power Co., Inc.; Public Power Corporation S.A.; Repsol YPF; Sergey Brin; Suntory, Ltd.; and Tokyo Gas Co., Ltd.

Annex 2 Project Idea Note of Regional Landfills Programme

Temporary state of the PIN – to be completed by the applicant

A Project Identification

A 1 Project summary	
Title of project activity	**Tacis Project: Capacity Building in Donetsk Oblast for Solid Waste Management**
Applicant	**"Donetsk Region Waste Management Company"**
Host Country	**Ukraine**
Project type	☑ **Joint Implementation** ☐ Clean Development Mechanism
Category of project activity	**Landfill Gas**
Generation of emission reductions	From: **2008** to: **2012**
Estimated emission reductions *(in t CO_2e up to 2012)*	2008 13,000 2009 55,000 2010 130,000 2011 240,000 2012 380,000 **TOTAL 818,000** **Average annual 163,600**
Crediting Period	From: **2008** to: **2012**
Offered amount of emission reductions	☑ **Joint Implementation**: **ERUs: not calculated yet (818 000 t CO_2e is the a rough evaluation of non emitted methane)**
Proposed ERU/CER price (EUR)	-
Date of submission of Expression of Interest	-

B Project Participants

B 1 Applicant	
Name	**"Donetsk Region Waste Management Company"**
Type of organisation *Please also describe the ownership structure.*	**Regional Government owned company** *100% owned by the Regional Council of Donetsk Oblast and several municipalities*
Other functions of the Applicant within the project	☐ Sponsor ☐ Intermediary ☐ Technical consultant ☐ Other: _____
Main activities, knowledge and experience	Ad hoc company for the Solid Household Waste disposal (as defined in the Regional Sanitary Landfill Programme), in charge of the funding, the construction, the operation of the regional sanitary landfills and the associated network of transfer stations
Name of contact person	-

Address	-
Phone/fax	-
E-mail	-

B 2 Project developer	
Name	**Consortium Thalès E & C – SOGREAH – GKW Consult** **(under TACIS program)**
Type of organisation	**Consortium of private consulting companies**
Other functions of the project developer within the project	☐ Sponsor ☐ Intermediary ☑ **Technical consultant** ☐ Other: _____
Main activities, knowledge and experience	**Waste management And environment consulting**
Name of contact person	**Philippe FICHAUX / Samuel Guy**
Address	**2b, Prospekt Mira** **83050 DONETSK** **Ukraine**
Phone/fax	**+38 062 340 00 50**
E-mail	philippe.fichaux@ekopro.biz / samuel.guy@sogreah.fr

B 3 Other project participants	
Name of project participant	International Financing Institutions
Type of organisation	☐ Governmental body: _____ ☐ Private enterprise ☐ NGO ☑ **Other: International Financing Institutions**
Function within the project	☑ **Sponsor** ☐ Intermediary ☐ Technical consultant ☐ Other: _____
Name of contact person	-
Address	-
Phone/fax	-
E-mail	-

C Host Country

C 1 Location of project activity	
Host Country Party(ies)	Ukraine
Region/State/Province etc.	Donetsk Oblast
City/Town/Community etc.	Involve all the cities and communities in the Region. The Waste Management plan for Donetsk Region will enable the construction of 11 regional sanitary landfills. The five ones to be build and to operate will be the located in • Donetsk City; • Kramatorsk, Slaviansk, Drujkovka and Slaviansk area; • Marioupol; • Makeyevka; • Dimitrovo.
Brief description of the project location	The Regional Sanitary Landfills Programme targets to close all existing municipal landfills and dumpsites and to create 11 new sanitary landfills covering the needs of disposal of the whole oblast. A Tacis study determined the landfills and their catchment. Landfill sites selection has been based on the map of the favourable areas (geology and hydrogeology) and the study of additional criteria (relief, surface water, neighbour housing, …). The choice of the 11 planed sites allowed had been made from a 40 potential sites. The first landfills to be built cover the main population areas.

C 2 Status of Host Country		
Host Country	☑ **Signed and ratified, accepted, approved or acceded to the Kyoto Protocol** ☐ Signed the Kyoto Protocol and has demonstrated a clear interest in becoming a Party in due time ☐ Has already started or is on the verge of starting the national accession process	
Memorandum of Understanding (MoU) with	Signed: o **Denmark** o **Canada** o **Netherlands** o **World Bank**	Prepared for signing: ▪ **France** ▪ **Austria** ▪ **Italy** ▪ **Portugal**

D General Project Information

D 1 General Information	
Project name	**Regional Sanitary Landfills Programme of Donetsk Oblast**

Project objective	Methane collection from the landfill and for electricity production will avoid release in the atmosphere of 25,346,400 m^3 of methane during the 2008 – 2012 period, that is to say **818,000 tonnes of CO_2e,** non considering CH_4 flared occasionally and emission from the gas power station. It is noted that extra ERUs can be providing by switching of energy from national grid to landfill gas use to produce electricity.
Description of project background	The TACIS Project: "Improvement of the Solid Household Waste Management in Donetsk Oblast" led to the development of new schemes of waste management and: ▪ Implementation of Local Action Plans (5-year at cities and rayons level) realizing the objectives of the Regional Strategic Plan ▪ Pilot-project (selective collection, provision of equipments for sorting plant, inter-city management of recyclable waste …) The strategy will lead to the construction of 11 new landfill sites, among which 5 should start operation between 2007 and 2010. Biological activity in the landfill will produce during the first years of operation about 25,346,400 m^3 of methane (2008 – 2012 period). Methane collection from the landfill and use for electricity production will avoid release in the atmosphere of **818,000 tonnes of CO_2e.** It is estimated that, the global scheme with 11 sites will operating, could produce more than 4,636,430,000 m^3 during the 45 years of biological activity. Thus, the gas collection network will avoid the emission in the atmosphere of 69,546,450 t CO_2e in the meantime. The annual average would be about 1,545,476 t CO_2e per year. As first approach, ERUs generated evaluation is only based on non-emitted methane. ERUs amount might increase, knowing the production of electricity will avoid CO_2 emission as well. Information about the electricity production is not available at this stage.

D 2 Category(ies) of project activity	
Project category *Please mark accordingly.*	☑ **Projects whose purpose is the avoidance or (energy) recovery of landfill gas;**
D 3 Technical aspects	

	The regional sanitary landfills of Donetsk Oblast will meet the usual western standards. The landfills will be built in two phases: 5 in 2007 and 6 in 2009. A gas collection system (drains, wells, network) will be implemented on site to collect the landfill gases, following the landfill site development steps. The collected gas will be sucked out from the pipes with a vacuum system and a blower. Then the gas will be transferred to gas engines where it will be burnt to produce electricity. If gas quality or quantity do not reach required standards (most of it depending on CH_4 proportion) to be used in the engines, the gas will go to a flare and will be burnt. A more accurate description of the system will be provided at later stage, and will be included in PDD, as well as monitoring equipments. The purpose is to collect all the landfill gas for preventing emission in the atmosphere and to use it for power production. Anyway when not converted to power, landfill gas will be burnt in a flare and so contributing to lower GHG emission. An additional purpose of the project is to sell electricity produced from the landfill gas to the public network. Direct local uses of the heat generated by the gas engines (cooling, exhaust gases) may be found but they have not been yet investigated and it could only be an additional benefit for environment.

E Project Organisation

E 1 Project team	
Project-specific qualifications and experiences	The Region Strategy had been build under the TACIS project in ▪ Phase 1 (January 2003 - November 2004): Improvement of the Solid Household Waste Management in Donetsk Oblast ▪ Phase 2 (May 2005 - November 2007): Capacity Building in Donetsk Oblast for Solid Waste Management The TACIS projects have been respectively implemented by the consortiums Thalès E&C – GKW Consult (Donetsk 1), and Sogreah – GKW Consult – ADEME (Donetsk 2). Companies and experts involved in all phases of the projects show significant experience and qualification in waste management, strategy implementation, facilities designing (among which, landfill sites) and long term experience in the Ukraine and the area.

E 2 Schedule	
Current project status	☑ **Project idea** ☐ Planning ☐ Implementation
Status of financing	**Financial plan under negotiation. IFI manifested its interest for the funding of the investments of the project and will provide most of the funds.** **ERUs may represent a significant part of the funding.**
Status of negotiations with the Host Country	**Not started yet – feasibility stage**
Status of permission procedures of authorities	**The project and PIN will be submitted to local Designated Focal Point (Ukraine Minister of Environment) in due time.**

Project preparation	From: on going to: 30/06/07
Construction/assembly	From: 01/07/07 to: 31/12/08
Project lifetime	**From: 2007 to: 2032**
Generation of ERUs	**From: 2008 to: 2012**
Other milestones	• Donetsk City landfill: operating in **2008;** • Kramatorsk, Slaviansk, Drujkovka and Slaviansk area landfill: operating in **2007;** • Marioupol landfill: operating in **2008;** • Makeyevka. landfill: operating in **2008;** • Dimitrovo landfill: operating in **2008.**
Effect of PIN acceptance on the time schedule of the project	Must be accepted for project being given LoE / LoA and PDD implemented. Milestone for funding negotiation with IFIs.

E 3 Financial aspects	
Costs of project development (EUR) *Please give figures and briefly explain (background of) calculations.*	
Costs of project implementation (EUR) *Please give figures and briefly explain (background of) calculations.*	
Estimated annual operating costs (EUR) *Please give figures and briefly explain (background of) calculations.*	
Estimated annual revenues (EUR) *Please give figures and briefly explain (background of) calculations.*	
Financing sources (equity/debt capital, financing institutions)	
Proposed ERU/CER price (EUR) *Please explain calculation.*	

F Greenhouse Gas Emission Reductions

Only projects resulting in emission reductions of greenhouse gases listed in table F1 can be accepted as JI or CDM projects. All emissions and/or emission reductions must be stated in metric tonnes of CO_2 equivalent.

F 1 Greenhouse gases	
Greenhouse gases to be reduced by the project	☑ **CO_2** ☑ **CH_4** ☐ N_2O ☐ HFCs ☐ PFCs ☐ SF_6

The Project Boundary shall encompass all anthropogenic emissions by sources of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the project activity.

F 2 Project Boundary	
Description of Project Boundary	Landfill sites will be totally new. Collection pipes network will be designed in accordance to the type of wastes and the landfill conception. Catchment rate will be very high, but still, there would be a slight percentage that could not be collected and would goes directly to the atmosphere. Emission evaluation will include emission of methane produced from the 4 landfill sites and monitored from the gas network monitoring system. Other activities on site, as use of compactors and others vehicle, are not includes in project boundaries, as seem to be not relevant, through landfill operating methods will impact on gas production. Waste collection and other activities not located on sites will not be included within the project boundaries. The project boundary is limited to the Landfill site, the power production and the flare. Electricity Distribution is outside the project boundary. There is no Heat production or Heat utilisation. A scheme will be provided.

F 3 Project emissions	
Description and estimation of project-specific greenhouse gas emissions within the Project Boundary	Remaining GHG emissions will consist in: - CH_4 non collected, due to catchment rate - CO_2 due to CH_4 combustion, either when flaring is necessary or due to power generation

A Baseline is the scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the project ("business-as-usual-scenario"). By comparing the Baseline with the project emissions the emission reductions generated can be calculated.[6]

F 4 Baseline	
Outline of considered Baseline methodology / scenario and estimation of Baseline emissions within the Project Boundary	There is no known project that would aim to plan and install gas collection and electricity production at designing step for a landfill. A detailed assessment of approved methodologies and local regulation must be done to determine whether methodologies can be used or if there is a need for developing / adapting methodology. A first approach shows that the **approved consolidated baseline methodology ACM0001 "Consolidated baseline methodology for landfill gas project activities" could be used.**

[6] Additionally, Leakage has to be taken into account.

Leakage is defined as the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the Project Boundary, and which is measurable and attributable to the project activity.

F 5 Leakage	
Description and estimation of Leakage	There are three primary sources of leakages: - efficiency of the collection network can not be 100 %. All the biogas produced by waste fermentation will not be collected, though it is considered very high. Monitoring plan will enable to know precisely the amount of gas collected and burnt; - extracting and pumping the landfill gas implies use a power from any source, most probably electricity from the grid. The electricity needs can be considered significant (<1%) when compared to the emission avoided by the project; - there could be some leaks in the gas transmission pipeline between the landfill and the power plant. These leakages will be easily monitored with measurements made at each step of the process

F 6 Emission reductions	
Crediting period	From: **2008** to: **2012**
Estimated annual and total abatement of greenhouse gas emissions in tonnes of CO_2 equivalent in comparison to the Baseline scenario (taking into account Leakage)	Baseline and project calculations had not been fully implemented yet. Though, it is estimated that methane collection from the landfill and for electricity production will avoid release in the atmosphere of 25,346,400 m^3 of methane during the 2008 – 2012 period. **818,000 tonnes of CO_2e,** non considering CH_4 flared occasionally and emission from the gas power station, could be avoided during the 2008 – 2012 period, or an average rate of **163,000 tCO_2e / year**

G (Additional) Ecological, Socio-Economic and/or Development Effects

G 1 Expected environmental effects	
Expected global/local environmental effects (positive and negative) of the project	The immediate and obvious positive impact of the project would be the removal from the atmosphere of the methane and associated effect on Greenhouse effect. Depending on recent law, this would have been flared or not. Nevertheless, the project will have a large scale of positive impact on local and global environment, such as: - reduced coal-fired power plant emissions (sulphur oxides, nitrogen oxides, particulates), hence an improvement in air; - quality and in the overall quality of the environment; - reduced adverse coal mining impacts (dust and acid mine drainage); - contribute to reduce the nuclear power plants risks in the area. The project will increase the safety at the landfill site due reduced risks for explosion or poison from uncontrolled migration of LFG and the obnoxious smells inside and outside the landfill.

G 2 Socio-economic and development aspects	
Expected social and economic effects of the project	Landfill is a common way to eliminate municipal waste in the country and in the area. The building of 4, then 11 landfill with such a modern design and equipment will contribute to the transfer of technology, that can be develop within the neighbourhood landfills (including abroad, as the Region has borders with other countries). The inclusion of the productive use of the landfill gas collected will also improve the financial position of the new born Regional Company: hence the local government will be able to expand services while providing the optimum landfill services and shows their capacity to adapt to quick changes in the country. Due to the number of landfills planed, on a long term plans and due to the "step by step" process required for landfill development, it is likely that the project will initiate new job to provide the needed services for installing pipes, pumps, monitoring instruments and so on. Ukraine is not energy self-dependant, so the project will reduce energy dependence.
Project-related employment structure	The project is not likely to create direct job on the landfill site. As shown in the previous box, and due to the dynamism of the Region, it is likely that new activities would be create directly connected to the project
Do any of the listed effects occur due to the project?	☐ ~~Resettlement~~ ☐ ~~Restriction of access to essential resources~~ ☐ ~~Compulsory purchase of land~~

H Additionality and Sustainability Effects

H 1 Additionality	
Presentation of the Additionality of the project *Please explain briefly how and why the project is additional and therefore not the (considered) Baseline scenario. Please describe why the emission reductions would not occur in the absence of the proposed project activity, taking into account national and/or sectoral policies and circumstances.*	Landfill gas recovery and utilization is an advanced solid waste and energy technology which is not currently utilized by the waste management sector in Ukraine. The technology is relatively unavailable to municipal and city waste management companies due to its lack of implementation and its extensive investment costs. There are no known municipal regulations which require landfill gas recovery and utilization. The fact of nonexistent funding for such facilities is widely acknowledged at all levels which leads to some of the ambiguity. Thus the project would avoid the emission in the atmosphere of 25,346,400 m^3 of methane, highly contributing to the greenhouse effect. It is foreseeable that LFG recovery and utilization technology will increasingly become available to municipalities and cities in the next decades as existing landfills are closed and new ones started. The majority of funding for implementing the technology will inevitably come from international developments funds. Therefore, it is expected that the existence of the technology in the country will help to improve the standard of landfill designing. Outside of what the submitted JI agreement is considered additional. The project is clearly additional as it is not financially viable. GHG emission reduction by LFG capture and electricity production do not generate high financial revenue: cost of energy in Ukraine is quite low (though growing quickly), Ukraine produces more electricity than it need itself and buy Russian gas at a price very much under the market ones. If LFG is utilised for energy production the revenue from electricity sales and the cost savings from energy utilisation on the landfill can not cover the additional

	investment and O&M costs. It should however be noted that electricity generation costs in Ukraine are likely to increase in the longer term as natural gas prices for electricity generation currently are below world market prices and must be foreseen to increase. This is however not taken into account here. Furthermore, the waste company which will be created for landfill operating totally depends on international funds. Incomes will come from the fees paid by the inhabitants. With a LFG collection and electricity production, new incomes can be expected from the sell of electricity and the carbon credits. The quantities are strictly depending of the investment of sanitary landfills. It means that a large part of the incomes are very sensitive to the evolution of energy prices. It's obvious that there's a transition period to manage. A strict application of the polluter pays principle should request that all the investment should be funded by loans and the reimbursement and the interests should be included in the price of the service. Such a policy would seriously delay the implementation of the program: raising capital for investment in LFG recovery is therefore a significant barrier to implementation of the project.

H 2 Sustainability Effects	
Summarising description of the project's contribution to the sustainable development of the Host Country	The implementation of these landfill gas projects is in full accord with the policy on sustainable development and Renewable Energy of the government of Ukraine. The project will reduce air pollution and global warming, and thus has local and global effect and a positive effect on the environment. Moreover, the project will enable the development of new activities and the transfer of technologies (landfill designing, LFG collection network designing and operating…) to a state where landfill is a common way for waste management. This is likely to contribute to the creation of new job and high value activities. Development of renewable and local energy sources contribute to local development and reduce the country energy dependence. It reduces the oil and gas transportation as well as coal mining, which are a source of pollution and environmental risk.

Annex 3 Project Design Document (draft or framework for PDD)

JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM - Version 01

Joint Implementation Supervisory Committee page x

SECTION A. General description of the project

A.1. Title of the project:

A.2. Description of the project:

A.3. Project participants:

A.4. Technical description of the project:

A.4.1. Location of the project:

A.4.1.1. Host Party(ies):

A.4.1.2. Region/State/Province etc.:

A.4.1.3. City/Town/Community etc.:

A.4.1.4. Detail of physical location, including information allowing the unique identification of the project (maximum one page):

A.4.2. Technology (ies) to be employed, or measures, operations or actions to be implemented by the project:

A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances:

A.4.3.1. Estimated amount of emission reductions over the crediting period:

A.5. Project approval by the Parties involved:

SECTION B. Baseline

B.1. Description and justification of the baseline chosen:

B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project:

B.3. Description of how the definition of the project boundary is applied to the project:

B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline:

SECTION C. Duration of the project / crediting period

C.1. Starting date of the project:

C.2. Expected operational lifetime of the project:

C.3. Length of the crediting period:

SECTION D. Monitoring plan

D.1. Description of monitoring plan chosen:

D.1.1. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario:

D.1.1.1. Data to be collected in order to monitor emissions from the project, and how these data will be archived:

ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.1.2. Description of formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

D.1.1.3. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived:

ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.1.4. Description of formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

D. 1.2. Option 2 – Direct monitoring of emission reductions from the project (values should be consistent with those in section E.):

D.1.2.1. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived:								
ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.2.2. Description of formulae used to calculate emission reductions from the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent):

D.1.3. Treatment of leakage in the monitoring plan:

D.1.3.1. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project:								
ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.3.2. Description of formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO_2 equivalent)

D.1.4. Description of formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent):

D.1.5. Where applicable, in accordance with procedures as required by the host Party, information on the collection and archiving of information on the environmental impacts of the project:

D.2. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored:		
Data *(Indicate table and ID number)*	Uncertainty level of data *(high/medium/low)*	Explain QA/QC procedures planned for these data, or why such procedures are not necessary.

D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan:

D.4. Name of person(s)/entity(ies) establishing the monitoring plan:

SECTION E. Estimation of greenhouse gas emission reductions

E.1. Estimated project emissions:

E.2. Estimated leakage:

E.3. The sum of E.1. and E.2.:

E.4. Estimated baseline emissions:

E.5. Difference between E.4. and E.3. representing the emission reductions of the project:

E.6. Table providing values obtained when applying formulae above:

SECTION F. Environmental impacts

F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party:

F.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:

SECTION G. Stakeholders' comments

G.1. Information on stakeholders' comments on the project, as appropriate:

Annex 1

Contact information on project participants

Organisation:	
Street/P.O.Box:	
Building:	
City:	
State/Region:	
Postal code:	
Country:	
Phone:	
Fax:	
E-mail:	
URL:	
Represented by:	
Title:	
Salutation:	
Last name:	
Middle name:	
First name:	
Department:	
Phone (direct):	
Fax (direct):	
Mobile:	
Personal e-mail:	

Annex 2

Baseline information

Annex 3

Monitoring plan

Annex 4 Analysis of changes in the level of tariffs for SHW collection services in Donetsk Oblast

Title	Analysis of changes in the level of tariffs for SHW collection services in Donetsk Oblast		
Code	061020 Analysis of tariff changes 1 E.doc	Date Redaction	20/10/06
Index of Revision		Emitter	Natalia BILOVA

Introduction

One of the main objectives of the Regional strategic plan of solid household waste management in Donetsk oblast for 2005-2009 is to reach a 100% payment collection from population for SHW collection services.

The objective of the present report is to study changes in tariffs for SHW collection for all groups of consumers, including inhabitants, dynamics of tariff development, ratio of payments made by the inhabitants for the services provided, ratio between the level of tariffs and growth of inhabitants' incomes/average salary over the period of 2002-2006.

Beside that, we have considered the dynamics of the change of SHW volumes collected from enterprises and organizations, both for the oblast as a whole and by cities and rayons.

Definition of terms

The definitions used in the present report have the following meaning:

commercial waste stands for solid household waste produced at enterprises and organisations, including the ones referring to budget and social sphere;

incomes of inhabitants stand for the volume of incomes calculated in monetary or natural form: salaries, incomes from property, social assistance and other current transfers (goods and services received in a natural or monetary form on privileged conditions).

Methodology

Sources of information

During the study the following sources of information were used:

- Data of monitoring for establishment of tariffs for housing services (for the year 2005 and 9 months of 2006) and information on sanitary cleaning of populated areas of Donetsk oblast for 2004 – first half of 2006 prepared by the Central Department of City-Planning, Architecture, Housing and Public Utility Services of the Regional State Administration;
- Information of cities and rayons of the oblast about the state of solid household waste management for 2003-2004;
- Statistic year-book of the Donetsk oblast for 2005;
- Data of the oblast statistic form N°1 – debts (housing and public utility services) "On Payment for Electricity-supply, Housing and Public Utility Services" developed by the Central Department of Statistics of Donetsk oblast;
- Regional strategic plan of solid household waste management in Donetsk oblast for 2005-2009.
- Some of the information was received by phone by contacting local departments of housing and public utility services.

Methodology of calculating indicators

Indicator «Average tariff for SHW collection services provided to the population»

As there were no fixed tariffs for SHW collection services provided to the population in the **year of 2002**, the level of tariff per person/month in cities and rayons of the oblast has been defined on the basis of average costs of waste collection included in the apartment fee for 1 m^2 (2.2 – 2.8 kopecks – data of cities and

rayons) and the norm of dwelling per person of each city/rayon taken from statistics for 2002. On the basis of tariffs received an average tariff was calculated.

For the years **2003-2004** these data have been calculated on the basis of information provided by cities and rayons.

Calculations of average tariffs for SHW collection services provided to the population for the **year 2005 – the first 9 months of 2006** were based on the data of monitoring over establishment of tariffs for apartment maintenance services received from the Central Department of City-Planning, Architecture, Housing and Public Utility Services of the Regional State Administration. It should be noted that in this monitoring the level of the average tariff for SHW collection services reflects only the tariffs used for inhabitants of multi-storied buildings of cities (municipal buildings) (Annexes 1, 2).

For analysis of an average tariff level in rayons of the Donetsk oblast there was used a form of the Central Department of City-Planning, Architecture, Housing and Public Utility of the Regional State Administration for sanitary cleaning of populated areas of the oblast covering the period of **2005 – the 1st half of 2006** (Annex 3).

In the information available (data of monitoring and sanitary cleaning in the information of cities and rayons), the size of the tariff is indicated for 1 m^3 of SHW collected or per person/month. That's why in order to define the annual cost of the service we had to make a relevant recalculation, taking also into account the average annual norm of SHW accumulation which is 1.2 m^3/year per city inhabitant and 1,4 m^3/year per inhabitant of the rural area.

For many cities and rayons the information concerning the level of tariffs has been clarified with local departments of housing and public utility services.

Indicator «Level of payments received from population for collection of SHW»

This indicator for 2002 – the first half of 2006 relies on the information received from the Central Department of Statistics in Donetsk oblast which is based on the data of statistic form N°1 – debts (housing and public utility services) (Annex 4).

The form includes the data about the amounts of invoiced payments for housing and public utility services and amounts paid by the population, waste collection included. Based on that data there has been calculated the level of payment for the services provided, both for the oblast and cities/rayons.

Indicator «Average tariff for the services of commercial waste collection»

The average tariff for collection of commercial waste, used in cities and rayons of the oblast during 2002-2004 has been defined on the basis of data provided by cities and rayons.

For the year 2005 and 9 months of 2006 average tariffs have been calculated on the basis of monitoring over the establishment of tariffs on the services for housing maintenance, received from the Central Department of City-planning, Architecture, Housing and Public Utility Services of the Regional State Administration.

It should be noted that in the data provided this information is not fully presented, that's why some of the data have been received through phone communication with local departments of housing and public utility services.

Considering the fact that in some of the cities there are different tariffs for each group of service-consumers (budget organisations and economic operators), average tariffs have been defined by direct calculations as there are no data about volumes of waste collection for each particular group.

Indicator «Volume of commercial waste collection»

It should be noted that at present there is no reliable database on SHW management in the oblast, there is also no data about volumes of waste collected and removed to landfills (dumps).

For the definition of volumes of commercial waste for **2002** we used the data of cities and rayons included in the Regional Strategic Plan of Solid Household Waste Management in Donetsk Oblast for 2005-2009 (table 5). However, in general, the data for 2002 do not reflect the dynamics of SHW collection provided in the information of cities/rayons about the state of solid household waste management for 2003-2004. That's why, henceforward, during the analysis of the situation we will use the data of 2003.

The above-mentioned information of cities and rayons as well as data of sanitary cleaning of populated areas have been taken as a basis for calculations of commercial waste volumes over the period of 2003-2004.

For some of the cities there are aggregate data but the data for collection of commercial waste are missing. In such cases the relevant calculations have been done.

In order to calculate the volumes of the mentioned waste over 2003-2004 (in case such information was not supplied by cities and rayons) there have been used coefficients revealing the share of commercial waste in total volumes of waste collected in a particular populated area in 2002, indicated in the Regional Plan.

When it was necessary, these coefficients were used during calculation of commercial waste volumes for 2005 – the first half of 2006.

Based on calculations, for 2003-2004 volumes of commercial waste were defined for 6 cities of the oblast, among which there are Donetsk, Kramatorsk, Khartsizsk and two rayons – Volodarskiy and Starobeshevskiy rayons.

For 2005 and the 1st half of 2006 this indicator for all cities and rayons has been defined by means of calculations. For that purpose there have been mainly used coefficients calculated for 2004. When unavailable, coefficients of 2003 were used.

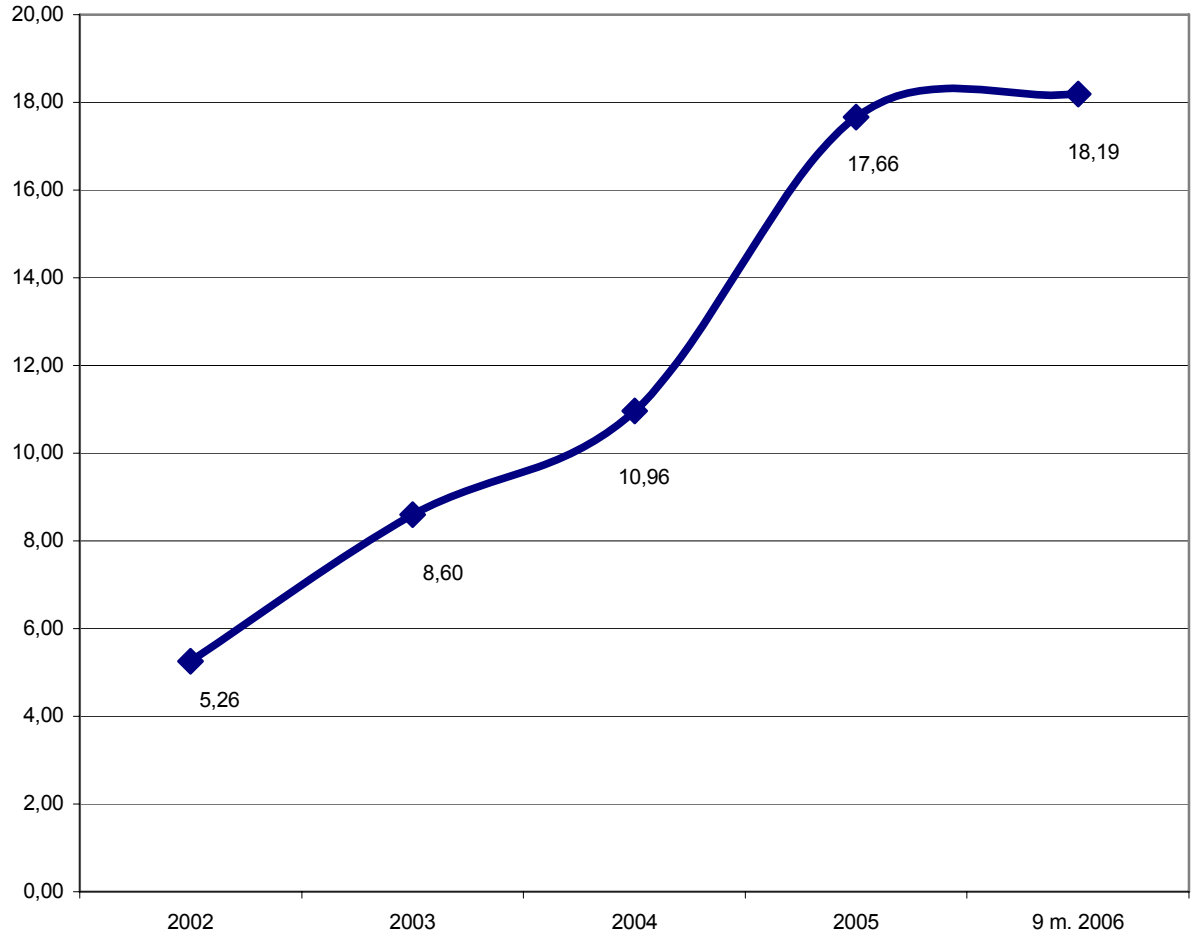
For instance, for the city of Artemovsk the volume of commercial waste collected for 2004 was 21.4 thous. m^3, or 21.0% of the total volume. Considering that the total volume of SHW collected in the city in 2005 was 128.1 thous. m^3, and in first half of 2006 – 65.0 thous. m^3, using the above-mentioned coefficient there have been calculated volumes of commercial waste removed which have made 26.9 thous. m^3 for the year of 2005 and 13.7 thous. m^3 for the first half of 2006.

As the data are not available, the calculated value of commercial waste collected has been defined without consideration of structural changes by groups of consumers in the following years.

Analysis of dynamics of changes in average tariffs for SHW collection services

Analysis of average tariffs for SHW collection services provided to the population

Since 2002 the dynamics of an average tariff growth for the population looks as follows:



Graph 4 Dynamics of change of the average tariff for SHW collection services in Donetsk oblast, UAH/person/year

In relation to 2002 the average tariff for the oblast in 2006 (the state of 21.09.2006) has increased by 12.93 UAH/person/year or in 3.5 times: in 2.8 times in cities and 5.1 times in rayons.

The biggest growth of the average tariff has taken place in the following cities: Dimitrovo – 4.6 times, Drujkovka – 4.2 times, Dokuchaevsk – 4.1 times.

The smallest growth is in Makeyevka – 1.2 times, Artemovsk – 1.4 times, Torez – 1.6 times.

In big cities of the oblast such as Donetsk, Kramatorsk and Marioupol the average tariff for SHW collection services has increased for the population in 2.1, 2.2 and 2.8 times correspondingly.

It should be taken into account that the average tariff for SHW collection services in the rayons of the Donetsk oblast within the period of 2004 – the first 9 months of 2006 calculated on the basis of data of sanitary cleaning of populated areas of the oblast, includes the payments done by the population of the private sector, which is the main part of the population of these administrative units. This justified a considerable change of the tariff in 2006 in comparison with 2002, for which this indicator has been defined thanks to calculations.

The data are provided in Table 5.

Administrative unit	Average tariffs for SHW collection service provided to the population, UAH/person/year					Average tariff growth rate (09-2006/2002)
	2002	2003	2004	2005	0-9 2006	
Oblast	**5.26**	**8.60**	**10.96**	**17.66**	**18.19**	**3.5**
Cities	**6.02**	**8.52**	**10.34**	**15.89**	**16.74**	**2.8**
Donetsk	6.42	7.85	8.76	13.68	13.68	2.1

Avdeyevka	5.46	8.69	9.00	15.38	15.38	2.8
Artemovsk	6.05	8.18	8.18	8.18	8.18	1.4
Gorlovka	6.92	8.65	8.65	17.16	17.16	2.5
Debaltsevo	6.31	10.04	12.25	20.54	20.54	3.3
Dzerjinsk	6.52	7.20	12.60	19.80	19.80	3.0
Dimitrovo	5.07	8.06	8.06	23.10	23.10	4.6
Dobropolye	5.10	11.70	11.70	14.57	14.57	2.9
Dokuchaevsk	4.91	9.96	11.88	18.25	20.05	4.1
Drujkovka	4.94	9.00	12.35	18.90	20.90	4.2
Yenakievo	7.26	7.20	8.70	8.70	21.60	3.0
Jdanovka	5.99	9.53	10.20	15.84	15.84	2.6
Kirovskoye	5.70	7.50	7.50	20.65	20.65	3.6
Konstantinovka	4.75	7.45	10.25	13.08	13.08	2.8
Kramatorsk	7.63	6.30	11.10	11.10	16.57	2.2
Krasniy Liman	5.97	9.49	21.72	21.72	21.72	3.6
Krasnoarmeysk	5.02	7.75	8.35	17.17	17.17	3.4
Makeyevka	7.39	8.93	8.93	8.93	8.93	1.2
Marioupol	6.01	7.62	7.62	15.00	16.55	2.8
Novogrodovka	5.02	8.00	12.48	14.40	14.40	2.9
Selidovo	6.05	9.62	13.20	13.20	13.20	2.2
Slaviansk	7.22	8.90	8.90	16.80	16.80	2.3
Snejnoye	5.70	9.07	12.50	13.55	13.55	2.4
Torez	7.37	11.45	11.45	11.45	11.45	1.6
Ugledar	5.49	6.36	6.36	22.05	22.05	4.0
Khartsizsk	6.55	9.50	9.50	15.84	15.84	2.4
Shahtersk	6.10	6.60	9.25	23.88	23.88	3.9
Yasinovataya	5.73	8.05	8.05	12.00	12.00	2.1
Rayons	**4.00**	**8.71**	**11.99**	**20.59**	**20.59**	**5.1**
Alexandrovsky R.	5.55	6.50	6.50	10.82	10.82	1.9
Amvrosievskiy R.	4.92	10.00	13.86	28.48	28.48	5.8
Artemovskiy R.	5.05	14.00	14.00	18.20	18.20	3.6
Velikonovoselkovskiy R.	4.90	9.53	9.53	25.70	25.70	5.2
Volnovahskiy R.	4.69	5.70	8.40	25.70	25.70	5.5
Volodarskiy R.	4.21	27.35	27.35	29.05	29.05	6.9
Dobropolskiy R.	0.00	0.00	0.00	0.00	0.00	0.0
Konstantinovskiy R.	4.56	6.35	6.35	7.63	7.63	1.7
Krasnoarmmeyskiy R.	0.00	0.00	0.00	28.06	28.06	0.0
Maryinskiy R.	4.97	11.90	11.90	21.50	21.50	4.3
Novoazovskiy R.	4.71	9.16	9.16	15.20	15.20	3.2
Pershotravneviy R.	4.95	9.62	9.62	31.40	31.40	6.3
Slavianskiy R.	4.58	8.90	12.00	22.70	22.70	5.0
Starobeshevskiy R.	5.92	11.51	33.10	33.95	33.95	5.7
Telmanovskiy R.	4.32	8.40	24.00	33.60	33.60	7.8
Shahterskiy R.	4.73	9.20	18.00	18.00	18.00	3.8
Yasinovatskiy R.	0.00	0.00	0.00	0.00	0.00	0.0

Table 5 Dynamics of an average tariff growth for SHW collection services provided to the population of Donetsk oblast

Annual rates of the average tariff growth in the oblast look as follows:

Years	2003	2004	2005	9 months of 2006
%	63.0	27.0	61.0	3.0

Table 6 % of growth in relation to the previous year

The peak growth of the average tariff was in 2005. The reason for that is that during this year most of the cities of the oblast have taken a decision to single out the costs of SHW removal from apartment fee and to use a fixed tariff.

Analysis of ratio between the tariff on SHW collection for inhabitants and their incomes and average annual salary

Let's consider the ratio between the level of average tariff for SHW collection services provided to the population and the average level of incomes for the population.

Year	2002	2003	2004	2005[7]	Growth rates (2005 / 2002)
Incomes of population, UAH/person/year	3091.4	3701.2	4984	6762.1	2.2
Average tariff for population, UAH/person/year	5.26	8.60	10.96	17.66	3.4
Ratio between the average tariff and incomes, %	0.17	0.23	0.22	0.26	

Based on the above-mentioned data we can say that over the period of 2002-2005 the level of average tariffs for SHW collection services delivered to the population has increased in the oblast by 3.4 times while the growth of incomes was 2.2 times. The ratio of the average tariff to incomes of the population has increased from 0.17% to 0.26%.

Statistic data about incomes of the population by administrative units are not available, that's why within the given context we have considered the ratio between the average tariff for SHW collection services provided to the population and an average annual nominal salary of one person over the above-mentioned period.

Based on the available data about average nominal salary let's calculate an annual average indicator and study the ratio between an annual average SHW collection tariff and this indicator. The data are provided in Table 7.

Since 2002 the level of the average salary in Donetsk oblast has increased 2.1 times, the average level of SHW removal has increased 3.4 times. In general, due to that the ratio between the average tariff and the average salary in 2005 has increased by 0.05, making 0.15%.

The maximum increase is in Dimitrovo and Shahtersk (0.15% and 0.14%), the minimum one is in Yenakievo and Makeyevka (0.07% and 0.08%).

The minimum ratio of the average tariff to the average salary is in the following administrative units: Artemovsk – 0.08%, Yenakievo – 0.09%, Krasnoarmeysk and Kramatorsk – 0.1%.

The maximum value of this indicator has been registered in rural areas: Velikonovoselkovskiy, Telmanovskiy and Krasnoarmmeyskiy rayons – 0.45 %, Pershotravneviy rayon – 0.37%, Volodarskiy rayon – 0.36%.

Administrative unit	2002			2005			Change of ratio (change of % items), 2005 to 2002	Index of salary growth (2005 to 2002), %	Index of average tariff growth (2005 to 2002), %
	Average annual salary of one employee, UAH	Average tariff, UAH/person/year	Average tariff to average annual salary, %	Average annual salary of one employee, UAH	Average tariff, UAH/person/year	Average tariff to average annual salary, %			
Oblast	5,424	5.26	0.10	11,544	17.66	0.15	0.05	2.1	3.4
Cities									
Donetsk	5,592	6.42	0.11	12,096	13.68	0.11	0.00	2.2	2.1
Avdeyevka	6,888	5.46	0.08	14,256	15.38	0.11	0.03	2.1	2.8
Artemovsk	5,040	6.05	0.12	10,476	8.18	0.08	-0.04	2.1	1.4
Gorlovka	4,776	6.92	0.14	9,576	17.16	0.18	0.03	2.0	2.5
Debaltsevo	6,900	6.31	0.09	11,856	20.54	0.17	0.08	1.7	3.3
Dzerjinsk	4,404	6.52	0.15	9,828	19.80	0.20	0.05	2.2	3.0
Dimitrovo	5,400	5.07	0.09	9,468	23.10	0.24	0.15	1.8	4.6

[7] Data about incomes per capita in 2006 are not available.

Dobropolye	6,264	5.10	0.08	11,820	14.57	0.12	0.04	1.9	2.9
Dokuchaevsk	5,376	4.91	0.09	12,000	18.25	0.15	0.06	2.2	3.7
Drujkovka	4,752	4.94	0.10	9,528	18.90	0.20	0.09	2.0	3.8
Yenakievo	4,548	7.26	0.16	9,768	8.70	0.09	-0.07	2.1	1.2
Jdanovka	6,492	5.99	0.09	11,856	15.84	0.13	0.04	1.8	2.6
Kirovskoye	7,464	5.70	0.08	15,192	20.65	0.14	0.06	2.0	3.6
Konstantinovka	3,660	4.75	0.13	7,524	13.08	0.17	0.04	2.1	2.8
Kramatorsk	5,976	7.63	0.13	11,544	11.10	0.10	-0.03	1.9	1.5
Krasniy Liman	5,604	5.97	0.11	10,272	21.72	0.21	0.10	1.8	3.6
Krasnoarmeysk	9,420	5.02	0.05	17,820	17.17	0.10	0.04	1.9	3.4
Makeyevka	4,608	7.39	0.16	10,464	8.93	0.09	-0.08	2.3	1.2
Marioupol	7,044	6.01	0.09	15,684	15.00	0.10	0.01	2.2	2.5
Novogrodovka	5,748	5.02	0.09	11,328	14.40	0.13	0.04	2.0	2.9
Selidovo	4,200	6.05	0.14	8,676	13.20	0.15	0.01	2.1	2.2
Slaviansk	4,332	7.22	0.17	8,724	16.80	0.19	0.03	2.0	2.3
Snejnoye	3,864	5.70	0.15	7,872	13.55	0.17	0.02	2.0	2.4
Torez	3,984	7.37	0.18	7,944	11.45	0.14	-0.04	2.0	1.6
Ugledar	7,176	5.49	0.08	14,904	22.05	0.15	0.07	2.1	4.0
Khartsizsk	5,532	6.55	0.12	10,752	15.84	0.15	0.03	1.9	2.4
Shahtersk	4,368	6.10	0.14	8,496	23.88	0.28	0.14	1.9	3.9
Yasinovataya	6,336	5.73	0.09	11,280	12.00	0.11	0.02	1.8	2.1
Rayons									
Alexandrovsky R.	2,700	5.55	0.21	6,360	10.82	0.17	-0.04	2.4	1.9
Amvrosievskiy R.	3,096	4.92	0.16	8,508	28.48	0.33	0.18	2.7	5.8
Artemovskiy R.	3,180	5.05	0.16	6,816	18.20	0.27	0.11	2.1	3.6
Velikonovoselkovskiy R.	2,484	4.90	0.20	5,712	25.70	0.45	0.25	2.3	5.2
Volnovahskiy R.	4,392	4.69	0.11	8,988	25.70	0.29	0.18	2.0	5.5
Volodarskiy R.	3,816	4.21	0.11	8,112	29.05	0.36	0.25	2.1	6.9
Dobropolskiy R.	3,768	0.00	0.00	7,356	0.00	0.00	0.00	2.0	
Konstantinovskiy R.	2,796	4.56	0.16	6,168	7.63	0.12	-0.04	2.2	1.7
Krasnoarmmeyskiy R.	2,952	0.00	0.00	6,240	28.06	0.45	0.45	2.1	
Maryinskiy R.	3,756	4.97	0.13	8,580	21.50	0.25	0.12	2.3	4.3
Novoazovskiy R.	4,080	4.71	0.12	8,340	15.20	0.18	0.07	2.0	3.2
Pershotravneviy R.	4,236	4.95	0.12	8,412	31.40	0.37	0.26	2.0	6.3
Slavianskiy R.	3,048	4.58	0.15	6,264	22.70	0.36	0.21	2.1	5.0
Starobeshevskiy R.	4,044	5.92	0.15	10,824	33.95	0.31	0.17	2.7	5.7
Telmanovskiy R.	3,504	4.32	0.12	7,404	33.60	0.45	0.33	2.1	7.8
Shahterskiy R.	3,708	4.73	0.13	8,616	18.00	0.21	0.08	2.3	3.8
Yasinovatskiy R.	4,176	0.00	0.00	8,916	0.00	0.00	0.00	2.1	

Table 7 Ratio between average tariff and average annual salary, %

Analysis of the level of payments by population for SHW collection services

The analysis is done on the basis of statistic data provided in Table 8.

Administrative unit	2002	2003	2004	2005	1 half of 2006
Oblast	95.6	79.1	67.6	74.5	77.0
Cities					
Donetsk	93.3	76.6	56.7	74.9	75.5
Avdeyevka	98.7	116.0	112.8	123.3	100.3
Artemovsk	129.6	91.9	102.2	97.5	99.2
Gorlovka	102.6	100.8	111.0	37.2	52.6
Debaltsevo	100.9	35.4	64.3	79.1	83.5
Dzerjinsk	63.4	58.7	67.0	60.4	78.7
Dimitrovo	0.0	0.0	0.0	77.0	75.9
Dobropolye	0.0	0.0	0.0	90.2	51.2

Dokuchaevsk	173.1	85.6	84.5	90.0	88.6
Drujkovka	100.3	121.2	66.0	91.4	92.2
Yenakievo	100.0	100.0	100.0	46.4	69.9
Jdanovka	59.1	77.6	149.3	84.7	78.1
Kirovskoye	86.6	89.0	77.0	65.1	63.6
Konstantinovka	162.3	128.0	45.4	75.9	86.7
Kramatorsk	146.3	103.3	97.1	100.0	74.1
Krasniy Liman	0.0	0.0	0.0	100.0	0.0
Krasnoarmeysk	53.4	176.7	63.4	73.3	86.1
Makeyevka	102.3	99.9	102.1	104.8	103.1
Marioupol	66.6	54.5	90.5	70.8	82.6
Novogrodovka	4.9	0.0	100.0	86.0	90.7
Selidovo	0.0	0.0	30.0	71.7	62.6
Slaviansk	53.2	95.8	104.1	92.0	89.2
Snejnoye	294.7	0.0	0.0	100.0	33.9
Torez	114.0	82.3	79.1	63.3	75.2
Ugledar	0.0	0.0	69.9	83.9	97.5
Khartsizsk	48.8	89.2	88.3	76.0	87.0
Shahtersk	56.4	56.8	78.7	78.3	112.5
Yasinovataya	113.5	68.4	87.1	78.7	98.9
Rayons					
Alexandrovsky R.	168.4	98.1	0.0	0.0	0.0
Amvrosievskiy R.	90.3	94.1	102.6	101.5	93.1
Artemovskiy R.	44.2	84.1	51.5	82.3	64.2
Velikonovoselkovskiy R.	55.5	63.2	92.0	93.6	90.2
Volnovahskiy R.	109.4	567.4	90.8	102.4	96.4
Volodarskiy R.	95.2	87.2	86.7	88.0	107.2
Dobropolskiy R.	0.0	0.0	0.0	0.0	0.0
Konstantinovskiy R.	65.4	78.5	0.0	0.0	0.0
Krasnoarmmeyskiy R.	0.0	0.0	0.0	0.0	0.0
Maryinskiy R.	54.6	50.7	87.5	92.8	97.9
Novoazovskiy R.	130.6	71.8	122.7	130.6	86.8
Pershotravneviy R.	95.9	96.7	62.5	97.4	73.5
Slavianskiy R.	0.0	1.5	54.7	86.2	84.8
Starobeshevskiy R.	83.1	240.8	102.1	88.2	106.0
Telmanovskiy R.	99.9	80.7	200.6	78.8	84.4
Shahterskiy R.	21.7	4.8	48.4	90.1	73.2
Yasinovatskiy R.	106.5	99.4	97.1	39.4	82.1

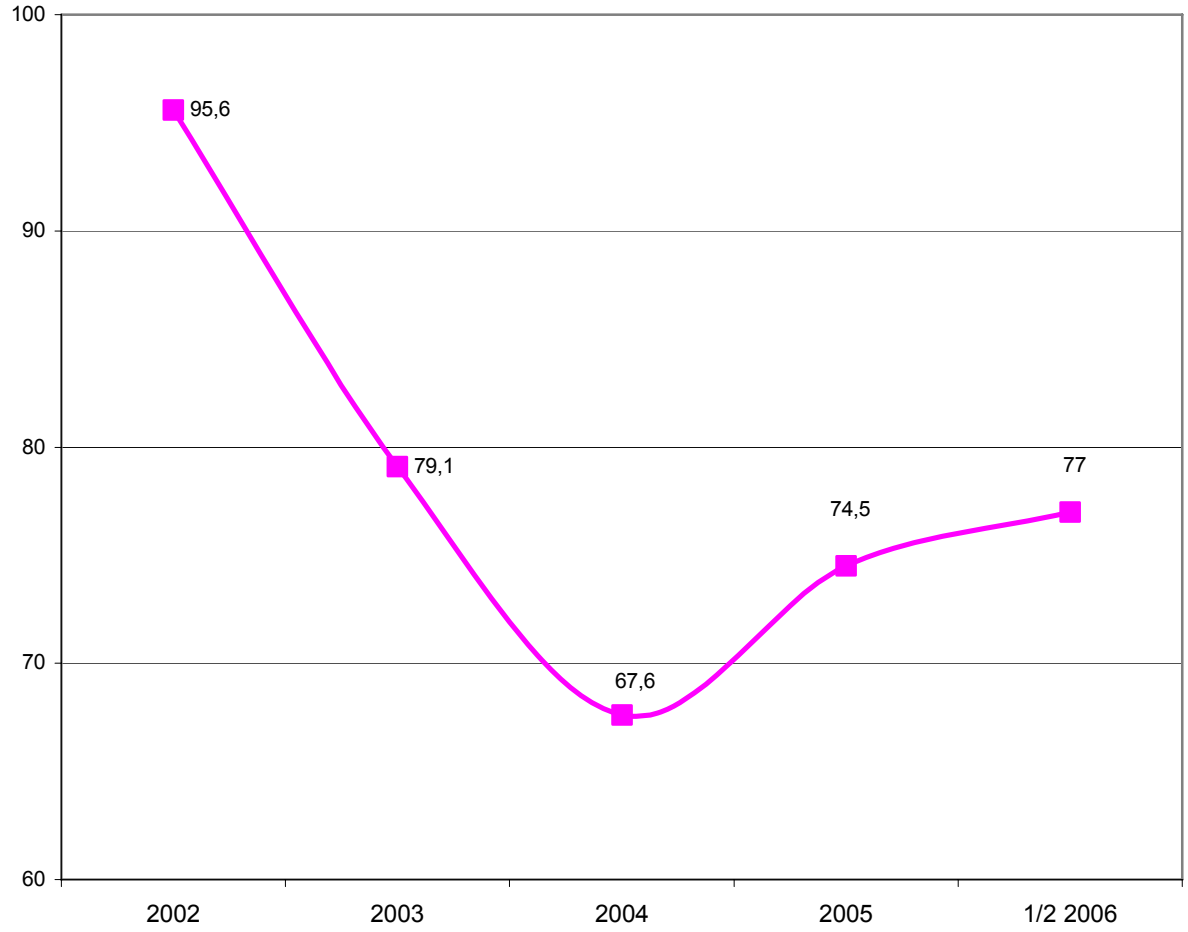
Table 8 Level of payments for SHW collection services done by the population, %

Considering that before 2003 the costs for SHW collection were included into the apartment fee, the statistics for the level of payments done by the population in 2002 include the payments for SHW collection services exercised by waste collection companies, JEKs and population of the private sector. That's why, as far as the ratio of payments done by the population is concerned, it would be reasonable to consider as basic the data for 2003 as since that time waste collection costs have started to be singled out from apartment fee and inhabitants began to pay for that as for a separate service.

The analysis of the payment rate for SHW collection services provided to the population has shown that by 01.07.2006 this indicator for the oblast in general is 77.0%. The highest level among the cities of the oblast (up to 100% and higher) is registered in small cities – Shahtersk, Avdeyevka, Ugledar, Yasinovataya; the lowest level is in Snejnoye (33.9%), Dobropolye (51,2%) and Gorlovka (52.6%).

More than 70% - 80% of SHW collection costs are paid by the inhabitants of 10 cities of the oblast, among which there are big cities: Marioupol – 82.6%, Donetsk – 75.5%, Kramatorsk – 74.1%.

In general, for the oblast over the period of 2003 – the first half of 2006 this indicator has decreased – from 79.1% to 77.0%.



Graph 5 Dynamics of payments done by the population of Donetsk oblast, %

NOTE: the rate we got is the 2006 situation of the recovery of the fees of the considered year; it means that in 2006 95.6% of the fees due 2002 have been paid. In 2003, this rate for 2002 was around 30%. It doesn't represent the fees "paid in time".

The most considerable decrease of this indicator can be seen in 7 cities of the oblast, among which there are the following: Kramatorsk – from 103.3% to 74.1%, Konstantinovka – from 128.0% to 86.7%, Yenakievo – from 100.0% to 69.9%. In Donetsk this indicator has also slightly decreased – from 76.6% to 75.5%.

At the same time over the mentioned period in 16 cities of the oblast the level of payment collection has increased.

A considerable growth is registered in 5 cities of the oblast: Marioupol – from 54.5% to 82.6%, Shahtersk – from 56.8% to 112.5%, Yasinovataya – from 68.4% to 98.9%, Debaltsevo – from 35.4% to 83.5%, Dzerjinsk – from 58.7% to 78.7%.

It should be underlined that in these cities (except for Marioupol) within the mentioned period the payment for SHW collection services has been singled out from apartment fee and a fixed tariff was established, influencing positively a level of payment collection.

The analysis of the state of payments for the above-mentioned services in rural area has shown that the payments are fully collected in two rayons of the oblast – Volodarskiy and Starobeshevskiy rayons; in Artemovskiy rayon the payment is lower (64.2%).

On the whole, in rural area the general tendency for the changes in the level of payments collection is not well-defined as in five rayons we can observe an increase and in five rayons there is a decrease.

It should be noted that local departments of housing and public utility services analyse the level of payments for SHW collection. The Central Department of City-Planning, Architecture, Housing and Public Utility

Services of the Regional State Administration monitors the level of payments for housing and public utility services exercised by inhabitants, however, their list **does not include the services for SHW collection.**

This indicator is also not included into the form of sanitary cleaning of populated areas of the Donetsk oblast provided annually by the mentioned department to the Ministry of Construction, Architecture, Housing and Public Utility Services of Ukraine.

Analysis of growth of average tariffs for the service on commercial waste collection

In accordance with Art. 28 of the Law of Ukraine "On Local Self-government Bodies in Ukraine" and decision of the Chairman of the Donetsk Regional State Administration as of 17.07.2002 N° 330 "On Prices and Tariffs for Housing and Public Utility Services" the right to establish tariffs for SHW collection services for transport public utilities and organizations has been delegated to local authorities.

Before the above-mentioned decision was put into effect, the level of tariffs was regulated at the regional level through establishment of a maximum profit (up to 20%) in relation to costs. The companies engaged in SHW collection calculated the tariffs by themselves and used them if service-consumers agreed.

At present the tariffs for SHW collection and removal from enterprises and organizations by transport utilities (of all forms of ownership) are ratified by the decisions of city executive committees of city, settlement and village councils.

While defining the level of tariffs for waste collection services in cities and rayons it is necessary to bear in mind that the tariffs are mainly established for two groups of consumers (except for the population):

1. Budget organizations and social structures.
2. Economic operators.

In Donetsk, Makeyevka, Artemovsk, Marioupol and other cities the tariffs for commercial waste collection have been differentiated. In such a case for implementation of the analysis the average tariff was calculated with consideration of two levels of tariffs.

The single tariff on waste collection from companies and organizations has been established in Yasinovataya, Kramatorsk, Debaltsevo, Konstantinovka and other cities.

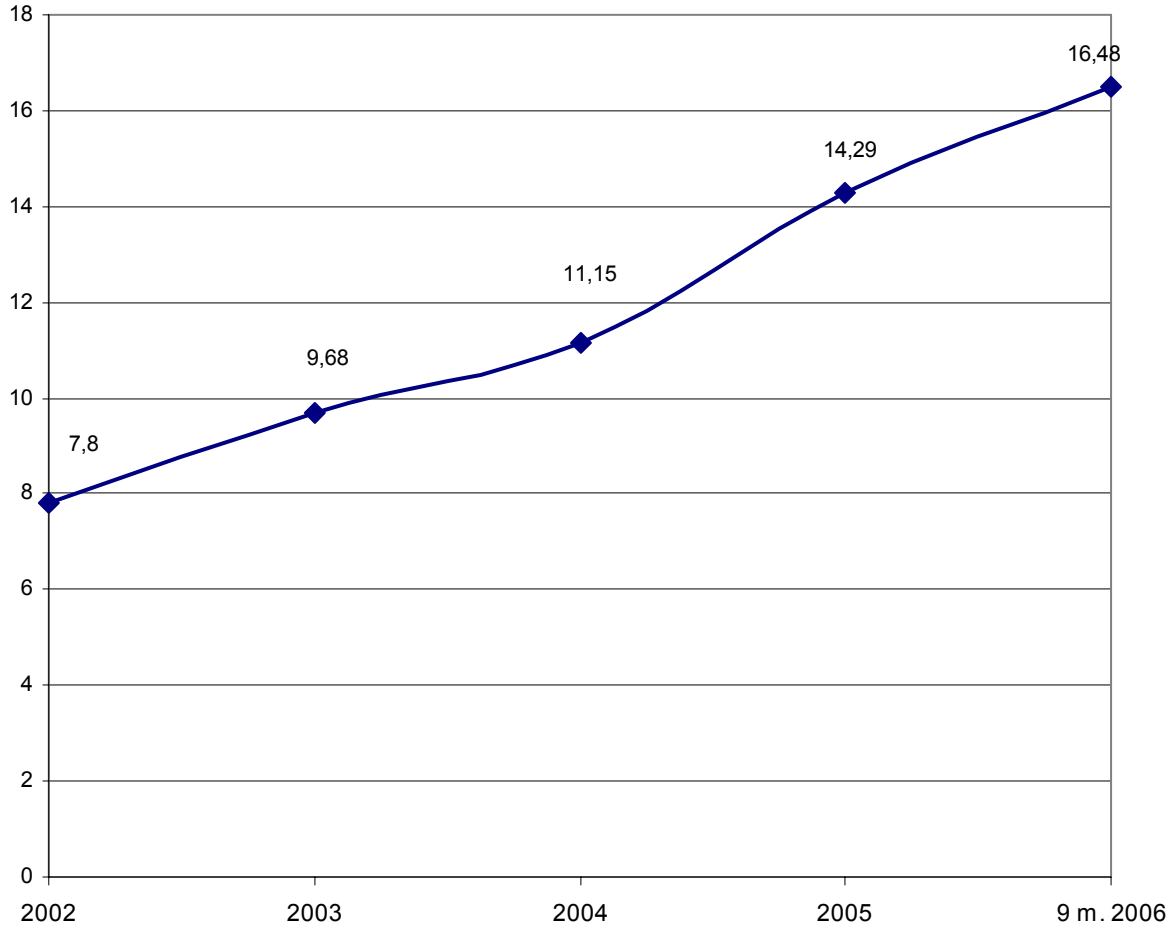
The analysis of dynamics of changes in the level of average tariffs for the services on commercial waste collection has shown that over the period of 2002 – the first 9 months of 2006 their level for the oblast as a whole has grown 2.1 times – from 7.80 UAH/m^3 to 16.44 UAH/m^3: 2.2 times in cities and 1.6 times in rural area.

The biggest growth is registered in small cities of the oblast:

- twice or higher in 11 cities of the oblast, among which there are Avdeyevka, Artemovsk, Dzerjinsk, Yenakievo, Jdanovka, Khartsizsk;
- more than three times – in Dokuchaevsk, Debaltsevo, Drujkovka, Krasnoarmeysk;
- more than four times – in Ugledar, five times – in Kirovskoye.

In big cities of the oblast such as Donetsk, Makeyevka and Kramatorsk over the indicated period the tariffs increased in 1.7, 1.9 and 2.1 times correspondingly.

Only in three cities of the oblast the tariff has not changed: in Dimitrovo – since 2002, in Novogrodovka and Yasinovataya – since 2003.



Graph 6 Dynamics of average tariff growth for commercial waste collection services in Donetsk oblast, UAH/m^3

In rural area the biggest growth of average tariffs for the services on commercial waste collection for the period of 2002 to 2006 is registered in Amvrosievskiy rayon – 2.1 times, Volnovahskiy rayon – 1.7 times, since 2003 in Alexandrovsky and Telmanovskiy rayons – 1.7 and 1.4 times correspondingly.

The data are provided in Table 9.

Administrative unit	2002	2003	2004	2005	September 2006	Index of growth, September 2006 to 2002
Oblast	7.80	9.68	11.15	14.29	16.48	2.1
Cities	7.42	8.91	10.41	13.72	16.44	2.2
Donetsk	8.00	8.00	8.40	13.50	13.50	1.7
Avdeyevka	5.90	5.90	8.93	12.42	12.42	2.1
Artemovsk	8.03	6.82	6.82	13.25	13.25	1.7
Gorlovka				11.40	11.40	0.0
Debaltsevo	7.20			12.03	22.50	3.1
Dzerjinsk	7.24	7.24	14.10	18.20	18.20	2.5
Dimitrovo	9.34	9.34	9.34	9.34	9.34	1.0
Dobropolye	8.28				13.20	1.6
Dokuchaevsk	6.29	7.72	9.77	9.77	19.76	3.1
Drujkovka	6.53	6.53	10.12	16.80	20.16	3.1
Yenakievo	7.30	7.30	8.49	16.17	16.17	2.2
Jdanovka	8.40	8.40	10.21	11.06	19.67	2.3

Kirovskoye	4.00	9.71	9.71	23.44	23.44	5.9
Konstantinovka	8.73	8.73	8.73	11.39	11.39	1.3
Kramatorsk	7.20	7.20	10.10	10.10	15.06	2.1
Krasniy Liman		16.41	21.24	21.70	32.27	
Krasnoarmeysk	6.80			16.34	24.12	3.5
Makeyevka	6.20	6.20	7.44	7.44	11.93	1.9
Marioupol		10.20	10.20	15.12	15.12	
Novogrodovka		13.00	13.00	13.00	13.00	
Selidovo	7.75	9.03	9.03	12.90	12.90	1.7
Slaviansk	8.32	8.32	10.52	14.65	14.65	1.8
Snejnoye	11.32	11.32	11.32	12.52	12.52	1.1
Torez	3.90	5.60	7.50	10.10	10.10	2.6
Ugledar	6.07	11.51	11.51	26.93	26.93	4.4
Khartsizsk	8.30	8.30	8.30	13.55	14.86	1.8
Shahtersk		7.07	11.05	18.43	18.43	
Yasinovataya	9.66	14.06	14.06	14.06	14.06	1.5
Rayons	10.67	12.31	14.08	16.26	16.61	1.6
Alexandrovsky R.		6.22	6.70	6.96	10.78	
Amvrosievskiy R.	7.31	9.20	18.50	15.20	15.20	2.1
Artemovskiy R.						
Velikonovoselkovskiy R.				19.59	19.59	
Volnovahskiy R.	8.92	8.92	11.25	15.19	15.19	1.7
Volodarskiy R.		17.29	17.29	23.04	23.04	
Dobropolskiy R.						
Konstantinovskiy R.						
Krasnoarmmeyskiy R.						
Maryinskiy R.						
Novoazovskiy R.	15.78	18.50	18.50	18.50	18.50	1.2
Pershotravneviy R.						
Slavianskiy R.	-					
Starobeshevskiy R.		12.06	9.55	10.55	10.55	
Telmanovskiy R.		14.00	20.00	20.00	20.00	
Shahterskiy R.						
Yasinovatskiy R.						

Table 9 Average tariffs for the services on commercial waste collection, UAH/m^3

The tariff policy implemented in the oblast is focused on establishment of lower tariffs for SHW collection for inhabitants and higher tariffs for enterprises and organizations. This is regulated through a profit margin included in the tariff – up to 10% for the population, 20%-30% for other groups of service-consumers.

The analysis of existing tariffs for collection of SHW from enterprises and organizations has shown that in most of the cities their level is higher in comparison with the tariffs established for the population.

For 21.09.2006 the average tariff for the services on collection of commercial waste in the oblast was 16.48 UAH/m^3, which is 17% higher than the average tariff on waste collection for the population (applied to 1 m^3): 18% in cities and 13% in rural area.

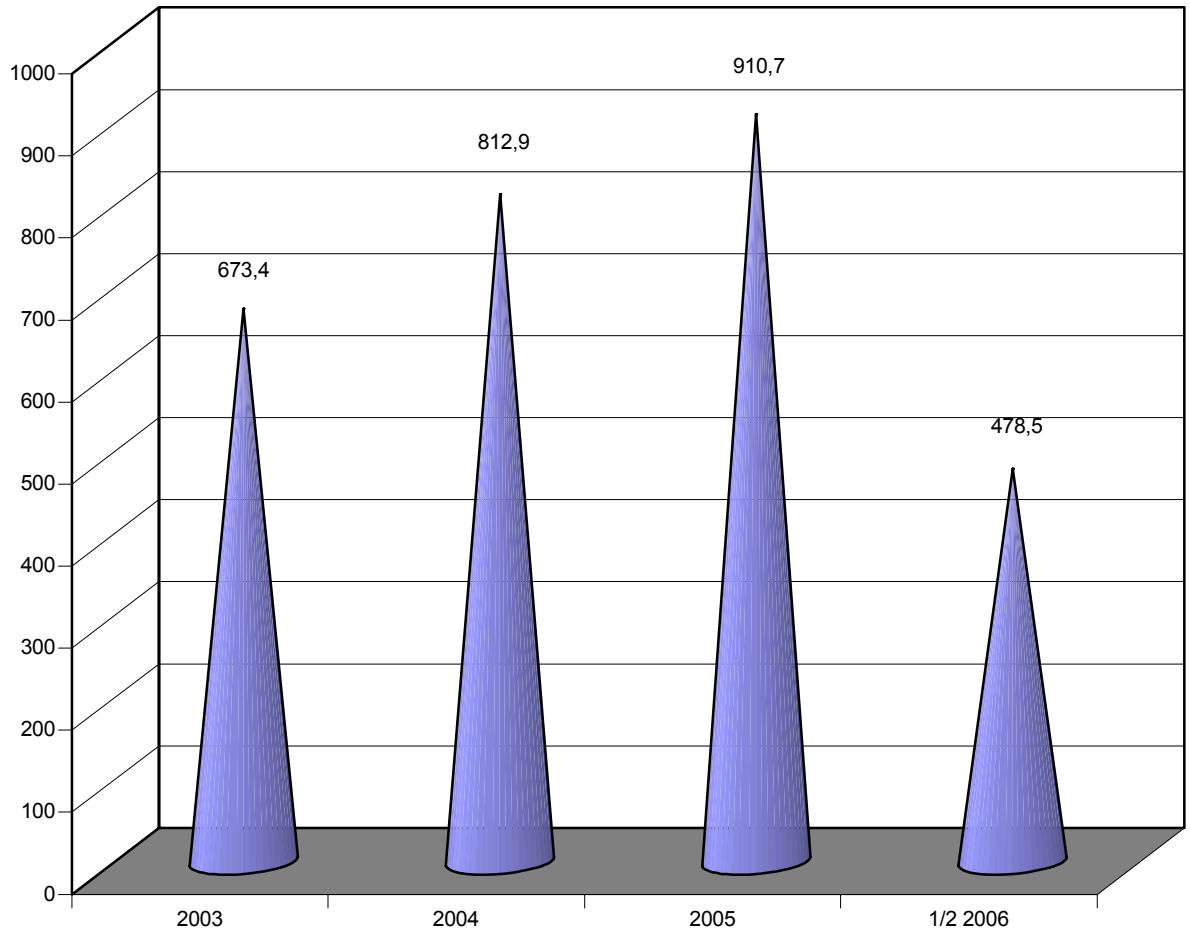
In some of the cities taken as an example we have established that the cost of commercial waste collection in comparison with the cost of SHW collected from the population is higher as follows:

- 1.6, 1.2 and 1.1 times in such big cities as Makeyevka, Donetsk and Marioupol.
- in small cities, for instance, in Artemovsk – in 1.9 times, in Jdanovka – in 1.5 times, in Debaltsevo – in 1.3 times, in Yasinovataya – in 1.4 times.

Analysis of volumes of commercial waste collected

The analysis of dynamics of changes in the volumes of commercial waste collected has shown that in 2005 for the oblast as a whole the volumes of commercial waste collected have made 910.7 thous. m^3, for the first half of 2006 – 478.5 thous. m^3. In accordance with the data of sanitary cleaning the share of this waste in total volumes of SHW collected in the oblast is 22.1% and 21.7% correspondingly.

Since **2003 to 2005** this indicator has increased 1.4 times on the average: 1.3 times in cities and twice in rayons.



Graph 7 Data about commercial waste collected in Donetsk oblast, thous.m^3

The biggest growth of commercial waste collected is registered in small cities: 3.5 times in Krasnoarmeysk, 3 times in Yenakievo, more than twice in Dzerjinsk, Jdanovka, Krasniy Liman, Snejnoye.

In big cities this indicator has increased as follows: 1.2 times in Donetsk, 1.4 times in Marioupol, 1.7 times in Makeyevka, twice in Kramatorsk.

The volumes of commercial waste collected in small cities of the oblast have remained practically the same. Among such cities there are Yasinovataya, Khartsizsk, Novogrodovka, Konstantinovka, etc.

The available data show that in the rayons of the oblast there is also a tendency for the increase of the volumes of commercial waste collected.

The indicator has increased more than twice in Alexandrovsky and Novoazovskiy rayons, in Volnovahskiy and Maryinskiy rayons in 1.6 and 1.3 times.

It should be underlined that in five rayons of the oblast which have no specialized companies for SHW collection there is no regular collection of SHW, including commercial waste. These are Dobropolskiy, Konstantinovskiy, Slavianskiy, Yasinovatskiy and Krasnoarmmeyskiy rayons.

During the analysis it has been established that at the local level there is no single approach for indication of total volumes of SHW collected. This refers to waste which companies transport to landfills by themselves using for that vouchers issued by landfill owners. Due to that the volumes of commercial waste collected and removed are sometimes underestimated.

For instance, in accordance with the data of the department of housing and public utility services of the Makeyevka city executive committee, the volumes of commercial waste collected in 2005 has made 24.5 thous. m^3, which is almost the same as the volumes of waste collected in Amvrosievskiy rayon. The specialists of this department explain that they do not register total volumes of commercial waste collected

from all companies and organizations of the city. The data provided by them reflect only the waste transported by the public utility on the basis of contracts with enterprises and organizations. Thus, their figures do not include household waste which the companies themselves transported to the landfill.

The data are provided in Table 10.

Administrative unit	2002	2003	2004	2005	2006	Index of growth, 2005 to 2003
Oblast (total)	1192,959	673,389	812,903	910,674	478,505	1.4
Cities (total)	1096,587	643,319	765,603	850,584	444,700	1.3
Donetsk	243,955	243,995	272,000	289,100	161,200	1.2
Avdeyevka	33,627	2,854	3,703	3,900	2,000	1.4
Artemovsk	34,892	20,400	21,400	26,900	13,700	1.3
Gorlovka	45,000	22,000	26,000	37,500	16,100	1.7
Debaltsevo	69,818	5,200	6,200	9,700	3,400	1.9
Dzerjinsk	15,025	1,700	3,100	3,700	1,400	2.2
Dimitrovo	4,184	3,800	4,500	5,200	2,700	1.4
Dobropolye	67,523	17,700	19,200	24,000	11,700	1.4
Dokuchaevsk	23,089	2,100	2,400	2,400	1,200	1.1
Drujkovka	20,046	12,700	12,800	16,200	10,200	1.3
Yenakievo	17,708	6,800	18,000	20,100	9,200	3.0
Jdanovka	3,052	2,700	7,600	7,600	1,600	2.8
Kirovskoye	4,000	18,100	25,800	27,900	8,600	1.5
Konstantinovka	19,250	11,070	10,950	12,000	6,000	1.1
Kramatorsk	34,323	21,100	34,200	42,900	20,100	2.0
Krasniy Liman	55,920	600	1,100	1,400	700	2.3
Krasnoarmeysk	2,000	4,100	13,300	14,300	7,600	3.5
Makeyevka	68,258	14,200	27,000	24,500	13,000	1.7
Marioupol	191,400	94,100	106,400	132,384	73,800	1.4
Novogrodovka	0	1,100	1,100	1,200	600	1.1
Selidovo	4,308	3,000	3,650	3,900	1,700	1.3
Slaviansk	10,651	43,900	45,400	46,500	27,800	1.1
Snejnoye	13,624	3,500	7,300	8,100	3,200	2.3
Torez	31,184	7,300	10,000	8,600	4,000	1.2
Ugledar	4,403	8,600	10,200	13,900	6,500	1.6
Khartsizsk	28,329	25,700	25,700	28,200	15,300	1.1
Shahtersk	36,962	30,000	30,500	23,400	14,100	0.8
Yasinovataya	14,056	15,000	16,100	15,100	7,300	1.0
Rayons (total)	96,372	30,070	47,300	60,090	33,805	2.0
Alexandrovsky R.	1,150	1,100	2,700	2,500	1,500	2.3
Amvrosievskiy R.	3,052	12,600	13,900	22,600	11,600	1.8
Artemovskiy R.	4,236		230	240	130	
Velikonovoselkovskiy R.	0		600	1,500	800	
Volnovahskiy R.	38,400	6,800	9,200	11,100	8,700	1.6
Volodarskiy R.	123	150		150	75	1.0
Dobropolskiy R.	0	0	0	0	0	
Konstantinovskiy R.	0	0	0	0	0	
Krasnoarmmeyskiy R.	2,000	0	0	0	0	
Maryinskiy R.	40,707	8,620	10,970	11,000	5,500	1.3
Novoazovskiy R.	1,036	800	1,900	2,000	1,000	2.5
Pershotravneviy R.	2,496		2,500	2,300	1,200	
Slavianskiy R.	0	0	0	0	0	
Starobeshevskiy R.	2,838	0	3,700	4,900	2,100	
Telmanovskiy R.	0		500	500	200	
Shahterskiy R.	334	0	1,100	1,300	1,000	
Yasinovatskiy R.	0	0	0	0	0	

Table 10 Data about the volumes of commercial waste collected in Donetsk oblast, m^3

Resume

In comparison with the year of 2002, in 2006 the average tariff for SHW collection established for oblast inhabitants has increased 3.5 times: 2.8 times in cities and 5.1 times in rayons.

Over the period of 2002-2005 the level of average tariffs for SHW collection services for the population has increased 3.4 times, the growth of incomes is 2.2 times, the level of average annual salary in Donetsk oblast has increased 2.1 times.

The %-ratio of the average tariff to incomes of the population has increased from 0.17% to 0.26%. In relation to the level of the average annual salary of one employee the % ratio has increased by 0.05, making 0.15%.

The analysis of the level of payments of the population for the services on SHW collection over the period 2003 – the first half of 2006 has shown a slight decrease of this indicator for the oblast in general – from 79.1% to 77.0%. It is mentioned that the analysis of the situation on the local level is not done. As it has been explained by the specialists of the departments of housing and public utility services of some of the cities, the reasons for that are the following:

- in many cities of the oblast in 2006 the apartment fee as well as the fee for SHW collection have increased. As a result, during the 1st half of the year some of the inhabitants have postponed their payments;
- in a number of small cities of the oblast the number of empty (abandoned) privatised apartments has increased. The owners of such apartments do not pay for housing and public utility services, so the amount of their debts grows, among these debts there are debts for SHW collection;
- considering the fact that the inhabitants of some of the cities pay for housing and public utility services on the basis of separate receipts, and the same concerns waste collection services, the owners of apartments with a big number of residents try to avoid paying for SHW collection.

The Central Department of City-Planning, Architecture, Housing and Public Utility Services of the Regional State Administration monitor the level of payments done by the population for housing and public utility services. However, their list does not include the services on SHW collection. Local departments of housing and public utility services also do not carry out such a job.

The form of sanitary cleaning of populated areas of Donetsk oblast which is submitted by the Department of City-planning, Architecture, Housing and Public Utility Services on the annual basis to the Ministry of Construction, Architecture, Housing and Public Utility Services of Ukraine does not include this indicator as well.

Within the period of 2002 – 9 months of 2006 the level of average tariffs for collection and removal of commercial waste in the oblast as a whole has increased 2.1 times – from 7.80 UAH/m^3 to 16.48 UAH/m^3: 2.2 times in cities and 1.6 times in rural area.

The analysis of volumes of commercial waste collection has established the following:

- In 2005 for the oblast as a whole the volumes of commercial waste collected have made 910.7 thous. m^3, for the first half of 2006 – 478.5 thous. m^3. In accordance with the data of sanitary cleaning the share of this waste in total volumes of SHW collected in the oblast is 22.1% and 21.7% correspondingly.
- Over the period of 2003-2005 this indicator has increased 1.4 times approximately, the growth for the cities was 1.3 times.

It is difficult to receive precise data for the mentioned indicator as at present there is no reliable database on SHW management. The same concerns volumes of waste collected and removed to landfills (dumpsites).

As there is no data, the volume of commercial waste collected in 2005 and the first half of 2006 (for some of the cities - for 2003 and 2004) has been calculated with the help of the database over the previous years without consideration of structural changes for the groups of consumers that have happened during the following years.

At the local level there is no single approach for indication of total volumes of SHW collected. This refers to waste which companies transport to landfills by themselves in accordance with vouchers issued by landfill owners. Due to that the volumes of waste collected and removed, including commercial waste, are sometimes underestimated.

Taking into account all the above-mentioned information, we can say that because of improper registration of different indicators reflecting operations in the field of SHW management and lack of data, the calculated values of average tariffs on collection of waste (including commercial waste) and their volumes are approximate. They only represent a general tendency for their increase in the oblast.

Annex 1

MONITORING		
of tariff establishment for housing maintenance services		
	Situation as of 21.09.2006	
	Established tariff for collection and removal of SHW, VAT included (UAH/1 m^3),~*	
City (rayon)	Population	Other consumers
Avdeyevka	12.82 (1.16-1.39**)	9.68-15.16
Artemovsk	6.82	16.90-19.97
Ugledar	20.07 (1.84**)	24.64-29.21
Gorlovka	1.27/1.38/1.43**	
Panteleymonovka	1.27/1.38/1.43**	
Debaltsevo	16.58	22.5
Dzerjinsk	16.34 (1.65**)	16.34-20.05
Dimitrovo	9.34 (1.85-2.00**)	9.34
Dobropolye	~	13.20
Dokuchaevsk	16.72	19.76
Donetsk	13.00 (1.14**)	13.00-14.00
Drujkovka	17.42	20.16
Yenakievo		
Jdanovka	12.70 (1.15-1.37)	19.67
Kirovskoye	23.78 (1.50-1.94**)	23.44
Konstantinovka	11.39 (1.09**)	11.39
Kramatorsk	9.26 (1.00**)	10.10
Krasnoarmeysk	~	~
Krasniy Liman	1.81**	~
Makeyevka	2.40**	10.50-13.35
Marioupol	12.48	15.12
Novogrodovka	12.00	13.00
Selidovo	11.83 (1.10**)	12.90
Kurakhovka village	10.53 (0.98**)	11.49
Ukrainsk village	10.53 (1.08**)	11.23
Gorniak village	11.56 (1.08**)	12.61
Ocheretino	~	~
Alexandrovka	-1	10.78
Rodinskoye	10.22	11.61
Slaviansk	13.45 (1.22-1.58**)	14.65
Snejnoye	1.22-1.04**	12.52
Soledar	~	~
Seversk	~	~
Sviatogorsk	11.57	14.71
Torez	8.60 (0.65-1.26**)	
Khartsizsk	8.30 (1.32**)	14.86
Zugres	10.78 (1.00-1.13)	~
Ilovaysk	10.15	10.15
Shahtersk	1.90-2.08**	16.21-20.64
Yasinovataya	10.91	14.06
Kurakhovo	9.55 (0.80**)	
Amvrosievka	~	~
Novoamvrosievka	15.2 (1.52**)	15.20
V-Novoselkovka	2.20**	~
Volnovakha	~	~
Vladimirovka village	~	~
Novotroitskoye village	~	~
Donskoye village		
Volodarsk	2.46**	22.04-24.04

Maryinka		
Novoazovsk	~	~
Mangush	0.90**	
Krasnogorovka settlement	10.93 (0.99-1.20**)	12.92-15.48
Starobeshevo	2.76**	10.55
Tchasov-Yar	~	~
Komsomolskoye	~	~
Novodonetskoye settlement	0.65**	6.90
Telmanovo	2.00**	20.00

Annex 5 Administrative aspects

Title	Administrative aspects		
Code	061024 Report Arnaud 1 E.doc	Date Redaction	20/10/06
Index of Revision	1	Emitter	Arnaud CARON

Context

The European Investment Bank (EIB) has signed a framework agreement with Ukraine. This agreement has already permitted a loan of 150 M€ out of a total cost 368 M€ for the rehabilitation of the M-06 highway between Kiev and Brody (July 2006).

The projects of capital investment relative to the implementation of the regional plan of management of solid household waste in the region of Donetsk (program TACIS "Capacity building in the oblast of Donetsk for waste management") seem at first sight much greater than the capacities of investment of the local governments. They will thus need grants from the State and a loan from an International Financial Institution (IFI) like the IEB, since the interest rates that the local government could get on the market would be prohibitive.

But the EIB will carry out a financial appraisal of the project before allowing such a loan, and it must be established that local governments have sufficient financial resources to guaranty that they (or their communal services enterprises) will be able to pay the fares that will be necessary to sustain the economical development of this new industry of waste management.

Furthermore, the institutional engineering, the management and the monitoring of this project needs to be foreseen, since local governments and administrations have no experience of such a complex project.

Description of the project

The TACIS project on waste management in the Oblast of Donetsk has lead to a regional plan for waste management including the necessity of capital investment and technical improvements in the collection of the fees abroad the inhabitants and significant capital investments for classical and selective collection and disposal of solid household waste.

A draft of the 10-year capital investment plan is presented in the pre-feasibility report of this project[8]. It can be summarized as follows:

Collection and sorting	248 MUAH	≈ 39 M€
Landfills and their transfer stations	416 MUAH	≈ 66 M€
Diverse	46 MUAH	≈ 7 M€

Table 11 Investments size order

Among these 710 MUAH (≈ 113 M€) of necessary capital investments, some are relevant from the very local level (like containers or computerisation of the fee collection). But a large part is directly relevant from the regional level. It can be separated in two distinct parts that represent two different activities.

The first part concerns the landfills, their transfer stations and the semi-trailers trucks between them, for a total amount estimated up to 412 MUAH (≈ 65 M€). The second part concerns the development and improvement of the classical and selective waste collection, which requires equipment with new type of trucks, for an amount estimated to 142 MUAH (≈23 M€).

This total amount of about 88 M€ of regional investment is far above the investment capacities of the local self-governments of the oblast. Considering that the aggregated "second basket" of all local budgets of the oblast is up to 300 MUAH, that only a little part of this basket finances capital investments, that local governments do not have only waste management investments to realise, and that many little towns budget are in deficit, it is simply not thinkable that such a project could be financed only by local self-governments. Furthermore, if cities and towns can borrow for investment projects, the interest rates they can get on the

[8] TACIS BSIF – Solid Household Waste Management of the Donetsk Oblast – Pre-feasibility report, March 2006, § 10.1

private market do not allow them to think about loans for more than a few years. It is thus necessary that an IFI get involved in this project to get round this difficulty of financing such a large investment.

Financial aspects

The revenues of the project presented in section 10.2 of the pre-feasibility report show that the viability of the investments depends on:

- A better collection of individual fees: This point is treated *infra.*
- An increase of the individual fees: The level of the fees, which are decided by the communal councils, will have to follow the real costs of waste treatment, in order to avoid the (eventual) available part of the "second basket" of the communal budget to be used to make good the deficit of the waste treatment competence.
- The obligation for enterprises to use the landfills (with a fee much higher than the actual habits): Once sanitary landfills are available, the effective use of them by the municipal collection enterprises will depend on the "political" willingness of the administration in charge of the enforcement of laws concerning those waste.
- The production and the selling of electricity from biogas: The exploitation of the landfills must be done efficiently from a technical point of view.
- The selling of carbon rights: The project must be acknowledged by a carbon fund, if possible since the inception.
- The selling of secondary raw materials: The effectiveness of this revenue will much depend on the quality of the collection and on the motivation of citizens.

Including the projections of all this revenues, it seems difficult to pay the costs of operation, pay the interests and reimburse the loans before a few years.

The loan contract will thus has to include a grace period for capital repayment in order to take into account the fact that the project needs the inception of a globally new system of management of household waste at the scale of an oblast.

Nevertheless, it is thinkable to consider that some of the projections included in the pre-feasibility report are particularly pessimistic. We can indeed reasonably hope that the price of the ton of CO_2e will regularly increase on the market, since a political consensus is emerging in occidental countries to fix more ambitious objectives in terms of CO_2 emissions. Moreover, the regular increase of wages that is observed in the oblast since a few year should continue, due to a dynamic international market of energy (here coal) and steel: this will allow the municipalities to increase regularly the waste management fees. Furthermore, the price of oil, and thus energy, will indubitably grow in the mid-long term: this will mechanically increase the price of the electricity that will be sold by the project, but will be compensated by the growth of the price of fuel needed for the collection and transportation of waste. A finest study about this issue is necessary, and any middle-long term project should now integrate different hypothesis on the price of fuel.

The issue of the collection of individual fees

Diagnostic

Increasing the fees is of no use if arrears in payment accumulate and if not every owner of a private house has a contract with the communal enterprise or with the private delegated enterprise.

The strategic objectives of the project, as described in the pre-feasibility study, include "100% of waste collection services paid by inhabitants in 2009". Many substantial advances were observed in this domain since the inception of the TACIS project on municipal solid waste in the oblast of Donetsk. But many inadequacies are still observed.

Not every individual householder has a collection contract

Since the legal basis does not consider that every inhabitant is automatically a producer of waste, a householder can still argue that he does not produce waste to refuse to enter into contract with a collection enterprise. It seems that the rate of individual houses without a contract exceeds 50% in some towns. Moreover, it is not clear that a householder is required to enter into contract with the enterprise, whether a communal or a private enterprise, that is chosen by the municipality.

Anyway, in case there is no legal evolution towards the requirement for an individual householder to enter in contract with an enterprise, nor the possibility for a municipality to create a tax on waste collection, municipalities will have to devote human resources and capital investments (computerisation) to the improvement of the rate of collection contracts in the private sector.

Untimely payment and non-payment

Whether in flats or houses, the rates of payment of waste collection fees are not optimal. The situation is generally better in flats where JEKs can be an intermediary between the communal enterprise and the households. But there are many cases where only about 70% of the private sector households pay their fee. This leads to much indebtedness that may represent huge amounts for low revenue households.

But it seems that every legal possibilities that are now at municipalities' disposal are not systematically used.

Fines

Law of Ukraine N° 486/96-VR "On temporary prohibition to impose fines upon citizens of Ukraine for untimely payment for housing and communal services" dated 19 November 1996[9] was justified by the fact that the State failed into paying wages, pensions, etc. It is now repealed. This allows the municipalities, which are in charge of deciding the amount of the fees of communal services, to integrate fines in case of untimely payment. This would constitute an efficient incentive to avoid that some households begin not to pay their fee (imitating some neighbours, for example).

Repayment of indebtedness

In the cases there is a written contract, the law of Ukraine 606-XIV on "Executive enforcement" (April 1999) stipulates that the debt recovery can be carried out at expense of debtor's funds and then at the expense of the debtor's property. In case of insufficiency of both, the indebtedness can then be recovered trough a seizure on the debtor's income.

Nevertheless, the application of this law supposes that a specified procedure is followed, involving that the householder is warned that in case of non-payment of the debt, a suit will be filled with the court, and then that a written claim is sent to the court.

This procedure is thus only thinkable: 1/ as there is a written contract and 2/ as the contract is sufficiently clear to establish the responsibility of the debtor. Even in that case, it must be noticed that the overload of courts leads to a slow consideration of that kind of cases, and that the poor equipment and staffing of executive (state) bodies in charge of the enforcement makes the execution of the procedure even slower. The court can also, in some cases, decide a restructuring of the debt rather than a forced recovery.

Many municipalities in Ukraine used this legal possibility to try to recover indebtedness with more or less success. In some cases, law firms were hired to collect debts through courts actions, at a fee proportional to the money recovered.

Despite the fact that in can seem excessive to fill a suit in a court to recover a few euros, it is nevertheless indubitable that this kind of action has a positive impact on the general compliancy to pay.

Other experiences to recover indebtedness

Some municipalities experimented rebates on debt repayment. This method can bring a temporary flow of cash for communal enterprises, and allows clearing of the situation with some citizens who want to get rid of their debt. But in order to be fair, it must be done with a simultaneous rebate on regular payers, so that it can end in a worsen of the financial situation of the enterprises.

Furthermore, the collection rate typically drops at the end of the campaign, since many citizens hope that it will be renewed.

Some cities have organised lotteries among regular payers. But this kind of method, although it can be sympathetic and softly incentive in the long term, cannot be the only way for a municipality to ameliorate the rate of collection of fees.

[9] "Payment collection for housing and communal services : the experience of Ukrainian cities", USAID, 2002

In some cases, the fact of receiving a severe letter convinces some non-payers to change their behaviour, but many enterprises (or municipalities) do not send those simple letters for budgetary and/or understaffing reasons.

It is also to be noted that some municipalities have organised a system of centralised payment for all public services that allows the citizens to pay all the public services on one lonely bill per month. It is then not possible any more for a householder to choose the services he will pay and those for which he will accumulate a debt.

The necessity of a waste collection tax

The actual system of contract between JEKs or individuals and collection enterprises is more and more criticised by foreign experts, members of elected bodies and civil servants. Filling the gaps of this system uses much human resources from the cities and collection enterprises, for a result that is still unsatisfying. The necessary future significant increase of the waste collection fee also requires a solid, simple and efficient system of collection.

Considering that every citizen produces domestic waste, many plead in favour of the instauration of a municipal individual tax on waste collection, if not in favour of the legal possibility for municipalities to create new taxes in a legal frame, in order to strengthen their global financial capacities.

Whatever the profile this tax may have, the symbolic weight of a tax and the legal facilities to collect it would undoubtedly make it more efficient than the actual fee.

This evolution of the actual fee into a municipal tax would need a legislative act by the Verkhovna Rada.

Such a fiscal reform would have, among others, the advantage of giving the municipalities some fiscal independence that would allow them to arbitrate transparently (from the point of view of the citizens) according to their willingness of ameliorating the service of waste collection and processing. The income of such a tax could fund whether an annex budget that may cover the whole competence "collection, transportation, transportation, utilization of domestic waste and rendering it harmless"[10], whether the general municipal budget.

Utilisation of the new landfills by the communes

The case was observed of an authorised landfill that was under-used because the communes preferred to use illegal dumpsites that were more convenient or less expensive than transporting the collected waste to the landfill and then paying the deposit of it.

These examples let think that there will not automatically be a massive rush on the sanitary landfills of the project, which use will be even more expensive than the actual authorised landfills. More than environmental considerations, the enforcement of the legal interdiction of waste disposal on dumpsites will be necessary to convince the mayors.

Another way is to implicate them in the inception of the project (see above), and to convince them that they will get more security and tranquillity by "delegating" the "utilisation" (disposal) to a convenient regional structure.

The conditions of a loan from the EIB

The EIB is the financial institution of the European Union. It was founded by the Rome Treaty. The Framework Agreement between Ukraine and the BEI was signed in June 2005, but is still not public. Nevertheless, many elements plead in favour of such an investment project from the EIB point of view:

- The size of the project complies with the minimum size of a project that can be the object of an "individual loan" by the EIB (25 M€);
- The project complies with one of the most important operational priorities of the EIB, environmental protection and improvement, and the EIB-President focused on Trans-European Networks and environmental protection during the press conference that followed the signature of the Framework Agreement.

[10] Law 1997-0280 on Local Self-Government, art.30

The project is initiated further to the Regional waste management plan, that was the object of a TACIS project[11], and another TACIS project[12] is in progress about the implementation of this plan: as an institution of EU, EIB aims to realise the political objectives of EU, including Europe AID.

Project appraisal

The EIB will carry out the project appraisal before according the loan.

The EIB website gives the list of the criteria[13] that are taken into account in order to estimate the pertinence of a project:

- **Technical scope:** The technical soundness of the project is guaranteed by the studies lead by the TACIS projects with a methodology that is compliant with European standards.
- **Implementation** ("Promoter capability to implement the planned project")**:** The promoter, which shall be a public enterprise, will benefit from the know-how transferred by the TACIS projects, and will also benefit from the support of the political and administrative authorities which are at the origin of the project, and thus of the necessary credibility to reassure and manage the suppliers.
- **Operation:** The transfer of know-how concerning the management of a European-standard sanitary landfill will be done by the TACIS project.
- **Compliance with applicable legislation:** The objective of the project is to comply with environmental legislation (end even to be in advance over it).
- **Environmental impact:** *idem*.
- **Market and demand:** Considering that the administrative authorities would enforce the law about waste disposal, the lack of sanitary landfill is indubitable, and no private initiative should compete with this project.
- **Investment cost:** The studies realised by TACIS led, with the accordance of regional administrative authorities, to the most economical situation of the projected landfills, and the prices should be optimised by the use of public tenders.
- **Profitability:** The draft of business plan included in the pre-feasibility report will be refined, and should show a better profitability (*see above*). A fiscal reform leading to a waste collection tax would even strengthen the projected profitability of the project.

Capital investment capacities of the municipalities

The EIB funds investments at a maximum rate of 50%. But local self-governments bodies do not have enough self-financing capacities to fund the last 50%. This is due to special countable rules that prevail in Ukraine, comparatively with European standards.

Instead of making provision to general unaffected funds from the State budget, or to a substantial fiscal autonomy, the law[14] makes of that self-government bodies receive funds from the State that are corrected by an equalisation grant based on the effective incomes and obligatory expenses. Due to these rules, self-government bodies have a very limited budgetary freedom, only based on the "second basket", which is made of relatively anecdotic revenues[15]. Furthermore, the habit of implementing public services through communal enterprises, which have separated budgets, reduces the effective financial capacities of municipalities by compartmentalising the resources.

Necessary capital investment relevant to the competence of self-government bodies are thus generally funded trough State subventions that are voted every year as an annex of the State budget law of Ukraine. It is to be noted that although the law does a distinction between operational budget and capital budget, which

[11] TACIS project EuropeAID/112554/C/SV/UA

[12] TACIS project EuropeAID/118732/C/SV/UA

[13] http://www.eib.org/projects/index.asp?designation=appraisal

[14] Budget code of Ukraine. A Fiscal code is in work at the Verkhovna Rada.

[15] This system of funding local budgets is due to the weakness of public resources as a whole (but the economical growth should also strengthen public resources), and also to the fear that, at the beginning of the process of decentralisation, some elected heads of self-government bodies would lack of know-how about the financial management of such bodies (this problem should also quickly reduce).

is essential, the ignorance about the different natures of these two parts of a budget is still very spread, even by elected deputies and many civil servants.

Separating the different trades among waste management

Despite municipalities have a global competence over waste management, two different trades must be told apart: collection and processing.

Some other satellite trades are often carried on directly by the staff of the municipal collection enterprises, like the maintenance of trucks: it is obvious that those enterprises must aim to efficiency in their core-business and externalise this kind of activities for which they can not be as efficient and economical as a specialised enterprise.

Collection requires some local investments, depending on the local policy that is chosen by the municipality. They can concern fee collection (computerisation), selective collection (containers, trucks, individual composters…), the put at level of the collection (new convenient containers and trucks), etc.

Capital investments concerning processing can be in the field of sorting (depending on the willingness of self-government bodies, like sorting plants, transportation and treatment of sorted material…), but are mostly in the field of landfills (transfer stations, transportation to the landfill, and the landfill itself).

Considering the urgency of the situation, the project aims to gather at the regional level the solution of the issues that are common to every municipality, knowing the difficulties that communes (or communal enterprises) encounter about the funding of capital investments that would be necessary.

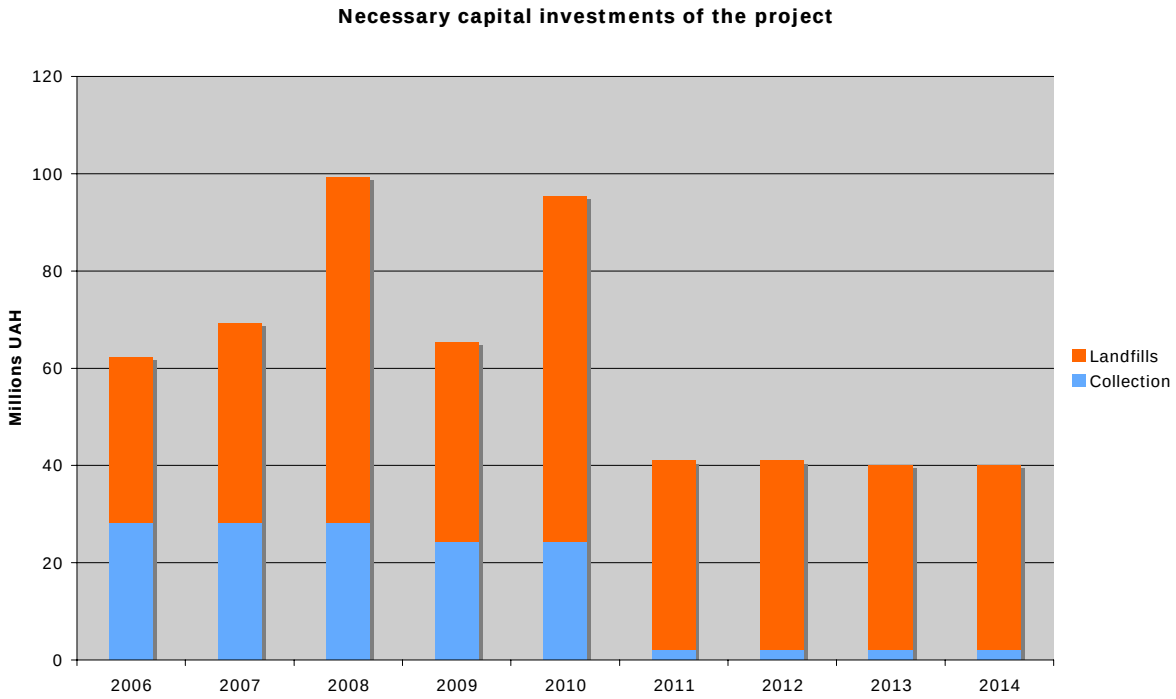
The project aims to help communes to assume their legal competence on waste management, without impeaching them to make real choices concerning the organisation of the collection, the level of service or the policy of selective collection or reduction of the amount of waste to collect, by furnishing common services that concern the two different trades of waste management:

- The creation of a leasing company that will provide maintained suitable trucks for the development and put to level of collection
- The construction and the exploitation of sanitary landfills and their satellite transfer stations that will provide a law compliant solution for ultimate waste

This scheme complies with the principal of subsidiarity.

Funding of the capital investment

The capital investment will last during a projected period of 8 years.



Graph 8 Necessary capital investments of the project

The EIB may be the principal investor of this project, with a maximum rate of 50%.

State subventions should also fund a significant part of the capital investment every year. The State seems indeed to aim at improving the waste management in the oblast, having subsidised XX M UAH of investments for this purpose last year. The Regional Council (and the regional state administration) is a crucial gate in the procedure of requirement of a State subvention and, once again, the project shall be implemented by the willingness of the regional deputies.

The municipalities will also have to contribute to the investments. But their lack of cash-flow and their technical difficulties to borrow will limit their possibility to participate financially to the investment. Nevertheless, municipalities often own the lands where the projected landfills will be situated: this shall constitute a significant participation to the project.

Concerning the investment in trucks for the collection, the possibility that the World Bank would be interested should be seriously evaluated[16].

	Landfills	Collection
EIB (loan)	206	71
World Bank (loan)		50
State (subvention)	136	
Regional council (subvention)	50	21
Municipalities (in kind)	20	
TOTAL	412	142

Table 12 Projected funding of the capital investments (in M UAH)

Organisation of the regional services

The project aims to provide two different services at the regional level. It means two different companies. The existence of two separate enterprises would mean that a commune could choose to participate to only one aspect of the project. The two activities would also be clearly financially independent.

[16] World Bank promotes leasing in Ukraine through IFC, its private sector arm.

The hypothesis of the creation a holding with two subsidiaries, or even of one single enterprise with two departments, would save some structure expenses, but would certainly lead to difficulties into separating the budgets of two different trades. It could also create difficulties in the case where other investors than BEI would aim to participate to the inception of only one part of the project, with their owns objectives.

Legal basis of a "regional" company

The article 60 (part III, on Material and financial basis of local self-governments) of the Law on Local self-governments[17] stipulates:

"3. The territorial communities of villages, settlements, cities, and sub-municipalities, either directly or through local self-government bodies, may join on a contractual basis in the right to joint ownership of objects of communal property right, as well as local budget funds, for the implementation of joint projects, or for joint financing (maintenance) of communal enterprises, institutions and organizations, and may create to this end the appropriate bodies and services.

4. Rayon and oblast councils shall manage, on behalf of territorial communities of villages, settlements, and cities, objects of joint property which meet the common needs of territorial communities."

This article gives what seems to be the institutional assembly most favoured by the law. A "regional company" shall thus be owned jointly by the communes and managed by the regional council.

A regional company would thus have the statute of a communal company. As such, it would have a separate budget, and shall be able to contract directly a loan with an international bank. It is to be noted that the Budget code of Ukraine (art. 72) lays out that the regional council cannot borrow for investment purposes [interpretation of articles 72, 73 et 74 of the Code], but M Ermakov said the Regional council can borrow.

Anyway, since the equipments will be owned by the regional companies, it is sound that the computability of these companies make the difference between the grants they will receive through their authorised capital and directly by the local self-governments, and the financial debt that they will have to reimburse.

The article 70 of the Law on local self-governments stipulates that the local-governments *"may act as guarantor of credits of enterprises, institutions and organizations which are the communal property of the corresponding territorial communities"*.

The regional council has a budget that is sufficiently large (more than 4 billions UAH) to fund the reimbursement in case of bankruptcy of the regional enterprises. Furthermore, guarantying the loan of the enterprises by a pool of municipalities (municipalities sometimes have no capital investment self budget) would lead to a complexity that would constitute a source of insecurity for the bank, and the creation of a joint structure of municipalities especially for that purpose would not have more credibility from the point of view of the bank than the regional enterprises themselves.

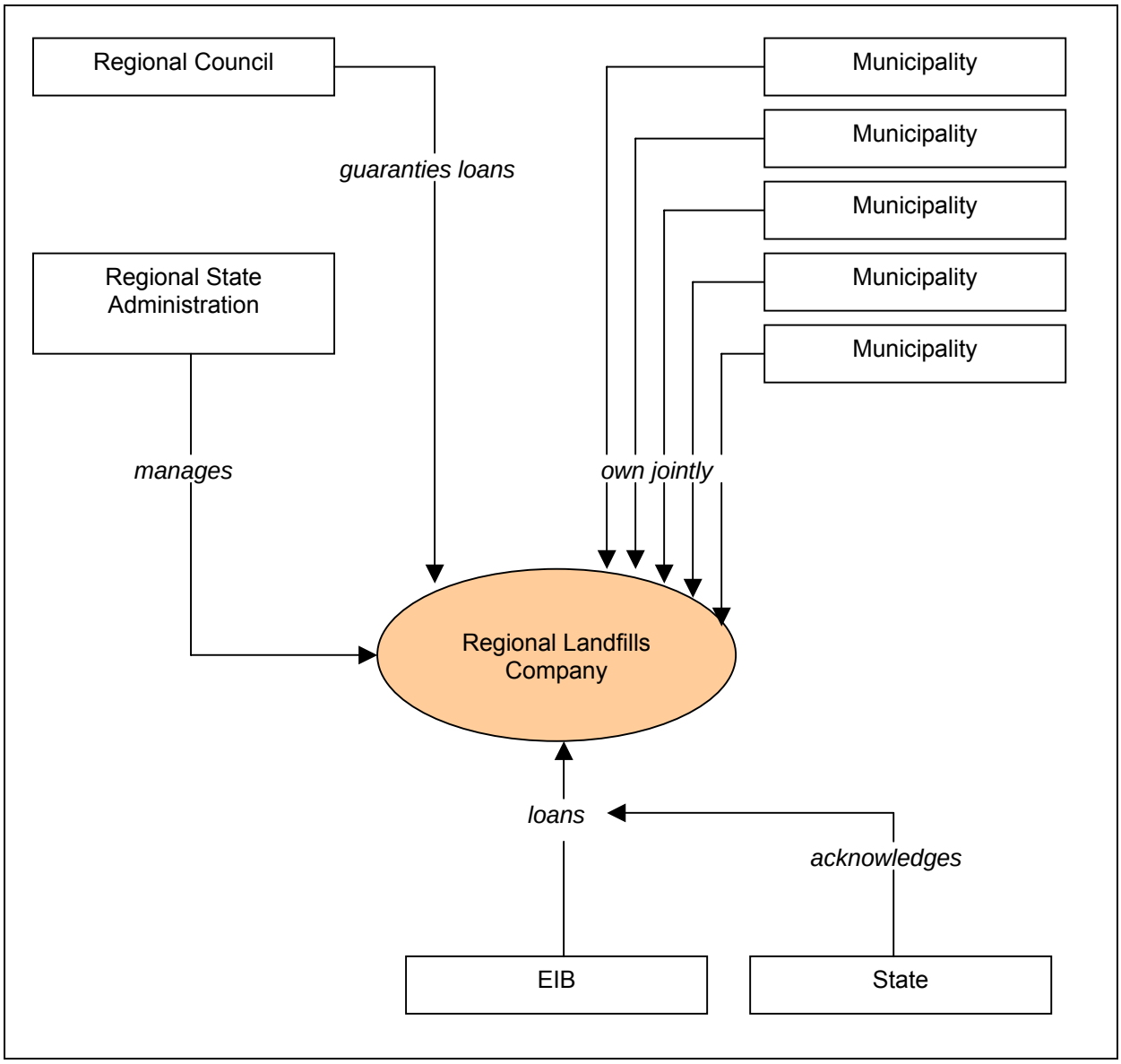
Finally, article 43 of the Law specifies some exclusive competences of the plenary assembly of the regional council:

"20) adopting decisions, in the procedure established by law, on managing objects of common property of territorial communities of villages, settlements, cities, and sub-municipalities which are governed by rayon or oblast councils; appointment and dismissal of their managers;

27) adopting decisions on delegating certain powers of rayon and oblast councils to local state administrations;"

Regional councils do not have a sufficient executive body (administration) to furnish the technical competencies that will be necessary for the implementation of the firms (negotiations with the municipalities, loan dossier, technical assistance for the constructions and for the running of the landfills, etc.). It is thus reasonable to think about the delegation of the everyday management of the project and then of the running of the regional enterprises.

[17] Law of Ukraine on Local self-governments, 1997-0280



Scheme 1 Feasible institutional assembly

Deficits during the first years

An arbitration involving the elected heads of municipalities and of the regional council will be necessary to decide how the operating deficit of the regional enterprises will be made good. Since the efficiency of the collection of individual fees will not increase enough to allow municipalities to raise them so quickly, the municipalities, and eventually the regional council, will have to guaranty some operating subvention for a few years, that will necessarily be funded through their general budget. This will constitute a severe effort for some poor municipalities, and the regional council should certainly concentrate its efforts to help them in priority.

Nevertheless, it is indisputable that the efficiency of the collection of the individual fees and their increase (knowing that the creation of a municipal tax would be incomparably more efficient) is the key of the long-term success of the project.

Necessity of the implication of the municipalities

Many mayors of middle and little-sized towns still manage their competence on waste processing in the "old way", meaning that they dump it in a "municipal landfill". Knowing that even many authorised ("passeportised") landfill are absolutely not sanitary, and knowing that many mayors will prefer to please to

their electors by maintaining a low individual fee, their implication will pass through the enforcement of every environmental and sanitary laws[18].

Even the symbolic authority of the regional council and of the regional administration will certainly be necessary to convince them, since ecological considerations will not be sufficient to convince them to raise the fees in the way that will be necessary for their municipal enterprises to become customers of the regional landfills.

A positive argument in their direction will be that they will get rid of this competence for long-term in a sanitary, ecologically and legally safe way by joining the regional association.

Anyway, the Inspection of Environment as the Sanitary Epidemiological Service have the power to close all landfills and dumpsites for non compliance with the regulations.

Statutes of the regional enterprises

The municipalities will own these enterprises jointly. Some municipalities will need a few years before deciding to participate. The statutes must thus forecast that associates will come every year. If not, the statutes will have to be modified each time a new associate comes: it means thus that the statutes must integrate low conditions of modification in order to divert the risk of political freezing[19].

Since the municipalities are the owners of the enterprise, and since the law gives them the competence on waste processing and on the choice of waste disposals, the statutory authority of the regional enterprises must be the general assembly of the municipalities (of the mayors or of their deputies). This is not contradictory with the fact that the regional council, that would be the delegated manager, presides the general assembly.

This general assembly could gather once a year in order to ratify the main orientations, to certify the counts, to accept new associated municipalities, etc. An annual report should naturally be sent every year to inform the municipal councillors.

The rights of vote among the general assembly should be weighted by the size of the municipality[20].

The general assembly should also elect a board of the enterprises that shall help the president to enforce the decisions taken by the general assembly, with more detailed and technical information, and more meetings.

The directors of the enterprises should also be formally chosen by the general assembly.

Inception and management of the regional enterprises

Once the main actors of the project (regional council, regional state administration and main cities of the region) agree on the project, it is necessary to create the enterprises as soon as possible. This stage will require some votes by elected councils, which will take a few months, even if organised "delicately" (lobbying).

The enterprises must immediately be provided with an inception budget and with their directors and a (very) light staff. Preliminary tasks will be to organise the company, to launch studies, and to prepare the finance negotiation.

The skills and the willingness of the directors will be crucial. Furthermore, the heads of the major elected councils and of the regional state administration must trust and support them, even if there is no doubt that such a project will trigger off much reluctance among local councillors and civil servants.

The local councillors will indeed hesitate to take decisions that imply financial risks, raise of the individual fees, and that constitute a kind of experiment from the Ukrainian point of view. The elected supporters of the project will have to convince them.

Since the directors will need assistance from the regional state administration in many fields, and since it is out of question that the reluctance of one individual responsible of the administration freezes the project, the

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[18] Knowing that alinea 7 of article 33 of the Law on local self-governments lays out that municipal executive bodies have the competence *"to determine, in accordance with legislation, areas for storing, keeping or placing industrial, household and other waste"*

[19] Conditions concerning statutory modifications must be more strict than a simple vote, but too strict conditions could lead to the possibility of the constitution of a "freezing minority" (a pool of municipalities unsatisfied by the price of the service, for example) using its capacity to stop the entrance of new associates in order to establish a power struggle.

[20] The determination of the authorised capital brought by each associate should thus depend on the size of the town.

directors will also need the entire trust and support of the head of the regional administration: the governor himself or at least a vice-governor. The civil servants that will be mobilised for the inception of the project will be destabilised by this new object that will change their habits and will constitute an additional work. The directors will thus need all the "delegated authority" of high-level administration managers.

Inception of the project

Some high-level elected heads of local councils (regional council and councils of the biggest cities) and responsible of the regional state administration must be *convinced* by the project, and ready to support it actively. The TACIS projects in the region of Donetsk have already actively contributed to this indispensable preliminary.

The effective inception of the project will be possible through the naming of a project chief, whether by the regional administration or by the regional council, who will be able to manage all the dimensions of the project (practical, political, technical, financial, managerial dimensions…).

This project chief should naturally become director of the regional landfill enterprise once it is created, since the creation of the enterprises is only one stage of the project.

He should be able to bypass the classical administrative hierarchy and to mobilise the necessary technical competences among the administration in order to speed up the negotiations with the bank and the creation of the enterprises. This would plead in favour of a project chief named by a high-level civil servant…

Once the enterprises are created and begin to function, the regional council (executive body), the regional state administration and the municipal council (executive bodies) as separated and independent institutions should name each a responsible in charge of the follow through of the correct execution of the contracts they will have signed with other participants of the project, and also of the everyday relations with the other actors of the project. This responsible will thus be in charge of the respect of the obligations of his institution and also in charge of the follow through of the respect of the obligations of the other institutions (i.e. of the defence of the interests of his institution).

This will allow the enterprises to slide along towards a "normal" way of functioning with their interlocutors.

Annex 6 Report on Potential Legal Relations between Waste Management Stakeholders – Realising the Donetsk Regional Solid Household Waste Management Plan

Title	Report on Potential Legal Relations between Waste Management Stakeholders – Realising the Donetsk Regional Solid Household Waste Management Plan		
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Executive Summary

1. This Report has been compiled under the Black Sea Investment Facility Project (EuropeAid 116448/C/SV/Multi-12) ("the BSIF Project"). It is addressed to the BSIF Project, and its main objective is to assist in developing and underpinning realization of the Donetsk Regional Solid Household Waste Management Plan ("the Regional Plan" or "the Project"), which was adopted as a recommendation by the Oblast Council in May 2005. This Report draws on the information noted in various earlier Reports under this and other EuropeAid Projects (details of which are noted below), but has not otherwise validated the information contained in those reports.

2. This Report provides an update of the legal and regulatory framework relevant to the matters to be addressed further in the Report; proposes a logical framework for the relationships of the rights and duties of all possible involved parties, and proposes principles for regional decrees or contracts establishing the rules for funding the Regional Programme. In support of the various proposals made through this Report, the Report contains an analysis of relevant legal and funding relationships of parties involved in bringing the Regional Plan to realisation.

1. Overview of the end results sought through the Regional Plan, and key considerations arising

3. Starting in 2006/2007, it is intended to initiate the construction and operation of between 8-10[21] new regional sanitary landfill sites, which would comply with key requirements for the construction and operation of landfill sites under EU legislation. All such landfill sites are to be constructed and in operation by 2014. All these new sanitary landfills would be owned and operated by a new Oblast-level Regional Waste Management Company ("the RWM Company"). In support of the intended effective operation of these new sanitary landfills, a series of some 21 Transfer Stations are to be established, owned and operated by the RWM Company. The RWM Company will therefore be involved in waste transport, but, it is envisaged, only as between the Transfer Stations and the new landfill sites and only therefore as regards waste that should by that point have become its property. There will still be provision for deliveries of SHW by SHW collection companies direct to the new landfill sites in appropriate cases (eg where the waste comes from an area closer to the landfill site than to the Transfer Station).

[21] In fact, the actual number is still to be decided. The numbers 8-10 are used for reference and as they are considered to be within the target number eventually decided. Nothing turns, as far as material to this Report, on the actual final number compared to the range of 8-10 such landfill sites.

4. It should be decided from the beginning whether the RWM Company is a dedicated purpose company only offering services with the particular persons with whom it contracts or whether it intends to offer services to the public – ie whether it offers services to the public at large – see the Civil Code, Article 633. If the latter, it may be required to allow for delivery of waste from entities other than authorised SHW collection companies. Given the scope of the Regional Plan, and the projections for SHW growth and facilities required, it does not appear that waste such as industrial or commercial waste such as building rubble is included in these figures. As a key part of the Regional Plan appears to intend funding to be available from Carbon Funds or sales of Emission Reduction Units ("ERUs"), it is desirable that the least inert material as possible is accepted in to the new sanitary sites (other than for daily or final cover), thus leaving more space for gas-producing materials and so enhancing the value overall of the waste received into the new landfill sites. On the above bases, it would appear desirable that the RWM Company not be an Article 633 service provider.

5. Waste collection and transport leading to delivery of waste to the Transfer Stations and/or new landfill sites would need to be organized in such a manner that would allow for the effective operation of the Transfer Stations and the new sanitary landfills.

6. These new landfill sites would provide for the disposal by sanitary landfill by/in 2014 of 100% of all solid household waste ("SHW") collected within the Oblast which was not recycled, re-used etc.

7. By/in 2009, 100% of all SHW produced is to be collected, and 100% of all waste management costs is to be charged.

8. Also by/in 2009, 100% of all fees charged for SHW management should be recovered

9. Supporting finance is to be raised also by way of State grants and from a number of Ukrainian Environmental Funds. Arrangements regarding these matters are outside the scope of this Report in any detail although key relevant legal arrangements are discussed below.

10. Further funds are intended to be raised by way of a finance facility from an International Finance Institution, anticipated to be the European Investment Bank ("EIB"), and also by way of sale of carbon emission reduction rights ("ERUs") and/or access to Carbon Funds through exploitation of landfill gas at the new 8-10 landfill sites. It does not appear that access to ERUs or Carbon Funds is intended as action separate from the positive carbon-impact effects of closure and/or remediation of existing open and closed dumpsites/landfill sites/illegal flytipping sites[22].

11. The Regional Plan also foresees closure of all existing dumpsites/landfill sites (currently about 300), including 29 presently with a "passport". Closure is intended on a gradual/transitional basis, with dumpsites/landfills receiving waste intended for one of the 8-10 new sanitary landfills being closed as each of the 8-10 new sanitary landfills come on line for waste disposal.

12. There are some recently opened landfill sites which appear to/might have been constructed in accordance with required sanitary regulations, but which are also intended to be closed as described above. Notwithstanding the Regional Plan, work on constructing new landfill sites continues, and yet further sites not within the Regional Plan are apparently contemplated for construction and operation in the future. It does not appear that any of these landfill sites will be among the new 8-10 regional sanitary landfill sites. Provision for closure of these newer landfill sites must also be made. This may prove problematic, as indicated below.

13. The Regional Plan also foresees remediation of the existing operational and closed dumpsites/landfill sites (calculated at between 500-1,000 sites). This aspect is outside the scope of this Report.

14. Over the years 2006 – 2014 it is intended that new vehicles, plant and equipment will be financed and operational which will allow the new 8-10 sanitary landfill sites to operate at the volumes and manner for disposal of waste and collection and exploitation of landfill gas. This aspect of the Regional Plan is outside the scope of this Report, save as to basic arrangements for financing.

[22] "Flytipping" is used here to describe the activity of dumping waste at sites chosen at random, and so not in locations where any pre-established environmental protection measures have been taken at all.

2. Key matters of principle to note

15. The Regional Plan is not a document legally binding on other public authorities, in particular other public authorities known as "local self government" bodies. The Regional Plan has the status of a "recommendation". Although the Oblast State Administration is, according to the Waste Law, Article 20(c), to set up the development and introduction of *inter alia* regional waste management programmes, other "lower" level local self government bodies (such as villages, settlements and cities [and sub-city districts]) are not under a legal obligation either to follow or to advance realisation of the Regional Plan. These bodies remain free to choose alternative action other than as envisaged in the Regional Plan.

16. The chief significance of this is twofold: (i) that all action aimed at realizing almost any given element of the Regional Plan where more than one local self government body is involved is likely to require prior coordination and/or binding legal agreements as to the way forward; and (ii) the absence of such agreement poses a risk to the practical realization of the Regional Plan, or at the very least presents an enhanced degree of risk in planning steps to realize the Regional Plan (including as to obtaining finance, and especially obtaining and repaying external finance).

17. The points set out in paragraphs 15-16 above may not be practically important as regards steps such as the construction of new sanitary landfill sites (and probably the creation of Transfer Stations) for the simple reason that the body/bodies that have the means to combine funds sufficient to fund the same are central or regional authorities. Likewise the same may also not be important materially in terms of operations of these facilities and/or of use made of the new facilities provided other steps associated with the effective operation of the new facilities are taken by other relevant authorities – for example, terminating illegal dumpsites or landfills that do not comply with required construction or operation norms. However, risk lies in the take up of use of the new facilities in that contracting decisions for municipal waste collection and delivery rests at a very local level, even as disparate as far down as to the administrators of individual blocks of residential flats and even individual private households. A possible solution lies in the local self government bodies committing themselves by contract or executive decision to action supportive of the Regional Plan (such as providing for LSG territory-wide tendering, with steps to encourage private sector households to contract with the winning bidder). It is considered that such a commitment would be lawful as those bodies would be committing themselves to act in a manner that supports and advances their own legal obligations as regards ensuring collection, transport and disposal of solid household waste in their territories (see further below).

18. Contracting for SHW management services is generally based on individual contracts. Such contracts are usually entered into in the most disparate manner across the population. That is, in principle each household (but see below for communally-owned buildings) enters into its own contract with such waste service provider as it chooses. Tendering for the provision of waste management services has started at the suit of either the JEKs and/or from local self government bodies owning the JEKs but only in relation to the premises encompassed by the JEKs and other communally-owned properties (eg government offices and hospitals and the like), but such tendered contracts may provide the right for the service provider to enter into contracts with the winner of the tender. It appears that even in such cases individual flat owners may still choose to enter into a contract with a third person in such cases. It is obligatory to enter into a waste service contract if one has waste disposed off by a third party, and in any event it is mandatory for enterprises producing waste. However, it is not obligatory for private sector houses to enter into a waste management contract per se.

19. It is assumed that it has been established that the arrangements proposed under the Regional Plan are in principle and in their execution in accordance with and not contrary to either public procurement legislation or rules or anti-trust legislation or rules. Verification of such matters is outside the scope of this Report. It is noted, however, that in the Cabinet of Ministers of Ukraine Decree dated July 26, 2001, No. 915 "On implementation of a system for collection, sorting, transportation, processing and utilization of wastes as secondary raw materials", paragraph 6 expressly provided for the positive approval of the Anti-Monopoly Committee to the setting up of a State Company with recycling exclusive rights. It may also be noted that according to a senior lawyer within the Donetsk Regional Council (i) anti-trust legislation and monopoly controls apply as regards Ukraine as a whole, and not as regards *parts* of Ukraine (including to matters that are only Oblast-wide); and (ii) the proposed facilities are intended to serve a public purpose and benefit (thereby presumably providing justification under anti-trust legislation for the steps taken even assuming they might otherwise in principle have been able to breach Ukrainian anti-trust legislation and rules).

20. It is also assumed that all SHW waste produced and collected within the Oblast will not be "exported" to another Oblast. ("Exportation" would deplete the potential waste volumes that could be used for planning the effective operation of the Transfer Stations and the new landfill sites, including with a view to generating and exploiting landfill gas.) It is also assumed that waste from other Oblasts will not be permitted to be "imported" for receipt and disposal within the Donetsk Oblast (although for reasons appearing below, that outcome is potentially less problematic than the former). It has not been possible to identify express legislative provisions providing for this situation. From discussion with the Regional Council its opinion is that it does not appear that a suitable directive (or order) can be issued by the State Administration or Regional Council to this effect. However, coordination and agreement between the relevant authorities not to export SHW outside the Oblast would assist in protecting the integrity of operation and realisation of the objectives of the Regional Plan. Such a position would be compatible with and promote realization of a central principle of European Union environmental policy – that there be rectification of pollution as close to the source as possible ("the proximity principle"). This is all the more important if the Regional Plan needs external funding such as from Carbon Funds to be effective. The possibility of a Regional Directive here to the above effect should be pursued further with the Regional Council.

21. Land will be required for the new landfill sites and the Transfer Stations. According to experts from the Ministry for Land Resources, 60% of the land territory in Donetsk Oblast is privately owned, and 40% is State owned. According to these experts there is as yet no concept of "communally-owned" land, although that might develop in the coming years. All land therefore that is not privately owned is State-owned land.[23] However, there is very little State-owned land outside the cities, and so land for landfill sites (and possibly but less critically for the Transfer Stations) will most probably have to be purchased by the RWM Company[24]. There are as yet no compulsory purchase powers which can be used by public authorities for this purpose. Land must therefore either be purchased from private owners, or acquired from public bodies by way of transfer, sale or contribution as commitment to the Project. Transfers of land for such purposes by LSGs appear sanctioned by the LSG Law – see Article 60(5). (It would not appear practically feasible for land for a new landfill site to be leased, as leases of land in principle last for 50 years only – see the Land Code, Article 93(4)). Any new landfill site created under the Regional Plan is likely to require a period for construction, receipt of waste, restoration and aftercare that exceeds 50 years.[25] This problem would not seem to arise with a Transfer Station.) An Oblast-owned RWM Company is a suitable entity to which or for the activities of which land may be "transferred" for these purposes (see also Section 12 below on further specific budgetary considerations). Any permission to use such land for a landfill site would be for "permanent use" under the Land Code (see Land Code, Article 92(1)).

22. The RWM Company will need to hold permits for (i) the siting of each of these waste management facilities; (ii) the construction of these facilities; (iii) the operation of these facilities (including subsequent restoration and aftercare); and (iv) for the operation of the required transport plant and equipment. These aspects are addressed below.

23. The nature of and ownership of the RWM Company is still to be decided – see below for details as to options. It does not appear to be envisaged that private sector enterprises will be involved in the composition of the RWM Company, so this option is not considered further.

3. Background Framework

24. In order to read this Report as an integral document, it is necessary to set out some key background material.

[23] The Land Code itself actually refers to "communally owned property" – see Land Code, Article 83, by way of example.

[24] Unless of course gifted by private owners – a result that seems unlikely. This does not rule out the possibility that there is State-owned land which may be used for this purpose. Nothing turns on these eventualities for the purposes of this Report, although the contractual relations arising as a result that are addressed below may need modification.

[25] It is possible that such a lease may be extended, but this is a risk to the Project in that permission may not be forthcoming or only on "ransom", and hence expensive, terms.

3.1 Overview – Solid Household Waste-related information

25. The Donetsk Oblast accounts for some 4,774,4000 inhabitants (as at 1 March 2003). Some 90% live in urban areas, and 29% live in individual houses. Individual houses referred to here are those that are privately owned. Some 71% of the population inhabits communally-owned municipal buildings, that is, buildings owned by the public sector, usually by bodies of Local Self Government (see below). These buildings are often multi-storey. The individual flats within these buildings may be owned privately, but the frame/shell of the building is owned by the public sector. Most frequently such publicly owned buildings are owned by public sector housing utility entities known as “JEKs”. JEKs have tended to provide waste collection services as part of the public service supply to JEK households/buildings either as “public services” or as “maintenance services”.

26. Across the Oblast territory as a whole only some 37% of the estimated total SHW produced is collected – namely, some 650,000 tonnes p.a. out of some 1,750,000 tonnes p.a.. Of the 1,750,000 tonnes, some 800,000 tonnes p.a. comes from the private sector and some 950,000 tonnes p.a. from the public sector.

27. There are 45 administrative units in the Donetsk Oblast, of which some 32 have a collection success rate of less than 40%. Of the 28 city areas, a range of some 18 times in terms of SHW collection rates is to be seen. Of the 17 rayons, all collect below some 32% of SHW produced. Of the some 60% not collected, the waste is either burnt locally or fly-tipped locally. Some 50% of individual (ie private sector) households admit to fly-tipping their waste. As at 2005 the rate of non-collection of SHW produced in the private sector ran at about 60% and at some 40% in the public sector.

28. On average, there is a fee rate disparity between the rates paid in the public sector – average of some 4UAH per inhabitant per year – and those in the private sector – on average about 12UAH per inhabitant per year. The Regional Plan aims to eliminate this disparity (upwards) by/in 2009 after which the (then common) rates are envisaged to increase.

29. In the Donetsk Oblast there are some 84 public sector utility companies supplying waste management services, mostly waste collection, transport and disposal, but some also or only operate dumpsites/landfills. As indicated above, there are few private sector companies involved at any stage of waste management.

30. There are over 24,000 waste containers in the Oblast, mostly in the cities. There are some 500 waste collection trucks, 120 tractors and 71 trailers, the latter two items being used predominantly in rural areas. Most of this stock of equipment is physically obsolete and needs replacing.

3.2 Regional State Administration – Brief Overview

31. Donetsk Oblast is one of 27 Administrative Units comprising the territory of Ukraine (the Constitution, Art. 133(2)). It sits administratively below the central government. Its State Administration (also known as Local State Administration - “LSA”) forms part of the central State apparatus and exercises State administrative power (the Constitution, Art. 118).

32. The LSA is comprised of a single Oblast-wide Oblast LSA, below and subject to which it are the rayons, of which there are 17. Oblast LSAs shall, within their areas of competence, coordinate and monitor rayon LSAs (Law on Local State Administration, No. 586-XIV (“LSA Law”) Art. 33).

33. The LSA is charged with carrying into effect State policy pertinent to the Oblast. The latter includes State policy on solid household waste management. The Head of the LSA is answerable ultimately to the Cabinet of Ministers and the President (see the LSA, Arts. 8-9 and 30).

3.3 Other bodies of state executive power

34. In terms of the exercise of executive power, as relevant to this Project, alongside LSAs sit special authorized bodies of executive power. These include, as material, the Ministry of Environmental Protection (“the MoEP”). The MoEP has its own Oblast-based offices in Donetsk Oblast as representatives of the central executive power of the MoEP. These regional offices are subordinate to the central ministry.

35. In similar vein, the Sanitary Epidemiological Stations (“SES”) act on the level of the Oblast state administration structure but is subordinate to the Ministry of Health.

36. Officials in charge of territorial bodies of ministries and other central executive authorities such as the MoEP and SES are accountable to the heads of the applicable LSA (LSA Law, Art. 31). However, they remain responsible to their ministries, and their interlink with the LSAs is by way of coordination and cooperation.

3.4 Local Self Government

37. "Local self-government" bodies represent the sovereignty of the individual which is exercised through elections of members of councils. These councils may exist at village, settlement, city (and sub-city district), rayon and oblast level. However, most statements of LSG powers are placed with the villages, settlement and cities. The powers and duties of LSG bodies are regulated by the law on Local Self Government (No. 280/97 VR) ("LSG Law").

38. As regards the assumption of responsibility for SHW management within the Donetsk Oblast, of the 17 rayons, 6 districts have a total of 6 cities submitted to their control, and of the 28 cities, 4 are subdivided into city districts, while 10 cities have a total of 15 smaller cities subject to their control. The sub-divided city districts are each responsible for organizing/ensuring the organization of SHW management within their own districts.

39. According to a representative from the Regional Council, the Regional Council (and the Rayon Councils in similar vein) cannot order village, settlement or city LSGs as to how they should exercise powers attributed by law to these LSGs. Save where expressly provided otherwise in the law, the rayon councils and the Regional Council may suggest, recommend and coordinate actions by these other LSGs, but their cooperation and agreement is required on each such occasion. This coordination may, however, be effected once and for all, with suitable arrangements made pursuant to the Budget Code and its provision for transfers of commitments required by law to be met with appropriate transfers of funds to achieve the same (see below).

3.5 "Original" and "Delegated" Powers, Duties and Functions

40. The powers held and exercisable by LSAs and LSGs are invested (a) directly by individual laws – referred to here as "original" or "own" jurisdiction; (b) by "delegation" expressly provided for by law (in principle, the delegation by law of powers downwards is, unless otherwise stated, of powers from the State); and/or (c) by "delegation" by choice from other prescribed bodies in accordance with prescribed powers. Where powers are "delegated" whether by law or by choice, the delegatee is accountable in relation to the exercise of them to the actual or prescribed delegator. The LSG Law expressly provides also which powers are or are to be delegated by which LSA or other LSG bodies to which other public authorities. Powers delegated by law cannot be "returned" by choice in individual cases to the (nominal) delegator.

3.6 Property of LSAs and LSGs

41. Jurisdiction over public property is exercisable by bodies exercising public authority such as LSAs and LSGs either under their "own" or "original" jurisdiction, that is, over property assigned by law to such respective bodies; or where delegated to them by any such bodies where provided for by law (see e.g. the LSA Law, Art. 15). Note the position mentioned above as regards land ownership.

42. According to the Budget Code, Article 7(3), the State is not liable for LSG budget commitments, nor vice versa. Also, by the Budget Code, Article 74(2), the State is not liable for local budget borrowing. LSAs are prohibited from using their own public property or that delegated to them by LSGs by way of pledge/collateral or other guarantees, and cannot otherwise assign, donate, endow or devolve such property. This suggests that having the RWM Company created and owned by the LSA (as to which option see below) is not advisable as it will not be able to use any property committed to the Project by LSGs as collateral for the operations of the RWM Company.[26] However, see paragraph 47 below as to LSG powers to provide their own property as collateral.

[26] However see clause 4 of the Regional Council Decision creating the "Donetsk Regional Centre of Waste Treatment" which suggests that the company there was put on the books of the LSA for inter alia management purposes.

43. According to recent amendments to the LSG Law, Art. 43(32) rayon and Oblast councils are exclusively to decide whether to grant approval to the transfer of state owned land to the public property of LSGs below rayon level (although this does not yet appear to have been provided for under the Land Code, according to experts from the Ministry of Land Resources) and also to decide on the transfer of private property of the LSG bodies in question, managed by rayon and oblast councils, into state property, as on purchase of state owned property.

44. Property of villages, settlements and cities (and sub-cities) is able to be committed on a contractual basis for realization of goals common to the participants (LSG Law, Art. 60(3)) although such commitments are to create joint communal property. Communal property such as this is managed on behalf of the original participants by, in principle, other LSG bodies (LSG Law, Art. 60(4)). This would have to be provided for by appropriate contractual arrangements. This is effectively Option (v) indicated below for creation of the RWM Company.

45. It is also possible that the RWM Company be set up by Regional Council Decision, with the Regional Council being sole shareholder, but the RWM Company would be the joint property of the relevant LSGs within the Oblast – see the Administrative Code, Article 78, and the LSG Law, Articles 43 and 60.[27] This is effectively Option (iii) below.

46. It is also possible for village, settlements, cities and sub-cities to propose (and presumably realize, if agreement of all relevant parties is forthcoming) transfer or sale of communal property to corresponding territorial communities, enterprises or state-owning bodies if the latter provide the relevant entities with important public services and utilities and meet their socio-cultural needs (LSG Law, Art. 60(9)(1)). It would appear that transfer of assets for realisation of the Regional Plan would be able to come within the scope of this provision. This could cover the transfer/sale of property (other than land) to be used for the new landfill sites and/or for the Transfer Stations, for example to the RWM Company. This would have to be provided for by appropriate contractual arrangements.

47. LSG bodies may use LSG property as collateral (LSG Law, Art. 60(5)), including that held on the above-mentioned communal basis. This would have to be provided for by appropriate contractual arrangements.

48. It is also possible for property of villages, settlements and cites (and sub-cities) to have a priority purchase of communal property on other territory if that would provide the territorial communities with public services and utilities and meet socio-cultural needs (LSG Law, Art. 60(9)(2)). This might need to be addressed to prevent property held or required for realization of the Regional Plan from passing out of control of the relevant bodies for this purpose.

49. It is also possible for villages, settlements and cites (and sub-cities) to possess communal property outside their own respective territorial borders (LSG Law, Art 60(9)(3)). This would have to be provided for by appropriate contractual arrangements.

3.7 Creation of the RWM Company

50. Accordingly, early elements to be decided in realising the Regional Plan include:

(i) what is the nature of the RWM Company – i.e. is it to be a joint enterprise with participating rights shared amongst the joint venture partners, or is it for example, otherwise to be a company issued by shares, including by agreement between LSGs/State Administration bodies;

(ii) in any event, who are the participating bodies either as shareholders or as members of the Board – are these to be State Administration bodies and/or LSGs and if so, which;

(iii) who owns the assets to be used – ie plant and equipment – should it be the RWM Company, or should these assets be owned by a third party but leased/hired by the RWM Company; and

(iv) who owns the land to be used for (a) the new landfill sites and (b) the Transfer Stations – for example, is this land to be owned by the RWM Company – and if so, how is it to acquire the land, by purchase or alternatively by transfer from LSGs/LSAs to the RWM Company; alternatively, should these land assets be owned by a third party but leased/hired by the Company.

[27] See the Regional Council Decision creating the “Donetsk Regional Centre of Waste Treatment”.

These would all have to be provided for by appropriate contractual arrangements

51. The exact modalities as to creation of and the type of company the RWM Company are to be determined hereafter, a task outside the scope of this Report. In broad outline, and for the purposes of this Report, options as to composition of the RWM Company appear currently to include:

(i) A combination of State Administration bodies acting under the Waste Law, Article 20(j) "*to involve and combine on a contractual basis the funds of enterprises, institutions, organizations and citizens, local budget, non-budgetary funds for financing the construction of brand new waste management facilities, extension and reconstruction of operating facilities as well as for the study of the probability of waste utilization, their marketing, etc."* but otherwise the RWM Company is that of the State Administration;

(ii) As (i), but as a joint exercise between the State Administration and LSG bodies, so that the RWM Company is owned by the State Administration and the LSGs;

(iii) A Company created by the Regional Council, with the Regional Council being the sole shareholder. This is the simplest solution as regards creation of the RWM Company and also its freedom to act once created;

(iv) A Company created by the Regional Council, but with shares allocated to participating lower level LSGs. A difficulty with this is that the other LSGs , whilst being shareholders and so in principle able to decide on who is appointed a director or other company officer, would not be involved in setting decisions as to day-to-day matters or strategy otherwise; and/or

(v) A combination of LSGs acting under the LSG Law, Article 60:

3. The territorial communities of villages, settlements, cities, and sub-municipalities, either directly or through local self-government bodies, may join on a contractual basis in the right to joint ownership of objects of communal property right, as well as local budget funds, for the implementation of joint projects, or for joint financing (maintenance) of communal enterprises, institutions and organizations, and may create to this end the appropriate bodies and services.

4. Rayon and oblast councils shall manage, on behalf of territorial communities of villages, settlements, and cities, objects of joint property which meets the common needs of territorial communities.

It appears that if the RWM Company were created under this Article, there would not be a need or possibly even a right for State Administration bodies to be involved in the ownership of the RWM Company. Such a situation would not, on its face, appear to prevent the involvement of State Administration bodies under the Waste Law, Article 20(j) as indicated above.

Option (iii) is the simplest solution as described above, although it is understood that the present preference is option (v).

Apart from the various other factors that may determine which option is selected, one important element to consider is tax imposition and tax returns. According to a Report produced within the BSIF Project,[28] Section 2.1, last paragraph, under Article 47 of the Law of Ukraine "On the national budget for 2006", taxes on profits of public utilities founded by local self government bodies are to be transferred to the budgets of the relevant local self-government bodies. If Options (iii) or (v) were chosen, provision would probably be required as to retention of these taxes within or to be transferred to the budget relevant to (the operation of) the activities sought to be realised by the Regional Plan. Further specialist advice is required by the Project on this matter.

4. Decisions on location of and permission for siting landfill sites and transfer stations

52. By the LSG Law, Art. 33(b)(7), decisions as to the location of the new sanitary landfills (and any other possible landfills) have been delegated to village, settlement and city council LSGs. This Law was adopted in 1997. If so delegated, if possible such power of decision might usefully be coordinated with the decisions of the rayon or Oblast councils, so making easier the decision-making process and number of entities involved in decision-making here.

[28] "Assessment of the freedom of actions and financial stability of local self-government bodies in the Donetsk oblast".

53. The Waste Law, Article 21 provides that decisions on the allocation of land for certain waste disposal and the construction of waste management facilities is taken by LSG bodies. It does not, however, say which LSG body must take this decision, but it appears that the relevant body concerned is that on whose territory the facility is to be located, alternatively where the effects of location and operation remain. Based on the above assumptions as to the relevant LSG bodies for SHW collection and disposal, it is assumed that the relevant bodies here are rayons, cities and sub-city municipalities.

54. Under the Waste Law, Article 23(k), the MoEP (actually the Donetsk Oblast State Department Office of the MoEP) is empowered to sanction the location of waste management facilities, including waste disposal facilities and Transfer Stations. The Donestk Oblast State Department Office of the MoEP is accountable to the Oblast LSA in the manner described above. Through coordination of powers, suitable action compatible with the Regional Plan may be achieved.

55. Hence, as regards the allocation of land for the 8-10 regional landfill sites, the relevant LSG bodies should be identified. They should be in agreement with the proposed location of the new landfill sites (see the Environmental Protection Act, Article 15(b), and the Waste Law, Article 21(m)) and should thereafter provide their decision permitting the location on the land and construction of the new landfills and Transfer Stations (Waste Law, Article 21(n)).

56. It is unclear whether all relevant LSGs should agree on the location of all new Transfer Stations and new Landfill Sites envisaged in the Regional Plan or only those directly involved in the operation of the Transfer Stations and new landfill site closest to or relevant for the management of waste to be derived from their territorial areas. It is suggested that, as necessary, provision be made only for the latter. Whichever is the ultimate answer to this specific question, it appears that all local waste plans and decisions are not actually obliged to be compatible with the regional waste plan. Coordination of effort will be required to realise the Regional Plan.

57. Under the Waste Law, Art. 20 the State Administration authorities have the competences to:

(c) set up the development and introduction of regional and local waste management plans (but note that their “adoption” or rather “recommendation” is not legally binding even at the level of policy-making);

(g) interact with local self government bodies (but note that this is on a consensual basis, not obligatory); and

(i) to set up and promote the establishment of specialized enterprises of all types of property for the collection, treatment, utilization and disposal of wastes waste (which is wide enough to encompass establishing new landfill sites as well as Transfer Stations – see the Waste Law, Article 1 – Basic Terms (definitions)). This latter appears to be a power which the relevant authority can exercise and implement on its own decision, within the scope of its competences.

Overall, however, these powers appear sufficiently wide to allow for suitable controls to be proposed at State Administration level.

58. In addition, but importantly, the local State Administration bodies hold the power to issue permits for the *construction* of waste management facilities “on corresponding territory” (Waste Law, Art. 20(t)). This seems to mean that the local State Administration actually decides on the issue of a permit for the construction of waste management facilities of regional importance.

59. Note that the Waste Law, Art. 21(n) appears to provide to LSG bodies a like power to grant permits, but that power also appears to be limited to granting permits for the *construction* of waste management facilities serving settlement or city bodies. Given the scale of the facilities envisaged under the Regional Plan, and that cities supply the majority of SHW produced in the Oblast, leaving aside the practical issue of who can finance such new facilities, it is possible that realisation of the Regional Plan could be jeopardized by the existence of this power. This should be addressed by suitable agreement or application and/or enforcement of relevant regulatory powers.

60. Moreover, under the Waste Law, Article 32(c) it is forbidden to specify sites for enterprises, installations, grounds, plants and other waste management facilities, to design and construct regional and interregional complexes for the treatment, neutralization, utilization and disposal of wastes, if they fail to meet ecological and sanitary-hygienic requirements. As the only facilities likely to be able to be constructed in accordance with this requirement are those proposed under the Regional Plan, the issue may in fact be academic. Note, however, the information that recent waste disposal facilities may have been constructed in accordance with required sanitary and such like requirements. For the sake of certainty, it would appear that some coordination or statement of position is required at Oblast level to avoid decisions under the Waste Law, Art. 20(n) jeopardizing the effective realisation of the Regional Plan.

61. This is underlined, in a practical sense, by the Waste Law, Article 23(h), whereby MoEP State Department offices grant the actual permits that permit *operation* of waste management facilities.

62. Coordination with the MoEP representatives is required, and, as indicated above, these persons are accountable in the manner described above for their actions to the Oblast LSA. However, in accordance with the principle of independence of authority and inability to fetter administrative powers or discretion, the latter would most probably not be permitted actually to order the MoEP office to act nor would the MoEP Office be permitted to agree to act contrary to their respective duties. This potential for alternative actions might be able to be addressed by way of an official Memorandum of Understanding or Policy Statement.

63. In order not to interfere with and jeopardize the effective realization of the Regional Plan all relevant LSGs should agree/undertake not to take decisions on the allocation/allotment of land for other landfills or for other services which might interfere with the effective operation of the Transfer Stations and the new landfill sites. If this is not possible, it appears that the MoEP must *approve* decisions as to the location of new landfill sites, so the Oblast LSA should if possible coordinate with the latter that no sanction is given for any other new landfill sites.

64. The final decision on location of the Transfer Stations and the new landfill sites within the Oblast appears to rest with the MoEP, further to proposed decision of the relevant LSG bodies. However, absent legal challenge in the courts, it still appears that the last word in terms of administrative control rests with the LSAs.

5. Securing reliable supply of SHW to the Transfer Stations and to the new landfill sites

65. The new landfill sites will be of a size and capacity that is intended to render them cost effective. The same principle applies to the various Transfer Stations to be established. This means that they should all be able to handle a given tonnage of SHW on a daily receipt basis as well as overall. “Security of supply” in this sense is important for the following key reasons.

(i) achieving as a matter of fact economies of scale for all operations;

(ii) ensuring that the Transfer Stations and the landfill site are being used, and that disposal fees are being paid (as appropriate to the business plan) for the Transfer Stations themselves and/or the landfill site on its own, as well as for the overall realization of the Regional Plan; and

(iii) ensuring further that the landfill site is infilled and able to be capped and restored in as timely a fashion as possible for the purposes of the sooner, more effective generation and exploitation of landfill gas.

The latter point is linked expressly to any proposed/anticipated possibilities to co-finance the Regional Plan/the new landfill sites (and Transfer Stations) Capital Expenditure and Operational Expenditure by way of sales of electricity as well as income from either Carbon Funds or from sales of ERUs.

66. Security of supply of SHW is achievable by a combination of at least the following objectives:

(i) ensuring that there are no “competing” landfill sites in the area once the relevant new sanitary landfill site is constructed and ready to receive waste;

(ii) ensuring that there are no alternative/competing Transfer Stations;

(iii) ensuring that all waste potentially available to be received in to any given new landfill site is required to be delivered to the relevant Transfer Stations/new sanitary landfill for disposal at that new landfill site; and

(iv) ensuring that appropriate enforcement and regulatory action is taken against those who fail to comply with requisite obligations to enter into waste management contracts and/or who dispose of SHW in an unlicensed manner.

5.(1) Ensuring no "competing" landfill sites

67. F Objective (i) seems as a matter of principle relatively easy to provide for in that any then existing or proposed dumpsites/landfill sites that do not comply as to construction, ongoing impact on the environment or (but less sure as to permanent cessation) do not comply with relevant sanitary regulations for receipt and disposal of SHW at the site are either (a) refused any further permissions and/or (b) made the subject of a closure or cessation order and in either event (c) made subject to appropriate enforcement action. This, in principle, could and should apply to all dumpsites/landfills. Such approach probably needs to be coordinated throughout all relevant regulatory and enforcement bodies. Elements (a), (b) and (c) are all existing legal obligations/objectives which the relevant public bodies are required by law to implement.

68. Twenty-nine landfill sites have received the relevant "passports". Based on a paper produced in the course of the Project, it has been suggested that the passport does not signify that the landfill site complies with all relevant sanitary etc. regulations. Moreover, it is also suggested that the grant of a "passport" merely signals that statutorily-required compilation of an inventory of all dumpsites/landfills is in the process of being effected. The fact that a landfill site "has" a passport would, on the above bases, not imply any right to receive waste in to that site, nor signal that all relevant regulatory requirements or standards have been, are being or will be met at such a site as regards receipt of waste.

69. If the above assumptions are correct, it would not appear that the grant of a passport gives rise to any property rights protected under the Constitution.

70. However, if, as appears in fact to be the practical effect of at least updates of a passport, the passport either does give rights or leads an operator to believe that it should expend monies on the basis that compliance with the requirements for "updating" the passport provide for rights as to (any or enhanced) receipt of waste as a matter of principle or fact in the future then it is possible that such an arrangement could create a "possession" within the protection of the European Convention for Human Rights ("ECHR"), Protocol 1, Article 1. ECHR rights are protected directly by the Constitution (Art 9) (and see also Article 41 as regards protection of property rights under the Ukrainian Constitution). Ukrainian Constitution norms have direct effect (i.e. can be relied upon directly by individuals against public authorities – see the Constitution, Art. 8).

71. If this is the case, it is important, notwithstanding the matters set out below as regards the annual/yearly permits for dumpsites/landfills, that the transitional arrangements as regards removal of the rights of dumpsites/landfills which have received passports (been "passportised") are such that the least invasive interference is effected with regard to any established rights or expectations as concerns receipt in the future of waste/expenditure incurred on the basis of an understanding/expectation encouraged by grant of the passport. The relevant tests, applicable in the context of a site having been "passportised", are discussed in more detail below.

72. The right specifically of any given dumpsite or landfill site physically to receive in any waste of any quantity or composition is determined on a year by year basis by way of (what is termed in and for the purposes of this document only as) a "waste disposal permit" from the State Department office of the MoEP for Donetsk Oblast. The actual limits as a total as regards the waste overall allowed to be received in to that site for that year are proposed by this State Department Office to the Donetsk Oblast State Administration, which approves them. The State Department office then applies the approved limits by way of the "waste disposal permit".

73. It seems a separate administrative decision is required from the relevant regulatory authorities for each yearly period and that there is therefore in principle no legitimate expectation arising or able to arise that (a) any such permit will be granted at all in or for any given year; (b) that any permit issued will allow the same or any given tonnage/volume of waste to be received as in the previous year or any given increase in tonnage/volume; and/or (c) that any destination for waste produced that applied in a previous year will stay the same in any subsequent year or years.

74. What are referred to in this document and for its purposes alone as “waste production and disposal permits” are issued for a period of a year at a time by the MoEP State Department Office to enterprises that produce waste. This permit limits the type and volumes of waste permitted to be produced within a year/12 month period by a given enterprise and also sets out to where waste for disposal is to be delivered. The limits for production and for disposal are proposed by the State Department Office and approved by the Oblast State Administration and then formalized in the permit by the State Department Office. In principle, the destination stated identifies the final destination for such waste (i.e. a dumpsite/landfill site), but it appears that there is no reason why the destination for delivery of waste might be elsewhere such as to a Transfer Station. In principle, the fact that a “waste production and disposal permit” of this nature prescribes a given destination for the delivery of such waste should not in principle provide for rights of that destination to receive such waste either for that year or as regards any subsequent year. Any such right should, if at all, arise from a permit issued to the owner/operator of that destination facility with the rights stated in the permit.

75. It is assumed that such waste production and disposal permits and waste disposal permits as have been granted are not, as a matter of principle, renewable on demand, save where there is cause not to renew.

76. In principle, as discussed further below, all such permits/authorizations/documents constitute “possessions” (or provide for rights relating to use of land in question which land is itself a “possession”) to be protected under Protocol 1, Article 1. As regards the matters the subject of this report, interference with Protocol 1, Article 1 rights must in essence be prescribed by law, be necessary in a democratic society and ensure protection of the proper balance between the interests of the individual operator as compared to the benefit to the community such that the individual does not bear an excessive burden as a result of any decision as to future operations of individual enterprises and/or dumpsites or landfill sites.

77. Insofar as a “waste disposal permit” or “waste production and disposal permit” is granted for one year at a time, a graduated “closure” plan of waste disposal sites affected across the relevant annual period could violate the Protocol 1, Article 1 rights in relation to such permits. Such interference could arise if the rights seemingly contained in the permits of whatever type were interfered with in the course of the year to which the permit relates. Such interference would have to pose an excessive burden on the entities affected before there was a violation of the Convention rights. Hence, merely altering the destination required for final disposal of wastes produced by an enterprise need not necessarily breach Protocol 1, Article 1. However, preventing a site authorized to receive a given volume of waste for the year before the given volume had been received in could well violate such Convention rights.

78. As such permits grant rights in relation to given tonnages/volumes of waste for a short period, it is likely that it would be held to be unacceptable if suitable transitional arrangements are not put in place. Risk of violation may be argued to be reduced by the fact that the Regional Plan is a public document, that all due publicity has been given to it, that all steps intended to be taken in following it will be based on laws existing as at the date the passports were issued (or if amended that they should not violate otherwise the requirements for lawful action under Protocol 1, Article 1). The force of this argument is probably reduced by the fact that the Regional Plan is not legally binding, but is merely a recommendation. There is probably a wider public interest being served by having waste go to a smaller number of waste disposal sites per se but especially if they are more environmentally protective (ie they preserve the wider environmental interests as to land use/public health), although the important issue would be whether the sites “interfered with” within a yearly permit period were in compliance with existing regulatory conditions. If not, it is even less likely that there would be a violation of Protocol 1, Article 1 rights as there is no right to be permitted to act so as to breach existing laws.

79. The simplest solution to these potential problems is to control ahead of time the period for which any such permits are granted and/or operational in the run up period to when it is anticipated that the Transfer Stations and new landfill site(s) will be constructed and operational (and hence, as from when it would be desirable to switch the destination for delivery of the waste in question). The relevant authorities need to establish a legally binding obligation to take steps to promote and not jeopardize realization of the same.

80. The relevant permits granted should state expressly that as regards the issues in question here, and as concerns:

(i) the "waste production and disposal permit" - the destination indicated for required final disposal may be altered to [X] Transfer Station and/or [Y] Landfill Site or such other destination on the decision of the relevant authorities at not less than [Z] weeks/months notice[29];

(ii) the "waste disposal permit" - that at not less than [X] months' notice,[30] the site will become subject to a closure notice such that it will not be permitted to receive in any further waste at that site, save as otherwise directed by the relevant authorities.[31]

81. It is advisable that no new passports be issued, unless the same is absolutely necessary in order to provide a better SHW disposal service in the transitional period before the relevant Transfer Station is ready to receive waste for onward transmission and/or the new landfill site is ready to receive SHW for disposal,. As applicable, on the grant of any "passports" in the future, or on their review or update, the passports should state expressly that their grant or further grant does not give any rights or expectation for the future as regards receipt of waste in to the site that has been "passportised".

Public law powers

82. The Oblast State Administration has power to issue directives within the sphere of their competences binding on individuals and other authorities. As the Waste Law creates a competence for local State Administrations to "set up the development and introduce regional and local waste management plans" (Waste Law, Art. 20(c)); "to control the use of waste taking into account their resource value and safety requirements for public health and the environment" (Waste Law, Art. 21(e)); "to interact with local self government bodies" (Waste Law, Art. 21(g)); "to develop programmes for the sanitary clean-up of inhabited areas" (Waste Law, Art. 21(h)); "to set up and promote the establishment of specialised enterprises for the collection, treatment and disposal of waste" (ibid, Art. 21(i)); "to promote the organisation of collection and disposal of domestic waste" (ibid, Art. 21(m)), it seems a valid proposition for the Oblast State Administration to issue directives to local self government bodies and also to individuals regarding waste collection, transport and disposal to encourage them to aim to ensure that realization of the Regional Plan is not jeopardized and actively assisted insofar as decisions of the relevant LSGs are concerned.

83. However, based on discussions with the Regional Council it seems that it is not open to the Oblast State Administration to issue a directive that all households must enter into contracts for the collection and disposal of their SHW waste. Were this possible a major step could be taken in aiming to ensure that 100% of waste produced be collected, and beyond that initiative, the prospect that there be 100% payment for 100% of SHW collected.

Contractual Issues

84. It is not a legitimate use of power by the Oblast State Administration authorities to enter into contractual arrangements interfering with the proper exercise of powers duly assigned to the LSG bodies (LSA Law, Art. 35 – "*Local state administrations shall have no right to interfere with bodies of local self-government acting in the line of duty*.").

85. However, as necessary, "*To carry out joint programmes, local state administrations and bodies of local self-government may make agreements and set up joint bodies and organisations*." (LSA Law, Art. 35).

86. This thus allows local State Administrations to enter into agreements with relevant LSG bodies (here rayons and city and sub-city LSGs) in order to realise the objectives of the Regional Plan, which should be regarded as such a "Joint Programme" under the LSA Law, Art. 35.

[29] Any such notice period should be compatible with Ukrainian administrative notice and challenge procedures and periods.

[30] See previous footnote.

[31] The latter is to provide for a change of plans in case the Transfer Stations in questions and/or the new landfill site is not able to be operational on the date(s) anticipated.

87. On this basis, it seems legitimate that the Oblast State Administration could have an agreement with relevant LSG bodies that the LSG bodies not allow State or private land in relation to which they exercise relevant powers to be used on their own initiative (without agreement of the local State Administration) for the purposes of establishing a new (sanitary or other) landfill site or a Transfer Station. This would not fetter the jurisdiction of the relevant LSG bodies to take their own decisions on location of such activities in the event that a third party suggested use of land other than such intended for use under the Regional Plan. It would appear legitimate that the relevant LSG bodies decline to approve use of such land if in contravention with the Regional Plan, as they could consider that it is a valid act of discretion to aim to realise the Regional Plan.

5.(2) Ensuring that there are no alternative/competing Transfer Stations

88. With one exception, set out below, there are no existing waste transfer stations in Donetsk Oblast, and none, other than as in the Regional Plan are known to be planned.

89. Ensuring that there are no new "competing" Transfer Stations is able to be addressed as set out in the previous section.

90. The one exception concerns a "factory" site at Kramatorsk. This is a joint venture of sorts between three cities/areas. The "joint venture" is between three public authorities with, it is understood, no private sector shareholders or investors involved. The venture is to develop, as a pilot scheme, a specialized sorting station. As a matter of fact, the factory sorts general SHW waste and removes for further treatment special waste lines. Some 24% is removed in this way from the general SHW waste stream. The remainder is then sent for final disposal to a dumpsite/landfill.

91. Under the Regional Plan, it is envisaged that this factory will become a specialized recycling centre, receiving in waste that has already been the subject of specialized selective sorting. It is not envisaged as a general issue that waste will be sent from this centre for final disposal, nor that the centre will or is intended to act as a Transfer Station in accordance with the Regional Plan or otherwise.

92. Conversion of this factory to a specialized recycling centre under the relevant transitional provisions does not appear to pose any regulatory or ECHR issues. In particular, it seems that the three public authorities operate the station as a public site for a public purpose and not for private law profit. In order to take advantage of the protection from the ECHR, it is necessary for a person to be an actual or potential/prospective "victim". Public authorities are not able to be "victims" as so understood under the ECHR regime.

Contractual issues

93. The same general contractual issues arise as under the previous section as to permitting use of land or granting permission for operating "competing" Transfer Stations. However, this appears academic in practice.

94. One general contractual issue should be arranged, namely that the Kramatorsk site will not be allowed to act as a Transfer Station; alternatively will be re-organised so that it will only act as a specialised recycling station.

5.(3) Ensuring that all waste potentially available to be received in to the new landfill site is required to be delivered to the relevant Transfer Stations for disposal at that new landfill site or directly to the landfill site

95. This issue concerns the following matters:

(i) that all waste that is produced is collected;

(ii) that collection, transport and/or delivery contracts are to deliver to the Transfer Stations/new landfill sites

(iii) the duration of collection and delivery contracts.

5.(3).(i) That all waste that is produced is collected

96. The Regional Plan is predicated on a given estimated volume of SHW being produced each year, being collected each year, and given percentages of that total being transported to the Transfer Stations for delivery and from there to the new landfill stations (the remaining percentage being recycled, reused etc).

97. The Regional Plan requires, for the effective operation of the Transfer Stations and thereafter the new landfill sites, that such SHW that is produced in Donetsk Oblast, which is not recycled or reused etc. be (a) collected and (b) delivered to the required Transfer Stations/new landfill sites.

98. The arrangements in Donetsk Oblast for the collection and delivery of SHW management services are very fragmented.

99. SHW collection, transport and disposal services tend to be provided by public service utility companies ("PSUCs"). These tend predominantly to be owned by the relevant local self government body, which therefore has an interest in seeing that the SHW service is provided by "its" company. This fragmentation of local economic interests is something that needs to be addressed in the context of realising the Regional Plan. There is some, but very little, private sector involvement in the waste collection, transport and/or disposal services. Tendering is required for the provision of *inter alia* SHW services to State or municipally owned premises (such as JEKs) (see the Law on Housing and Communal Services, Articles 27ff), but is not necessarily municipality-wide, as tenders can be made by individual JEKs (*ibid*). In large cities, there may be several SHW service providers across the city.

100. All JEKs are supposed to make provision for waste collection from the buildings they own. Various mechanisms are used to provide such services with waste collection and/or disposal contracts being the norm either between the waste management service providers (usually the PSUCs but occasionally private sector providers) and the JEKs or between the waste management service providers and the individual households within the JEKs. Private individual houses are required to enter into contracts where they wish to have waste disposed off, but are not as a matter of law required to make such contracts in any event. Business enterprises are required to enter into waste disposal contracts as a matter of law.

101. Billing for SHW management services, now usually in advance, is on the basis of either (i) direct payments from the individual to the waste management service provider; (ii) payments from the JEKs to the waste service providers for waste services provided in fact; and/or (iii) billing for service delivery based on norms established by LSGs. Payment is usually a laborious process in that individuals go the offices of the service provider or physically to the bank to pay into the bank account of the waste service provider the monies due. The administrative demand on the waste service providers just to track billing and payment is very labour-intensive. Payment systems using a form of direct debits or direct payments to bank accounts either of the waste service provider or of the JEKs have commenced in a number of LSGs, alongside a system of computerisation and centralized holding of all relevant data. It is estimated that as a result recovery rates increased by at least some 20%. If possible, this might be addressed across the Oblast by a Regional Council directive to relevant LSGs that they computerise their waste collection and delivery services, including billing. The possibility may be enhanced if the LSGs have committed themselves to the realisation of the Regional Plan, and hence use of the facilities to be made available by the RWM Company. Rates overall, however, of non-payment or of non-contracting in 2005 were running at about 60% as regards the private sector and some 40% as regards the public sector.

102. Generally, the fee for a waste management service covers collection, transport and disposal. It also happens that SHW deliveries are made by enterprises or individuals direct to dumpsites/landfills with payment being arranged usually by way of pre-paid vouchers.

103. Under the Waste Law, Art. 15 (b) *inter alia* private households are obliged to pay for services provided by enterprises, institutions, and organizations which collect, store, transport, render harmless, dispose, and bury wastes. The law in Ukraine does not actually state that all households must either (a) enter into a contract for management of their domestic waste and/or (b) pay for a service being made available for the management of their domestic waste. However, where domestic waste is produced and is to be collected and/or disposed off, householders are obliged to pay for this as a service.

104. Private households make up some 29% of the inhabitants, but produce about 45% of all SHW. Levels of non-contracting or non-payment from private households is at least 50%.

105. A change in the law is not at this stage an option, so existing options must be used

106. It seems that flytipping is undertaken by some 27% (according to a survey within the project) of private households. This could be reduced by individual prosecutions by relevant authorities. This may set a precedent, and be a dissuasive factor.

107. What is required is a system that provides some obligation on all households to enter into contracts with waste service providers and to pay for the service provided. That is not currently possible as such without a change in the law. What is possible, however, and which can achieve the same result, is for relevant enforcement powers to be brought to bear targeted at households that do not have waste collection contracts and/or are not paying. Enforcement for these failures to act is provided for under the Waste Law, Article 42.

5.3.(ii) That collection, transport and/or delivery contracts are to deliver to the Transfer Stations/new landfill sites

108. Assuring that SHW collected is delivered to the relevant Transfer Stations is in principle not complicated.

109. **A. Permits issued to enterprises** producing waste must specify the destination for delivery of the SHW produced. The relevant authorities involved in the issue of these permits are the Donetsk State Department Office of the MoEP (Waste Law, Article 32(a)) and the Donetsk Oblast State Administration (by way of approval – Waste Law, Article 20(n)). These bodies are responsible together also for ensuring implementation of the Regional Plan, and so should only issue permits providing for delivery to pre-determined Transfer Stations, together with stated limits for each type of waste involved.

A. Contractual or public law issues

110. As necessary, although the same may arise anyway by way of operation of the matters set out above as to location of new Transfer Stations and new landfill sites, some statement of agreed position in principle should be made between these bodies, for example a Memorandum of Understanding as to how these powers will be organised.

111. **B. Contracts with enterprises for the collection, transport and disposal of SHW waste** entered into directly by municipalities and/or JEKs are in principle able to specify the destination for delivery of waste collected under these contracts. Realising this goal should not in principle be difficult as municipalities in Donetsk Oblast own the vast majority of collection and delivery/disposal companies. Their operations cover collections of SHW waste from communally-owned property (including JEK properties) as well as privately owned properties within the territorial areas of the relevant LSGs. The municipalities may make it a condition of the collection and disposal contracts that SHW waste collected be delivered to specific destinations, hence to the Transfer Stations/new landfill sites.

B. Contractual or public law issues

112. As necessary, if the same does not arise anyway from steps to be taken indicated above, the RWM Company should enter into agreements with the various LSG contracting bodies so that SHW waste collected under municipality contracts is delivered to stated destinations, namely, as required over time, specific Transfer Stations or new landfill sites. All such arrangements should provide for nomination of alternatives in the event that the first nominated location is unable to cope with the waste arising and alternative locations are needed. Further, or additionally, as required, agreement should be made with the RWM Company that the relevant LSGs will ensure that JEKs under their control providing waste collection and disposal services as communal services will provide expressly that SHW waste collected must be delivered to locations identified in the contract or as otherwise advised.

113. **C. Where the municipalities do not own the collection and disposal companies, they may well own communal properties, including JEK properties.** The JEKs either enter directly into contracts for SHW management performed at the JEKs, as a result of which they may specify as a condition of the contract with the collection and disposal company the destination for delivery of the SHW waste. Alternatively, the JEKs or municipalities provide for households within communally-owned properties to enter into contracts with companies identified or awarded contracts with the municipalities or JEKs respectively, which latter contracts are able to provide specifically for the destination for delivery of the SHW collected.

C. Contractual or public law issues

114. The same arrangements as under B. here should apply.

115. **D. Private households.** It is suggested that there be no direct contractual arrangements between private households and the RWM Company. Arrangements that individual private households should enter into are with SHW service providers, the contractual arrangements regarding whom and the RWM Company are addressed above.

116. As indicated above, suitable transitional arrangements in respect of all the above needs to be provided for.

5.3.(iii) The duration and nature of collection and delivery contracts

117. Presently, such contracts are either for 12 months or are for 12 months renewable 1 month before the end of the 12 months or each subsequent 12 months' period. A few SHW collection and disposal contracts, but considered by the Ukrainian law expert on the EuropeAid Project as very few, are open-ended. Such contracts can be brought to an end by mutual agreement or by court order. One reason why such open ended contracts are rare is because any intervention before the courts takes a long time and possible up to 2 years, as well as being costly.

118. Short term collection and delivery contracts are not conducive to building up a base of funds for renewal of plant and equipment, in particular, containers for households to deliver their waste, nor vehicles for collecting and delivering the waste to the next stage.

119. Once the Regional Plan is underway, it is likely to be desirable to provide for contracts of longer duration for the collection and delivery of SHW waste. A minimum useful period for this purpose is likely to be at least 3-5 years.

120. Such contracts might also usefully provide for use of communally-owned plant and equipment, whereby the service provider merely has the right to lease/use the same, with obligations to repair/replace those broken or ill-operating.

121. Existing collection contracts provide generally for three elements to be covered in the price charged: (i) collection itself; (ii) transport and (iii) disposal. Disposal, under the Regional Plan will always and in any event be carried out by the RWM Company. The charges for this service are either to be made known in advance so that collection providers know the costs to be added/included in their price (not necessarily problematic in principle or practice where the LSG sets the tariff for SHW services), alternatively, is to be taken out of the individual contracts for collection and transport and paid directly between the entities contracting otherwise with the RWM Company for disposal of their SHW – for example, if the RWM Company contracts for disposal of SHW directly with LSGs. Similar provision may need to be made where the SHW is to be delivered to a Transfer Station when some transport will be within the service actually provided through the individualized contracts and some may be outside, to be provided by the RWM Company.

6. Contractual arrangements as regards the composition and ownership of the RWM Company

122. Options for creation of the RWM Company are set out above. The entities involved could be some/all of the LSG entities responsible and active in SHW management. In respect of each such proposal there is scope, at least in principle, for the involvement of the Oblast State Administration, even if only as coordinator/part funder (cf Waste Law, Article 20(i) and (j)).

123. These corporate internal arrangements must provide for inter alia (i) insertion of share value: (ii) provision of start-up finance; (iii) loans; (iv) provision of capital and/or operational losses; (v) guarantees for borrowings and provision of collateral; and (vi) division/allocation of profits; and (viii) on termination of operations, division of assets.

124. For example, the allocation or return of monies as profits might be distributed according to (a) initial or continuing finance injection; (b) tonnage/volume of SHW delivered to named Transfer Stations or for named new landfill sites within given periods; and/or (c) returns from carbon funds/sales of emission reduction units under a Kyoto-compatible arrangement.

7. Contractual arrangements as regards the RWM Company's own operations

125. Generally, the lawful scope of the RWM Company activities will be set out in its company statute. It may also be provided for if the RWM Company is set up by LSG Decision. What follows is a brief summary of arrangements regarding the RWM Company's own operations, and which is to be read subject to Section 8 below.

126. **A. SHW Landfill Disposal operations:** In principle, no contractual relations as the RWM Company will carry out these activities at the new landfill sites.

127. **B. SHW Transfer Station operations:** In principle, no contractual relations as the RWM Company will itself carry out all operations required at the Transfer Stations.

128. **C. SHW Transport from Transfer Stations to the new Landfill sites:** In principle, no contractual relations as the RWM Company will carry out these activities from the Transfer Stations to the new landfill sites.

8. Contractual arrangements as regards ownership/use of land

129. There are significant decisions potentially required as regards this matter. As indicated below, the simplest solution as regards each instance of land ownership/holding is that the RWM Company purchase and remain sole, full and complete owner. Note, however, that it is now possible under the Land Code for servitudes to be imposed controlling use of land sold. Any such servitudes should in principle be avoided.

130. If this is not possible, land may be transferred to the "ownership" of or simply transferred to the RWM Company but the RWM Company is probably not then full and complete owner, but "manager" or "trustee" of the property so transferred (see LSG Law, Article 60(3)-(4)). As such, the rights of the RWM Company to deal with the property transferred may be circumscribed by the bases upon which and the purpose(s) for which such land is transferred, in respect of all of which the RWM Company remains accountable to the transferors. Efforts should be made so that any such transfer of land is made without any or any (unnecessary/burdensome) constricting conditions, thus leaving the RWM Company free to deal with the land as is appropriate to its operations. However, such arrangements should provide that the RWM Company will comply with all applicable environmental and sanitary norms, and provide for return of the assets transferred in a suitable state for future use (especially assets of land).

131. It is unclear whether such a transfer for a particular purpose may be revoked if the transferor decides either that they wish the property back (unlikely as this encourages uncertainty in legal relations generally) or if the purpose for which land is transferred is too tightly circumscribed and an evolved use necessary for the operations of the RWM Company falls outside the original purposes. This should be addressed in appropriate form in the legal arrangements for the transfer or sale of any such land in question.

132. Moreover, where any party other than the RWM Company is involved as regards landholding, whether as owner or transferee, a number of other complicating factors arise which need to be addressed contractually. If any land is transferred to the RWM Company for new landfill sites or Transfer Stations, the question arises for what purpose(s) is the land transferred: for example, (a) just for the operation of the individual landfill site in question acting as such; (b) for the operation of that landfill serving an identified number of Transfer Stations; (c) for the operation of all landfilling purposes at all new landfill sites; or (d) for the operation of all Transfer Stations serving whichever landfill site(s) in question.

133. The purpose attached to any such transfer affects the possible future use of the land in question, and more generally, the freedom of the RWM Company to act as regards any assets then under its control. These aspects should be kept in mind when reviewing the matters set out further below, but the freer the RWM Company remains to deal with assets put at its disposal the better as a matter of principle.

134. **A. Land for new landfill sites: options:**

(a) the land for the new landfill sites is purchased by the RWM Company: no contractual relations as, once bought, the RWM Company will own its own property here. This is the legally simplest solution;

(b) the land is transferred by LSGs to the RWM Company with no purchase required: the RWM Company (component public bodies) will be accountable to the transferor for use of property transferred. This may be provided for in a legally binding agreement between the relevant parties, the terms of use should include suitable elements from those set out in sub-paragraph (c) below. This is the middle solution in terms of legal complication;

(c) the land is leased either as a single piece of land from a single relevant public body or is leased as joint communal property from a number of LSGs or leased from a private landlord/owner – contractual relations between RWM Company and the lessor are required to govern rights and obligations arising as a result of using the land including: rent/royalty payments; ongoing obligations while waste is being infilled; ongoing obligations arising after no more waste is being received for disposal; obligations as regards aftercare; obligations as to status of the land after landfill activities are completed; and obligations as to when and how the lease of the land is to be returned to the lessor. Formal leases of land last only 50 years as a maximum, although potentially renewable. This is potentially the legally most complicated solution.

B. Land for Transfer Stations

(a) the land for the Transfer Stations is purchased by the RWM Company: no contractual relations as, once bought, the RWM Company will own its own property here. This is the legally simplest solution;

(b) the land is transferred by LSGs to the RWM Company with no purchase required: the RWM Company (component public bodies) will be accountable to the transferor for use of property transferred. This may be provided for in a legally binding agreement between the relevant parties. This is the middle solution in terms of legal complication;

(c) the land is leased either as a single piece of land from a single relevant public body or is leased as joint communal property from a number of LSGs or leased from a private landlord/owner – contractual relations between RWM Company and the lessor are required to govern rights and obligations arising as a result of using the land including: rent/royalty payments; ongoing obligations while waste is being infilled; ongoing obligations arising after no more waste is being received for disposal; obligations as regards aftercare; obligations as to status of the land after landfill activities are completed; and obligations as to when and how the lease of the land is to be returned to the lessor. Formal leases of land last a maximum of 50 years, although renewable. This period is unlikely to be problematic as a Transfer Station should not be required for longer than this as regards any given programme for new landfill sites.[32] This is the legally most complicated solution.

[32] It cannot be excluded that new landfill sites after those envisaged in the Regional Plan are set up in the vicinity of the prior Transfer Stations, but this is too far ahead of the main objective of the Project which is realising the current Regional Plan, that it may be put to one side at this stage.

9. Contractual arrangements as regards ownership/use of property other than land

135. **A. Buildings at the Transfer Stations:** these will be either:

(a) owned by RWM Company – this is the legally simplest solution and after the purchase no ongoing contractual relations are required; or

(b) leased – possibly by way of construction and lease back - contractual relations are required between the RWM Company and the leasing company/person probably involving standard leasing terms, but the legal situation may be complicated by the fact that the buildings may be built on land owned by a person other than the RWM Company (see above).

136. **B. Plant and equipment at or used at the Transfer Stations:** such plant may include (i) compactors; (ii) working plant and equipment; or (iii) waste transport vehicles. Such equipment may be:

(a) owned – a legally simple solution and after the purchase no ongoing contractual relations are required; and/or

(b) hired or leased – contractual relations are required between the RWM Company and the hiring and/or leasing company/person. Such solution is not necessarily complicated and hiring or leasing equipment, at least the vehicles, may be financially desirable (because of liquidity issues as well as for potentially passing responsibility for repairs and replacement to a third party), and is not overly complicated as a legal solution.

10. Contractual arrangements as regards ownership and the passing of ownership of the SHW waste

137. According to the Waste Law, Art. 8, waste is able to be the subject of ownership rights, and ownership can be transferred in accordance with procedures stipulated by legislation. Waste may also be abandoned (cf Waste Law, Article 9).

138. It is likely that waste placed in bags or containers for collection by an authorized SHW collection company is either intended to be transferred to the collection company or is abandoned. In either event, ownership of the waste probably passes at that stage to the waste collection company.

139. It is necessary, for the avoidance of doubt, that waste collection contracts stipulate that ownership of the waste collected passes to either the relevant public authority (JEK/municipality) or the waste collection company as soon as it is collected. Exceptions need to be made to this general statement so that items not intended to be thrown away (eg jewellery) do not pass in terms of ownership to the waste collector.

140. The contracts made with the relevant public authorities/waste collection companies/companies/individuals delivering waste to the Transfer Stations should stipulate expressly that ownership in the waste lawfully delivered there passes to the RWM Company once the waste is unloaded at the Transfer Station. This allows the RWM Company to reject waste not authorized for delivery at the Transfer Station for example either because it is of a type prohibited for receipt there or at the new intended landfill site destination, or because not permitted by the RWM Company for receipt there at all regardless of type.

141. It is important to make express provision for the RWM Company to own the waste transferred to it for at least the following reasons:

(i) legal certainty as to ownership;

(ii) legal certainty as to rights in dealing with it;

(iii) legal certainty as to obligations arising in connection with the treatment/management of the waste; and

(iv) legal certainty as to ownership of the consequences of placing the waste in the landfill site – ie production and exploitation of landfill gas.

If ownership in the waste does not pass, ownership of the gas may not pass either or in any event be acquired by the RWM Company, and hence the sole right to the RWM Company to the proceeds of exploitation of the gas could be jeopardized.

11. Contractual arrangements as regards receipt of waste to the Transfer Stations and as regards receipt to the landfill sites

A. Potential contractual arrangements regarding delivery of SHW waste to the Transfer Stations and/or new landfill sites

142. The RWM Company may provide for direct deliveries of SHW waste to the new landfill sites and to the Transfer Stations, and in any event disposal at the new landfill sites.

143. The RWM Company may make contracts for delivery/receipt of waste as follows:

(i) with the relevant LSG bodies who make arrangements for SHW collection and disposal, whether they also directly arrange SHW collection and disposal;

(ii) with the JEKs/administrators etc of communally-owned residential buildings;

(iii) with enterprises with permits for SHW production; and/or

(iv) with the companies/persons collecting SHW for collection and disposal.

144. Regardless of which is the counterparty, all such contracts need to make express provision whether the service being provided by the RWM Company is receipt of the SHW directly at the new landfill site or at notified Transfer Stations, with disposal subsequently. Flexibility as to point of delivery should be provided for in favour of the RWM Company, and on giving reasonable notice, and preferably at no additional cost to the RWM Company.

145. The RWM Company will hold permits for the Transfer Stations and for the new landfill sites. It is likely that such permits will limit:

(i) the number and type of vehicle movements to and, as applicable, from such locations;

(ii) the tonnage/volume of SHW able to be delivered in any day/week/month/year and overall; and

also provide for *force majeure* circumstances:

(iii) whereby waste deliveries need to be re-directed to another Transfer Station or new landfill site.

146. Regardless of the contractual counterparty, the RWM Company needs to ensure that it does not over-commit itself to receipt of SHW such that it becomes in breach of its obligations under any such permits. That can be provided for in the contracts the RWM Company enters into. However, it is likely that alternative arrangements need to be provided for, and also as to who (probably the RWM Company) pays any additional resulting expenditure.

(i) Contracting with the relevant LSG bodies

147. It is possible that the RWM Company enter into contracts for the delivery of SHW waste with all LSGs who make provision already for arrangements for SHW collection and disposal. In this case the LSG accepts a responsibility to make arrangements that all SHW waste collected and not for recycling etc is delivered to points notified to it/them by the RWM Company for this purpose. The standard contracts for SHW collection and disposal may well have to be altered or the services for which the LSGs provide for payment may need to be altered as there will now be different organisations which require payment – (a) the SHW collector and transporter and (b) the RWM Company. In effect, the disposal element will be provided by a single but different entity while some of the transport may be provided by that entity, namely the RWM Company. All of this requires further steps to be taken by the LSGs which are addressed below.

148. This is the best solution from the point of view of the RWM Company as it involves it in a lesser number of contractual relations and, importantly, in lesser complicated contractual relations. It is also a solution that may assist further in the practical realization of the long term goal of all households being required to enter contracts alternatively that SHW management be paid by way of a LSG tax/charge as LSGs will gain the experience of organizing matters to meet such obligations assumed by them directly with the RWM Company. It may also assist in avoiding potential difficulties with emerging public procurement law and/or anti-trust law as the LSGs will not be making agreements to narrow competition but organising their public duties in a potentially more efficient manner.

149. It may be academic given the lack of alternatives in Donetsk Oblast, but in principle, in such a case the RWM Company should seek commitments/provide rights to the LSGs for receipt at the notified points and for disposal at the new landfill sites of minimum volumes/tonnages of SHW waste, and that if the minimum volumes/tonnages are not met then certain payments are made to the RWM Company in any event. The logical and potentially legal problem with an arrangement as stark as this is that it seems to run counter to the objective of reducing the production of waste. The RWM Company will, however have set overheads in keeping facilities available throughout the year, which must be met from somewhere. In addition, land, plant and equipment needs to be amortised and income received to pay for works required at landfill sites ahead of waste being received in (for example, construction of new cells). A potential way round this problem may be to charge a minimum charge per year to the LSGs, against which is set payments required for waste received in for transport and/or disposal at the new landfill sites. Alternatively, if all relevant LSGs are shareholders, the shareholding agreement may provide for losses to be covered by the LSGs in accordance with a pre-established formula.

(ii) Contracting with the JEKs/administrators etc of communally-owned residential buildings

150. In practice, presently, most SHW is collected from communally-owned residential properties under contracts entered into by JEKs directly with SHW service providers. Most SHW service providers are public utility companies owned by LSGs. JEKs are communally owned by LSGs and so in principle should be able to be directed as to which delivery points SHW collected from their properties is to be delivered (and to agree with the RWM Company as to the same). As a practical step, if a JEK wishes to make provision for the disposal of its SHW waste, it needs also to be sure that there are appropriate facilities for its receipt and disposal (although a duty of care as regards transfer of waste does not appear to have been initiated yet in Ukraine). LSGs are also able to give directions to their public utility companies as to where to deliver waste for disposal.

(iii) Contracting with enterprises with permits for SHW production

151. Most of such cases involve enterprises contracting with waste management companies, rather than directly with the RWM Company. However, if the RWM Company contracts directly with the enterprises it would allow the enterprises to direct the collecting companies as to where their waste should be delivered. However, this is not likely to be a major factor in realizing the Regional Plan as permits issued to enterprises by the State Administration bodies must state the destination for any waste permitted to be produced by the enterprises in question. This issue is likely therefore to be resolved by way of cooperation of the relevant State Administration bodies.

(iv) Contracting with the companies/persons collecting SHW for collection and disposal

152. This is likely to be the most frequent situation, at least unless and until the RWM Company is able to reach agreements with the relevant LSGs as to them accepting the responsibility to organize collection and delivery services directly with the Company. Although the situation arises under the other scenarios set out above, the RWM Company should ensure (i) that its treatment (either as to prices or as to directions for delivery of waste or as to volumes to be delivered) between waste management companies is not discriminatory as to property ownership (ie whether they are private sector operators or public utility operators); and (ii) is organised so that the RWM Company retains the right to direct to where waste is to be delivered.

B. Rights and obligations for supply and receipt – time, frequency, points of delivery, vehicles and volumes

153. Regardless of which situations indicated above apply (or which combination), it is necessary to provide expressly what rights and obligations arise as regards supply and receipt. The RWM Company needs to identify its maximum tonnages/volumes permitted on a daily, weekly, monthly, yearly and overall basis as regards (i) the Transfer Stations and (ii) the new landfill sites. For ease of reference it is assumed that tonnage is the relevant unit, but the same principle applies if it is volume.

154. The maximum tonnage for any period needs to be addressed in conjunction with the probably maximum vehicle movements permitted to and from each such facility. It may be that the RWM Company must stipulate that it will only accept deliveries as to numbers of certain vehicles of certain capacities during certain periods in order to protect its rights/obligations under its permits in this regard.

155. By preference, the RWM Company should indicate to the various operators delivering waste their times for making deliveries, in what capacity vehicles and also the point of delivery.

156. Provision should be made for penalty consequences if deliveries are not made in prescribed capacity vehicles and/or at or within prescribed periods and/or at the locations indicated.

157. Express provision should be made with each counterparty as to their maximum tonnages able to be delivered within given periods such that flexibility is maintained as regards receipt and hence income, but also as regards compliance with permit conditions limiting waste receipts at the facilities in question.

158. Equally, it should be stipulated that provided waste is delivered as required the companies delivering have a right to deliver and to have received the waste they present for receipt at the RWM Company facilities.

159. Suitable provision needs to be made for waste to be taken back by those delivering it if such waste is not as prescribed for delivery by that counterparty to the facility in question, with alternative payments being required if the RWM Company has to deal with it elsewhere itself.

160. More generally, as regards contracting matters, depending on which entities are the counterparties to the RWM Company, alterations to the scope of existing SHW collection contracts might need to be made. For example, a municipality may grant a contract for collection, transport and disposal to a public utility company and pay for the totality of that service. If, however, the municipality becomes the RWM Company client, the municipality may become directly liable to pay the RWM Company for the (transport and) disposal service. In such a case, the municipality will not want to include within its contracts for waste collection and transport payment again for the costs it must itself pay to the RWM Company.

C. Rights and obligations as to the content of the waste – and right to reject

161. It should be set out expressly by the RWM Company what waste of what type, tonnage and frequency is permitted to be delivered to which RWM facility by which counterparty. Provided the counterparty complies with its obligations, it should have a right to deliver, and penalty systems should be in place to address failures by the RWM Company to have facilities open to receive the waste in question.[33]

162. It should also be set out expressly that the RWM has a right to refuse to receive in waste if not in prescribed form, vehicle or content.

163. As the RWM Company will have a monopoly over waste receipt and disposal facilities within the Oblast, it should be prohibited from rejecting receipt of waste lawfully permitted under the legislation to be sent to landfill. Suitable provision must be made to protect this position either by decree or in the RWM Company contracts.

D. Duration of contracts

164. The RWM Company will ultimately have a monopoly over the sites able lawfully to receive SHW waste produced within the Oblast. Moreover, all SHW waste produced in the Oblast will, in principle, be obliged to use the facilities of the RWM Company.

165. Competition will exist or is intended to be created at a level below disposal so it is important that contracts giving rights to dispose of SHW waste at the RWM Company facilities be limited in time. If this is not the case, then the market would be foreclosed and those holding existing rights once the RWM facilities commence would hold rights for ever, and effectively prevent new entrants to the market.

[33] This Report is not the appropriate place to discuss employment provisions able to ensure that waste management facilities are available throughout the year in order to avoid public hygiene, public health or environmental adverse consequences arising from failure to collect, transport or deliver waste.

166. As a result, contracts between the RWM Company and SHW collectors and deliverers to RWM facilities should have time-limited contracts. A suitable period should be established, and which should coincide with the period of the contracts given by the relevant public authorities letting such contracts. The latter are not controlled, except by either (i) the Law on Housing and Communal Services, Article 28 which stipulates that if there is a tender offering and only one tenderer, the resulting contract cannot last more than 12 months; and probably (ii) public procurement or anti-trust law.

167. However, in order to prevent the collection contracts at local level and the delivery contracts to RWM Company facilities being out of step some measures are required to coordinate their respective durations.

E. Payment/reimbursement arrangements

168. The Pre-Feasibility Report of March 2006 provides figures for a 10 year capital investment plan. The Waste Law Article 20(j) provides power to the State Administration to combine, on a contractual basis, funds, including from LSG budgets, monies in order to finance construction of new waste management facilities and extension and reconstruction of operating facilities. This power is wide enough to provide for funds to construct new landfill sites as well as new or reconstructed Transfer Stations. According to information received in the Project, such funds as might be available through this route would not be sufficient, but they would assist. Such contractual arrangements may be made by way of shareholding shares for investment/payment from LSGs to the RWM Company.

169. In additional, there are operational costs to be covered, including to provide for replacement plant and equipment. Statutory rules regulating communal services (ie including waste collection, transport and disposal) provide for a level of charges by figure that provides for recovery of at least real cost or for a profit margin of not more than say 20% - see Law on Housing and Communal Services, Section VII, Articles 30ff. If the RWM Company counterparty is a public service utility company supplying SHW services, the RWM Company costs of dealing with such SHW waste needs to be made part of the charges imposed by the utility company. In addition, the Waste Law, Article 20(o) allows the State Administration to define the level of payments for “waste siting” (ie for “deposit of waste”). This may assist in identifying true costs involved.

170. The contractual arrangements may be (i) directly entered into by the LSGs so as to ensure payment by it to the RWM Company of the price of the latter managing the LSG’s SHW waste at its facilities; or (ii) directly with any other counterparty so as to ensure payment to the RWM Company of its charges by that counterparty. Hence, in the latter situation, the collecting company is liable to pay the RWM Company prices regardless of whether the collecting company is able to collect payment from its customers.

171. These arrangements do not provide a high degree of certainty to the RWM Company in terms of recovery of its expenditure or even ongoing costs given the poor rates of contracting, collecting or payment. Without security of payment of at least costs, the RWM Company venture is at risk, including as to being able to deliver on any obligations it may assume with regard to Carbon Funds or sales of ERUs. It is to be noted that the Law on Housing and Communal Services, Section VII requires LSGs to provide from their budgets funds to cover real costs of communal services where the tariffs set do not cover the same.

172. Payment provision may be agreed by constituent LSGs or State bodies by way of a form of “guarantee” in that the relevant entities do not purchase capacity ahead of time but pay a sum to the RWM Company for the RWM Company agreeing to make available its services to those LSGs for the SHW services which the LSGs are obliged as a matter of law to provide. Collectively, all relevant LSGs, enterprises and private households may thus provide certainty to the RWM Company for recovery of its costs.

173. If the RWM Company is set up by way of some form of joint venture between all relevant LSGs, the RWM Company statute may well provide for reimbursement of costs incurred and not recovered during the year.

174. The suggestions in the previous two paragraphs do not appear to conflict with the principle of waste minimization as no minimum tonnage/volume of waste is guaranteed, nor is a minimum payment made in equivalent fashion. The LSGs merely make payments to ensure that a facility will be available, should it be required, for the coming years to assist or enable them to meet the obligations concerning ensuring the organization of waste collection within their territories.

175. The disparity between rates for SHW management between municipal households and private sector households should be addressed by either a Regional Directive to all relevant LSGs requiring them to raise the rates paid by the former to equalise with private household rates, alternatively by LSGs participating in the arrangements regarding the RWM Company operations to undertake to and act so as to achieve the same.

F. Duration of permits and limits

176. In order for the RWM Company to be able to service any contracts for delivery of SHW to its facilities, the RWM Company needs to know that, in principle, it is able to operate so as to receive in and dispose of the waste in question. At the very minimum its permits to receive in waste during a 12 month period should coincide with the permits issued to third parties that allow them to deliver waste to those sites in that same 12 month period. For this it needs the requisite certainty through its permits.

177. The “construction permit” and the “operating permit” for a facility are in principle given once and for all, subject of course to regulatory controls on compliance with prescribed requirements. Maintenance of the permit to allow operations to continue rest solely therefore in the hands of the RWM Company and no further protection measures are required.

178. However, the current system of permits provides for limits for receipt of waste at a waste reception/disposal facility to be set on an annual basis. In terms of legal certainty as to future operations, this system is problematic. Although the issue may be academic as a matter of practice if the RWM Company operates the sole SHW facilities in the Oblast, it may be problematic (a) during any transitional period prior to the only facilities legally able to operate being those of the RWM Company, and (b) in terms of meeting obligations in relation to Carbon Funds, sales of ERUs.

179. A more sensible and secure system would be (a) for the new landfill sites, to provide an overall maximum volume/tonnage (in fact, it is more sensible to make the maximum tonnage/volume allowed for receipt in to a landfill compatible with provisions made under the planning controls such as maximum final post-settlement contours), with a maximum annual tonnage/volume permitted during the life of the site.[34] This would require a change in existing rules under the Cabinet of Ministers Decree which prescribes that limits for placing of waste at any given site are set once a year.

180. In addition, in order for the RWM Company to know that it will be able to service obligations potentially arising with regard to Carbon Funds or in relation to ERU sales, it should know that it will receive waste every year. That is, it should know that SHW produced within the Oblast which is not recycled/re-used will be sent to the Transfer Stations and landfill sites to be provided under the Regional Plan. This may arise as a matter of fact on the above scenario that there be no competing Transfer Stations or landfill sites, but for legal certainty such should by preference be provided by legally binding provision. Such provision may be by way of agreement with the RWM Company by those responsible for concluding SHW collection and delivery contracts and directing the destination for the waste collected regardless of the frequency of concluding contracts or for tendering for SHW collection and delivery.

12 Budgetary considerations

181. Under the Budget Code (“BG”), Article 6(4), the consolidated budget of the oblast includes the oblast budget and the consolidated budgets of the rayons and cities of oblast significance. The consolidated budget of a rayon include the rayon budget and the budgets of towns of rayon significance, villages and settlements that are constituents of the rayon (BG, Art. 6(5)). As a result, where the oblast sets a budget for construction of a new sanitary landfill as part of its budget, that part represents part of the consolidated budget of all constituent elements pertinent to the oblast budget.

[34] This could be further controlled with maxima for weeks or months.

182. By the BG, Article 15(4), expenditures meant for repayment of debt-related liabilities are to be carried out in accordance with contract. Hence, borrowings outside of contractual arrangements are prohibited. This does not affect transfers between LSGs, or from LSGs to the LSAs as these are provided for under law where the transfer is to pay for the services that the transferee provides to the transferor. Such transfers may be permissible in relation to services to be offered by the RWM Company as regards waste transport (as described above) and disposal.

183. Key spending units (including heads of LSAs and of LSG councils) are to draw up a plan of activities in accordance with their tasks and functions (BG, Art. 22(4)(1)). This would require the relevant bodies to have determined which was to be responsible for meeting from their budgets costs associated with the RWM Company and/or payment for RWM Company facilities, plant and equipment. This is further important as local budgets (such as these) cannot be passed with a deficit (BG, Art. 72(3)). Moreover, where a contract repayment schedule is violated by the borrower, that relevant council is prohibited from new borrowings for the following 5 years (BG, Art. 74(5)).

184. It is necessary to identify which items of anticipated expenditure are multi-year investments, and to provide expressly for the same, as otherwise all budgetary appropriations lapse at the end of the budget period (BG, Art. 23(7), and see Art. 76(4)-(5) for provision for draft multi-annual budget commitments). This may be relevant if the new sanitary landfill sites are to be financed by for example the Oblast LSA and/or the Regional Council – whether with a view to transfer to the RWM Company or to be leased to it. It is also necessary to identify whether construction of the new sanitary landfill sites are to be built from central budget funds – in which event provision must be made for them in the State Budget as they are likely to take longer than a single budget period – BG, Art. 38(1)(4). However, it is also important to note that under the Waste Law, Art. 20(j) the LSAs may involve and combine on a contractual basis inter alia local budgets for financing brand new waste management facilities. This accords also with powers under the BG for oblast and LSG councils to ensure expenditure required under law to be drawn also from local budgets. However, more importantly, and practically, LSGs may pool resources of their respective budgets on a contractual basis for implementation of their own assignments (BG, Art. 92(1)). This may assist in developing the resources for locally-based Transfer Stations and/or for collection and transport of local SHW for transmission to Transfer Stations and new sanitary landfill sites.

185. It is likely that most important is the power of councils of cities of oblast significance and rayon councils to delegate all or part of their own assignments to the oblast council, in which case this delegation shall be accompanied by transferring appropriate resources to the oblast council budget by way of an inter-governmental transfer (BG, Art. 92(2)). This may be important where the cities decide that an oblast-wide solution is best addressed by an oblast level decision-making entity. Likewise, local LSG councils can decide similarly to delegate up assignments to rayon councils, also with transfer of appropriate resources (BG, Art. 92(3)).

186. Subventions from local budgets to other budgets are provided for the maintenance of joint projects (BG, Artts 102-108). Whether this is brought into play depends on what decisions are taken as to which entity takes responsibility for what activities to realise the Regional Plan.

13. Logical Framework for the rights and duties of all possibly involved parties

187. The following paragraphs set out a summary of the arrangements to be made within the legal framework of contractual rights and obligations of key stakeholders involved in realising the Regional Plan. The detailed discussions above should be referred to as to matters of particular detail.

13.1. As to creation/dissolution of the RWM Company

188. It has been decided that the Regional Plan is to be delivered through creation of a separate legal entity – what is termed above as “the RWM Company”. It has been decided, as I understand it, that the RWM Company will not be a creature of the Local State Administration (i.e. it will not be wholly-owned by the State Administration), nor will it be a joint enterprise between the State Administration and the LSGs. It appears further to have been decided that the RWM Company will not be a company created by shares with LSGs simply as share-holders. However, it appears that the current preferred option is for some form of joint venture on the part of LSGs as a result of which the RWM Company is created as a separate legal entity.

189. A central question is whether all participants are participants as to a whole venture or participants as to a part only. For example, there are some 45 administrative units across the Donetsk Oblast. Shall they (a) equally participate as to SHW management across the Oblast as a whole, or will they (b) be participants as regards SHW management within their own designated areas/extended areas, and if the latter, how is this to be organised? For example, will the Oblast territory be divided into "operational areas" of the RWM Company, and costs/income specific to that area shall be covered by the arrangements between the relevant LSGs? The simplest arrangements is that as at (a)

190. Key factors to determine in any event include:

(i) who are the participants – eg all the LSGs in the Donetsk Oblast or only the main stakeholders eg cities, rayons and the Regional Council;

(ii) what contribution will the participants make to the set up and initial financing of the RWM Company? For example, will each invest the same amount, or a variable amount, and if the latter on what basis is the variation to be calculated;

(iii) will each be required to contribute tangible assets for example land for use as transfer stations, and/or, land to be used for the new landfill sites? If so, will this be by way of or part of their contribution under (ii)?

(iv) What happens to assets committed on conclusion of the operations of the RWM Company?

13.2. As to use of assets made available to the RWM Company by the LSGs

191. What arrangements are to be made for use of assets made available to or transferred to the RWM Company? The simplest solution is to provide that all such assets are to be made available to and used by the RWM Company as the RWM Company considers best advances its (the RWM Company's) stated terms and objectives. As the RWM Company is obliged under Ukrainian law to provide an account of all assets transferred or made available to it to the providers, this is most easily provided by way of a general accounting by report as to the operations of the RWM Company.

192. Provision must also be made as to key liabilities: (i) as regards assets transferred and which may be the course of potential liabilities to third parties – either the transferor assumes such a liability or, more easily, the RWM Company assumes the liability on transfer being completed; (ii) assets acquired subsequently by RWM Company with respect to third party liability – the simplest is that the RWM Company assumes this liability; and (iii) liability as regards any land transferred to the RWM Company but which it is intended should revert to the transferor on completion of the RWM Company activities regarding such land. Here the RWM Company should establish the baseline state of the land transferred, assume all liabilities during operations and all liabilities arising from its operations even after hand back of the land to the original transferor.

13.3. As to ensuring compliance with required environmental protection and waste law requirements

13.3.1 As between the RWM Company (its participants) and the State Department of the MoEP

193. As indicated above, the success of the Regional Plan is dependent to some extent on there being no "competing" landfill sites and no "competing" transfer stations. Assuming all current and planned landfill sites other than the Regional Plan 8-10 new sanitary landfill sites do not comply with requirements for environmental protection, in order to allow the RWM Company to attempt to plan its affairs, it would be useful for the RWM Company (as a public utility service company – if that is the route chosen for its creation) or more particularly the Regional Council or regional LSA to aim to enter into a Memorandum of Understanding with the relevant authorities, in particular, the State Department of the MoEP so that the enforcement powers of the relevant regulatory bodies are applied so as to bring unauthorized and illegal landfilling activities to an end compatible with the timetable provided for the Regional Plan to be operational across the Oblast.

194. As indicated above, such a document should

(i) set out the understanding and accepted basis for closure of illegal activities, and commitment of all relevant parties to meeting and ensuring respect for the relevant requirements, but also

(ii) provide that documents issued as "permits" in the interim, make clear on their face that they provide no rights beyond what the document itself says or purports to control. For example, if the situation in Ukrainian law is that a "passport" is merely descriptive, it should say so, and expressly state that it provides no rights to landfill waste to any extent for any period for any volumes/tonnage.

(iii) Likewise, any "permits" which authorise receipt of any volume/tonnage of waste into an existing operational site, must state clearly on it that it provides authority to infill with waste only for a stated limited period of time.

(iv) If there is a new transfer station or new sanitary landfill site anticipated to become operational in the course of a period of authority granted by the permit, the permit should state that permission to receive waste elsewhere granted may be reversed at [x] months' notice; and

(v) Permits issued to enterprises for the production and delivery of waste provide expressly that the location for which permission is granted as a delivery point for the waste produced may be altered at not less than [x] months' notice.

13.3.2 As between the RWM Company and the LSGs

195. The exact provisions required here depend on what arrangements the LSGs have made as regards SHW management within their own territories. It is assumed here that all participating LSGs currently make their own arrangements as regards SHW management (including contracting). The options below do not specify whether LSGs should make arrangements so that payment for SHW management services are paid directly to themselves or to the SHW service providers. As there would be under the Regional Plan at least two core service providers – the RWM Company and the waste collection companies – it is preferable for all payments for SHW management services to be paid to the LSG and the LSG pay the RWM Company and the individual waste collection companies. If that is not possible, then the LSGs should undertake to the RWM Company that they, the LSGs, will make contracts with the SHW management providers who are waste collectors ensuring that they, the latter, will ensure payment to the RWM Company of all payments due for receipt and disposal of the SHW waste delivered by the waste collection companies.

196. The key options are as follows:

(i) contractual obligations accepted by the LSGs towards the RWM Company (with applicable incentives for ensuring compliance) so that the LSGs individually (or collectively) as regards their respective territories either:

(a) arrange their affairs so that they

(1) individually or collectively (A) issue a single contract, after public tender, for SHW management of all communally-owned premises including JEKs by a single Contractor; and/or (B) order all JEKs and others managing communally-owned property to enter into contracts with SHW service providers as directed by the LSGs;, and

(2) encourage all private households and enterprises to enter into SHW contracts with the respective appointed Contractor; while

(3) use their environmental protection and waste control powers (A.1) to enforce against flytipping, especially concentrating on households without contracts, as well as (A.2) against illegal dumpsites or other waste management facilities in a graduated manner compatible with operation of the Regional Plan by the RWM Company; and

(4) in any event, seek to impose requirements on those engaged in SHW management that they deliver all non-recyclable SHW waste to destination points notified to them by the LSG; whilst they also

(5) agree with the RWM Company as to where the SHW so collected is to be delivered (ie as reasonably required by the RWM Company); and

(6) agree as to approval for locations for SHW management within their territories, so that the LSGs do not grant approvals which jeopardize attainment of the objectives of the Regional Plan; while at the same time

(7) undertaking to equalize up the costs to be charged by way of tariffs for SHW management so as to eliminate the discrimination between SHW costs for communally-owned properties and private properties; and

(8) ensuring that the costs of services to be provided by the RWM Company are either fully included within the tariffs set for charging and collection by the respective Contractor, or are removed from the costs of the respective Contractor and are paid directly from the LSG to the RWM Company; and

(9) undertake to install computerization systems and/or provide for direct payments into bank accounts for payment of SHW management services;

(10) provide undertaking as to collection rates of SHW for delivery and payment rates for receipt and disposal of the SHGW waste on a graduated basis with a view to achieving 100% SHW produced and not re-cycled being collected, and 100% payment charged for SHW management services and 100% fees collected;

or, each individually or collectively, as each LSG chooses:

(b) transfer under contract such of the above responsibilities able to be so transferred to the rayon councils or Regional Council, with requisite transfers of resources (the same to be subject to suitable contractual arrangements);

and in any event:

(c) provide (for) guarantees to the RWM Company for payment for receipt, transport and disposal of all SHW waste organized to be collected by the LSGs for delivery to and disposal by the RWM Company;

and

(ii) contractual obligations accepted by the RWM Company as to

(1) making available by given deadlines Transfer Stations and new landfill sites for receipt and disposal of all the SHW delivered by or on behalf of the LSGs in question;

(2) giving directions to the respective LSGs/Contractor on a predictable basis as to points for delivery of the SHW waste; and

(3) providing alternative arrangements in the event that the former are not available in time on any given occasion (with appropriate incentives for compliance by the RWM Company).

13.3.3 As between the LSGs and the managers etc of their respective communally-owned properties

197. The LSGs should issue instructions, impose and/or enforce contractual provisions on the managers of their communally-owned properties/premises to the above-mentioned effect. This may require imposing a common contract service provider on all JEKs and communally-owned properties. The LSGs should also make provision, by notice in advance, to the JEKs and managers of other communally-owned properties for equalization of SHW management charges and for payment collection rates.

13.3.4 As between the RWM Company and any enterprises

198. As appropriate, the RWM Company may wish to enter into suitable contractual arrangements with enterprises which wish to deliver themselves SHW waste directly to the transfer stations and/or the new landfill sites. In principle, the RWM Company should not engage in such arrangements as it undermines the objective of moving towards a single contract for individual/collective LSG territories for SHW collection and delivery.

199. The arrangement as set out above should not prevent the RWM Company entering into direct contractual relations for receipt and disposal of non-SHW-type waste from private enterprises. However, such matters are outside the scope of this Report.

14. Principles for Regional Decrees or Contracts establishing the rules for funding the Regional Programme

200. As indicated above, it is not open to the local State Administration to issue decrees or directives to LSGs so as to interfere with the lawful powers, rights and obligations of LSG bodies. As SHW management is a function that LSGs are to ensure on their territories, it is not open to the local State Administration to compel the LSGs to act against their own decision-making powers regarding such matters.

201. However, as also indicated above, it is open to the local State Administration bodies to engage funds from a variety of sources, including those of LSGs, for purposes including construction of new sanitary landfills and waste management facilities. Hence, as the State Administration is more easily able to raise/receive funds for multi-year projects, and have its commitments backed by the State, this power of the local State Administration could be used to provide support (by way of required contractual obligations with the local Sate Administration) for arrangements as set out under the previous Section 13.

Annex 7 Statute of the Utility Enterprise "Donetsk Regional Centre of Waste Treatment"

DONETSK REGIONAL COUNCIL

DECISION

as of 23/11/2006 N° _____

City of Donetsk

On Creation of the Utility Enterprise

"Donetsk Regional Centre of Waste Treatment"

In order to improve life conditions of the oblast inhabitants as well as functioning of housing and public utility sector and to create grounds for the rational use of secondary raw materials and introduction of a comprehensive system of waste treatment, being guided by Article 78 of the Administrative Code of Ukraine as well as by Articles 43 and 60 of the Law of Ukraine "On Local Self-Government in Ukraine" the Regional Council

DECIDED:

1. To create a utility enterprise "Donetsk Regional Centre of Waste Treatment" and to put into its statutory fund 30 thous. UAH from the Regional Budget.

2. The Central Finance Department of the Regional State Administration (Mr. Skarga) should define the source of financing for the money to be transferred to the statutory fund of the utility enterprise.

3. To introduce changes into the Decision of the Regional Council as of 04.03.1999 N°23/5-116 "On Delegation of Powers of the Donetsk Regional Council to the Donetsk Regional State Administration as regards Management of the Regional Property and Approval of the List of Facilities Jointly Owned by Territorial Communities and Managed by the Regional Council (including changes introduced by the Decisions of the Regional Council as of 17.08.99 N°23/7-171, as of 29.02.2000 N°23/11-258, as of 24.03.2000 N°23/12-286, as of 04.03.2003 N°4/7-162, as of 09.09.2003 N°4/10-269, as of 30.03.2004 N°4/15-415, as of 20.07.2004 N°4/17-460, as of 28.12.2004 N°4/24-558, as of 15.03.2005 N°4/26-613, as of 21.09.2006 N°5/5-42) – in item 1 after the words "Motor-transport utility" it is necessary to add "Donetsk Regional Centre of Waste Treatment".

4. To approve the Statute of the Utility Enterprise "Donetsk Regional Centre of Waste Treatment" (the Statute is attached).

5. The implementation of the decision should be controlled by the Regional Council Standing Commission on Investment Policy, External Economic Relations, Communal Property and Privatisation.

Chairman A.M. Blizniuk

RATIFIED

by the Decision of the Regional Council

as _____ N° _____

STATUTE OF THE UTILITY ENTERPRISE
"DONETSK REGIONAL CENTRE OF WASTE TREATMENT"

1. GENERAL PROVISIONS

1.1. The utility enterprise “Donetsk Regional Centre of Waste Treatment” is a joint property of territorial communities of villages, settlements and cities which is managed by the Donetsk Regional Council (hereinafter referred to as the “Enterprise”) and has been created in accordance with the decision of the Donetsk Regional Council as of _____ N° _____

1.2. The Enterprise is subordinate to the Donetsk Regional Council.

1.3. Name of the Enterprise:

- in Ukrainian – Комунальне підприємство “Донецький регіональний центр поводження з відходами”;
- the short name – КП “ДРЦ поводження з відходами”;
- in Russian - Коммунальное предприятие «Донецкий региональный центр по обращению с отходами»;
- the short name – КП «ДРЦ по обращению с отходами»;
- in English – Utility Enterprise “Donetsk Regional Centre on (of) Waste Treatment”.

1.4. The legal address of the Enterprise is 13 Universitetskaya Str., Donetsk, 83000, Ukraine.

2. AIM AND SUBJECT OF ACTIVITIES

2.1. The Enterprise has been created in aim to:

- implement economic activities dealing with collection, sorting, transportation, recycling and utilization of waste as secondary raw materials;
- involve scientific and technical potential into implementation of efficient techniques and achievements in the field of waste treatment and utilization;
- introduce technologies and measures focused on reduction of the negative impact on the environment;
- create a database of new ecological and technical elaborations.

2.2. The subject of the Enterprise activities within the framework of the active legislation is:

- comprehensive treatment of waste in the process of collection, sorting, transportation, recycling and utilization of waste as secondary raw materials;
- provision of methodological and consulting assistance to enterprises, institutions and organizations engaged in collection, sorting, transportation, recycling and utilization of waste as secondary raw materials;
- participation in development and implementation of regional, local and national programmes of waste treatment;
- implementation of works related to production of packages as well as equipment and technological lines required for their production;
- promotion of re-equipment and reconstruction of enterprises focused on implementation of new technologies in the field of waste treatment as secondary raw materials.

2.3. In accordance with the tasks entrusted, the Enterprise

2.3.1. plans its activities on one's own, defines the strategy and main directions of its development with consideration of scientific and technical forecasts, priorities, market conditions for products, goods, services and economic situation;

2.3.2. organizes training and further professional development for the specialists in the field of waste treatment as secondary raw materials and organization of package production at domestic and foreign educational institutions, establishments, etc.;

2.3.3. co-operates, in accordance with the legislation, with international finance and other organizations, foreign economic operators on solving the questions dealing with development of package production, collection, recycling and utilization of packages and other waste as secondary raw materials and carries out foreign economic activities;

2.3.4. acts as an intermediary, wholesale and retail trader;

2.3.5. carries out import and export operations as regards purchase and procurement of secondary raw materials, technologies and equipment for production and utilization of packages and other solid household waste; assists to enterprises, institutions and organizations in the relevant operations;

2.3.6. produces its own equipment for manufacturing packages and utilization of waste;

2.3.7.contributes to implementation of investment projects through investment contributions, provision of loans, leasing to implementers and customers of these projects and organization of joint activities with them;

2.3.8. creates an information-and-analytical system and databases in the field of waste treatment as secondary raw materials;

2.3.9. implements leasing operations in accordance with the active legislation;

2.3.10. creates engineering centres;

2.3.11. carries out activities for preparing of waste inventory and passports; develops registry maps for waste production, recycling and utilization facilities, prepares passports for waste disposal sites;

2.3.12. implement an ecological audit of waste treatment facilities;

2.3.13. provides insurances in the field of waste treatment;

2.3.14. purchases hard currency in accordance with the procedure established by the current legislation of Ukraine;

2.3.15. production activities:

- treatment of solid waste: collection and disposal of household waste as well as of industrial waste, including hazardous waste;
- collection and destruction of waste;
- processing and neutralization of toxic waste;
- processing of metallic and nonmetallic waste and scrap;
- cargo vehicle activities;
- development, introduction, production and sale of goods for production and technical purposes; production and servicing of systems and ways to implement the works and provide services in order to ensure technical protection of the information;
- implementation of all types of electro-technical and control-and-measuring works;
- development and introduction of new zero-waste technologies;
- recycling of nonferrous and ferrous metals;
- production and installation of wooden, metal and plastic constructions;
- production of joiner's works, glass-works;
- extraction, recycling and transportation of fuel and lubricant materials, goods and other natural resources.

2.3.16. construction and repair works:

- implementation of capital construction and repair of production and social facilities through economic activities or based on subcontracts, purchase of equipment, tools and vehicles, capital repair of the main assets;
- implementation of all kind of repair and adjustment activities;
- implementation of installation, adjustment and service works; implementation of engineering studies for construction;
- research and development activities;
- repair, including painting and anticorrosion works for metallic structures;
- repair and operation of pipeline transportation facilities;
- wholesale trade of waste and scrap;
- organization of commercial companies, centres, shops and company trading points as well as of catering companies, restaurants, cafes, bars, etc.;
- commission trade of domestic and foreign goods;
- trade and purchase activities as regards national consumption goods, computers, household radio-electronic devices, electronic devices, cars, mechanisms and other equipment. This includes purchases from foreign countries.

2.3.17 Provision of services:

- provision of dealer's, distributor's and agent's services;
- provision of services of a representative body; activities by proxies;
- provision of marketing and consulting services;
- fulfillment of expert's activities;
- implementation of marketing research based on applications of Ukrainian and foreign natural persons and legal entities referring to the Ukrainian market and Ukrainian producers, organization of seminars and conferences on business, marketing and consulting;
- development and introduction of technologies for production of ecologically clean goods and drinking water;
- repair, adjustment and maintenance of office equipment;
- operations with immovable property;
- provision of engineering services;
- implementation of conferences, symposia, seminars and other activities;
- organization of exhibitions, fairs, competitions, lotteries, auctions and participation in them.

2.3.18. Foreign economic relations:

- implementation of export and import trade and other commercial operations;
- provision of intermediary's services in foreign economic relations;
- provision of dealer's, distributor's and agent's services in foreign economic relations;
- provision of services of a representative body on the basis of a proxy or commissions in foreign economic relations;
- operations with customer-owned raw materials;
- charitable activities;
- other types of activities not prohibited by the current legislation of Ukraine.

Some types of activities, the list of which is established by the law, can be implemented by the Enterprise after acquisition of a special permission (license).

3. LEGAL STATUS OF THE ENTERPRISE

3.1. The Enterprise is a legal entity of the public law. The Enterprise acquires the rights and obligations of a legal entity since the date it is registered by the State.

3.2. The Enterprise will carry out its activities on the basis and in accordance with the current legislation of Ukraine, decisions of the Regional Council as well as this Statute.

3.3. The Enterprise has a right to join associations, corporations, concerns and other associations of companies on a voluntary basis in accordance with the anti-monopoly legislation and other normative acts of Ukraine and upon the agreement of the Regional Council.

3.4. The Enterprise will have its own accounting, a settlement account, a hard currency account and other bank accounts, a round stamp with its name, a rectangular stamp and a letter-head form. The Enterprise can have a trade mark – the logotype which is to be registered in accordance with the current legislation.

3.5 The Enterprise will bear responsibility for fulfilling its obligations within the scope of the assets it possesses and in accordance with the current legislation.

3.6. The Enterprise will not bear any responsibility for fulfilling the obligations of the assets owner and the assets owner will not bear any responsibility for fulfilling Enterprise obligations.

3.7. The activities of the Enterprise can be checked by the bodies authorised for such actions in accordance with the current legislation and within the range of their powers.

4. RIGHTS AND OBLIGATIONS OF THE ENTERPRISE

4.1. The rights of the Enterprise:

4.1.1. The Enterprise has a right to attract credits, loans and budget funds for implementation of activities related to prevention or reduction of waste production as well as to sorting, transportation, storage, recycling and utilization of waste.

4.1.2. The Enterprise has a right to order and implement works related to fulfilment of its obligations and implementation of investment projects.

4.1.3. The Enterprise has a right to organize and carry out tenders for implementation of investment projects focused on the development of collection, sorting, transportation, recycling and utilization of used-up packages.

4.1.4. The Enterprise has a right to create subsidiaries, representations and other autonomous sub-divisions that will have the right to open current and settlement accounts. It will be obliged to get an approval of the Regional Council for the Provisions regulating their activities.

4.1.5. The Enterprise has a right to submit to the Donetsk Regional Council and other executive bodies the proposals as regards efficiency improvement in the field of waste management as secondary raw materials.

4.1.6. The Enterprise has a right to implement innovation activities.

4.1.7. The Enterprises has a right to construct warehouses for storing material and technical resources.

4.1.8. The Enterprise has a right to create a company trade network for implementation of the Enterprise functions.

4.1.9. The Enterprise has a right to purchase securities of legal entities of Ukraine as well as of other countries in accordance with the legislation.

4.1.10. The Enterprise has a right to carry out advertising campaigns and organize exhibitions.

4.1.11. The Enterprise sales its services and goods by prices and tariffs either set by the Enterprise itself or defined on a contractual basis. For the cases stipulated by the Ukrainian legislation the prices and tariffs will be fixed.

4.1.12. Following the procedure defined by the legislation the Enterprise has the right to make agreements on its behalf, to acquire property and special non-property rights, to bear responsibility and to act as a plaintiff or defendant in court.

4.1.13. The Enterprise has a right to define forms, systems, amounts and types of payments for the work in accordance with the current legislation of Ukraine.

4.1.14. The Enterprise has a right to carry out other types of activities, not prohibited by the legislation.

4.2. Obligations of the Enterprise

4.2.1. During the definition of the strategy of economic activities and preparation of the production programme the Enterprise should take into account the requests of the owner, regional contracts and other contractual obligations.

4.2.2. The Enterprise shall:

- ensure a timely payment of taxes and other compulsory payments to the budget in accordance with the current legislation;
- implement construction, reconstruction as well as capital repair of capital assets, ensure a timely operation of new production facilities and commissioning of the acquired equipment without no delays, bear responsibility for an unsatisfactory use of production facilities;
- implement proper activities as regards material and technical provision of the production process;
- acquire necessary material resources from companies, organisations and establishments not depending on the forms of their ownership as well as from natural persons;
- ensure a delivery of services, production and delivery of products and goods in accordance with regional contracts and orders as well as contracts concluded;
- create proper conditions for a high-efficiency operation, ensure the observance of the labour legislation, rules and norms of labour protection, technical safety and social insurance;
- implement measures as regards the improvement of labour conditions, increase of employees' salaries in order to strengthen their financial motivation, ensure saving and rational use of the consumption fund and timely payment to Enterprise employees;
- fulfil norms and requirements as regards environment protection, rational use and restoration of natural resources, assurance of ecological safety;
- ensure improvement of the economic tools of management, management of production, increase the interest of employees in raising the efficiency of labour and final results of production activities;
- ensure an efficient use of labour, material and financial resources during implementation of economic activities;
- keep records and reports in accordance with the current legislation of Ukraine;
- organise and ensure training, re-training and professional development of the staff in accordance with the established procedure.

The report about the results of production and financial activities of the Enterprise shall be provided to the Regional Council on the annual basis.

5. ASSETS OF THE ENTERPRISE

5.1. The assets of the Enterprise consist of capital assets and turnover assets as well as of other values, the cost of which shall be indicated in the balance sheets of the Enterprise.

The statutory fund of the Enterprise is UAH 30 000.

5.2. The assets of the Enterprise are the joint property of territorial communities of villages, settlements and cities which is managed by the Donetsk Regional Council and which is assigned to the Enterprise for its economical activities.

Implementing its right of using these assets for economic activities the Enterprise holds, uses and handles the above-mentioned assets as it finds it necessary, taking any actions related to them which do not contradict the current legislation of Ukraine and the present Statute.

5.3. The money of the Enterprise are kept at settlement accounts of banking establishments and used in accordance with the purpose following the legislation and the present Statute.

5.4. The sources constituting the Enterprise property are the following:

- property transferred by the founder to the statute fund;
- incomes received from sales of goods, implementation of works, delivery of services as well as from other types of financial and economic activities;
- incomes from securities;
- credits;
- charity contributions, donations of enterprises, institutions, organizations and citizens;
- depreciation allocations;
- property acquired from other enterprises, institutions and organisations;
- other property received on the grounds not prohibited by the legislation.

5.5. Alienation, transfer on a mortgage basis, provision for rent of the assets used for economic activities of the Enterprise take place in accordance with the procedure established by the Donetsk Regional Council.

5.6. The Enterprise has no right to transfer its property to other legal entities or citizens on a free-of-charge basis, except for the cases, stipulated by Law.

5.7. Writing-off of the basic assets from balance sheets as well as a speeded-up depreciation of the basic assets of the Enterprise can take place only in accordance with the relevant agreement and the procedure defined by the Donetsk Regional Council.

5.8. Losses incurred by the Enterprise as a result of violation of its property rights by physical persons and legal entities as well as public bodies are to be reimbursed to the Enterprise in accordance with the relevant decision of court.

5.9. The Enterprise will manage and use land and other natural resources in accordance with the purpose of its activities and current legislation.

Alienation (buy-out) as well as refusal from the right to use land plots occupied by the Enterprise facilities should take place after getting a relevant approval of the Regional Council.

6. MANAGING THE ENTERPRISE

6.1. Current activities of the Enterprise will be managed by the Director General.

6.2. The Director General of the Enterprise shall be appointed and dismissed by the resolution of the Chairman of the Regional Council in accordance with the procedure defined by the Regional Council.

6.3. The Director General of the Enterprise will sign a contract defining the duration of employment, rights, obligations and responsibilities of the Director General, conditions of his material provision and other terms.

6.4. The Director General will decide by himself the issues concerning the activities of the Enterprise within the framework of the current legislation.

6.5. The Director General of the Enterprise shall:

- implement a general management of the Enterprise;
- bear full responsibility for the state and activities of the Enterprise;
- act without any proxy on behalf of the Enterprise, representing it at all companies, establishments and organisations;
- handle the money and assets in accordance with the current legislation and the present Statute;
- make contracts, issue orders and proxies, open settlement and other bank accounts;
- bear responsibility for preparation and execution of financial plans;
- make labour contracts with all employees of the Enterprise and dismiss them in accordance with the current labour legislation;
- distribute functional obligations between deputies and heads of the Enterprise structural subdivisions; approves an organizational structure, staff members and number of the Enterprise employees and its territorial structural subdivisions;
- establish a working day schedule, defines forms and system of labour remuneration, concrete tariff levels, travel allowances, official salaries;
- provide material incentives (bonuses) to the Enterprise employees;
- create safe working conditions for the Enterprise employees.

Within the scope of his powers the Director General will issue orders, organize and control their implementation.

6.6. The Enterprise employees shall be appointed and dismissed by the Director General of the Enterprise.

6.7. The staff of the Enterprise will consist of all employees contributing to its activities through their work which is regulated by the labour contract or other documents defining labour relations between an employee and the Enterprise.

During general meetings (conferences) the staff will:

- consider and approve the draft of the collective agreement,
- consider and take decisions as regards self-governing of the staff,
- define the list and procedure for granting social privileges to the staff of the Enterprise,
- prepare proposals concerning material and moral work incentives.

6.8. The powers of the Enterprise employees are executed in accordance with the legislation.

6.9. The decisions related to social and economic issues of the Enterprise activities are to be approved by the Director General of the Enterprise. For the cases previewed by the legislation they should be included in the collective agreement.

The collective agreement also regulates the issues of labour protection, production and work relations with the Enterprise administration.

6.10. The right to make a collective contract is given to the Director General of the Enterprise. On behalf of the employees the contract can be signed by the body authorized by them.

7. ECONOMIC AND SOCIAL ACTIVITIES OF THE ENTERPRISE

7.1. The main indicator of financial results of the economic activities of the Enterprise is its profit (incomes).

Following the legislation, the Enterprise will do the Enterprise and tax accounting as well as prepare statistics and provide the relevant documents in accordance with the established order and scope to the state statistics bodies, tax office and other authorized authorities.

The Director General of the Enterprise and Chief Accountant will bear a personal responsibility for following the procedure of book-keeping as well as for reliability of accounting and statistics data.

7.2. The net profit of the Enterprise remaining after covering material costs and the costs equivalent to them, costs related to the payment of wages, payment of interests for bank credits, payment of taxes, stipulated by the legislation of Ukraine and other payments to the budget will stay at the full disposal of the Enterprise.

7.3. The sources constituting financial resources of the Enterprise are its profit (incomes), depreciation allocations, incomes resulting from sale of securities, charity contributions of the employees, enterprises, institutions, organizations and citizens as well as other incomes.

7.4. The relationships of the Enterprise with other companies, institutions, organisations and citizens in all fields of economic activities will be regulated by contracts.

7.5. The Enterprise will carry out its external economic activities (including external trade) which, in accordance with the legislation, will be based on the principles of hard currency self-repayment and self-financing. Hard currency incomes are to be entered into the hard currency account of the Enterprise and to be used by it independently in accordance with the legislation.

7.6. The audit of the financial activities of the Enterprise will be implemented in accordance with the current legislation.

7.7. Social and economic issues related to the Enterprise activities will be solved by its management bodies with the help of the staff or the body authorised by the staff and reflected in the collective agreement. The collective agreement will also regulate such issues as labour protection, production and working relationships of the staff with the management of the Enterprise.

7.8. The right to sign a collective agreement on behalf of the owner is given to the Enterprise Director, the right to sign a collective agreement on behalf of the employees is given to the body authorised by the employees.

8. INTRODUCTION OF CHANGES AND ADDENDUMS TO THE STATUTE

8.1. Changes and addendums to the Statute shall be made in accordance with the procedure defined for the Statute approval and registration.

9. TERMINATION OF ENTERPRISE ACTIVITIES

9.1. The termination of the Enterprise activities will take place through its re-organisation (amalgamation, joining, division, separation, transformation) or its liquidation by a decision of the Regional Council or Economic Court in accordance with the current legislation.

9.2. During re-organisation of the Enterprise all its rights and obligations will be transferred to its successor.

9.3. The liquidation of the Enterprise will be carried out by the Liquidation Commission which shall be created by the Regional Council or other body defined by the Law. The powers as regards the Enterprise liquidation can be delegated to the body managing the Enterprise which is being liquidated.

9.4. Since the establishment of the Liquidation Commission it will acquire all powers as regards managing the Enterprise. The Liquidation Commission will prepare a liquidation balance of the Enterprise and provide it to the body that has appointed the Liquidation Commission.

9.5. During re-organisation or liquidation of the Enterprise the rights and interests of the employees that will be released will be guaranteed in accordance with the labour legislation of Ukraine.

9.6. The assets remaining after meeting creditors' requirements will be used by the Regional Council at its own discretion.

Explanatory note

for the draft decision of the Regional Council

"On Creation of the Utility Enterprise "Donetsk Regional Centre of Waste Treatment"

In the Donetsk oblast there has been developed the Programme for Environment Protection and Assurance of the Ecological Safety. This Programme is under implementation now.

Within the framework of the Programme the Donetsk Regional Council has taken a decision to create a public utility for industrial waste recycling.

However, practical activities have helped to reveal a number of problems as well as ideas contributing to solution of waste recycling issues.

That's why, there has been taken a decision to liquidate a public utility for industrial waste recycling and to create a new company with a wider scope of services and powers in this field.

"The Donetsk Regional Centre of Waste Management" represents first of all the comprehensive approach to solution of problems referring to collection, sorting, transportation, recycling and utilization of waste as secondary raw materials.

Secondly, the Centre will provide methodological, consulting, scientific and technical assistance to enterprises, establishments and organizations involved in waste utilization.

Taking into account all mentioned above, we propose to create a public utility "Donetsk Regional Centre of Waste Treatment".

Head of the Department for Communal

Property of the Regional Council Executive Board **Y.I. Oleynik**

7. Documents

Biblio 1 Regional Strategic Plan for Solid Household Waste Management of the Oblast of Donetsk 2004-2009, prepared by the Tacis Programme "Improvement of Solid Household Waste Management in Donetsk Oblast", adopted by the Regional Council on 17/02/05

Biblio 2 Choice of the sites for the Regional Landfill Programme, Tacis Programme: "Capacity building in Donetsk Oblast for Waste Management", 14/10/05

Biblio 3 Bibliographical Study: Carbon rights for landfills funding, Tacis Programme: "Capacity building in Donetsk Oblast for Waste Management", 18/05/06

Biblio 4 WB Project Leasing in Ukraine, Website: http://www.leasing.org.ua/

Biblio 5 Landfills Inventory: Final Report, Tacis Programme: "Improvement of the solid Household Waste Management in Donetsk Oblast", 30/09/04