Background Paper on Financing Waste Management in Ukraine

Vera Demus and Ruslan Zhechkov
4/1/2014
Contents
1. Introduction ............................................................................................................................................ 2
2. Strategic and Legal Framework for the Waste Sector ................................................................. 4
   2.1 Sector EU Principles of Integrated Waste Management ................................................................. 4
   2.2 National Strategic, Legal and Institutional Framework in the Waste Sector .............................. 5
3. Waste management situation in Ukraine ....................................................................................... 8
   3.1 Recycling ........................................................................................................................................ 10
   3.4 Tariffs ............................................................................................................................................. 14
4. Waste as a Business Opportunity .................................................................................................... 15
   4.1 Public Private Partnership in Waste Management ................................................................ 18
5. Donors’ International Technical Aid in Ukraine ............................................................................ 20
   5.1 Donor Organizations ...................................................................................................................... 21
   5.2 Projects ........................................................................................................................................ 22
6. Conclusions ......................................................................................................................................... 23
1. Introduction

This report serves as a background paper to a round table on financing waste management in Ukraine, which will take place in Holiday Inn in Kiev on May 28th.

For Ukraine, the issue of solid waste treatment is very urgent considering that accumulated solid waste is the main cause of air, soil and groundwater pollution\(^1\).

According to statistics every year Ukraine accumulates from 700 million to 1 billion tons of waste, which can be further broken down into processed waste (2-3\%), waste sorted as recyclables (7-8\%), and the rest of the waste which is stored in landfills and waste dumps, 90\% of which do not meet basic environmental standards\(^2\). According to the Ministry of Regional Development, Construction, Housing and Communal Services, approximately 0.5 billion tons of waste was generated in Ukraine in 2012, with a total amount of accumulated waste reaching a staggering 36 billion tons. Out of this amount, more than 1 million tons, including dangerous waste, is being accumulated in unauthorized dumps. The total area of waste fields (including sludge reservoirs, waste banks, and ash disposal areas) has reached 165,000 hectares. In addition, 50 million cubic metres of domestic waste are generated each year. Only a very small amount of waste is being used as secondary resources\(^3\).

Ukraine has a potential to significantly reduce greenhouse gas emissions, increase waste recovery rates, and contain environmental and health risks by reforming its solid waste management sector\(^4\). Currently, for Ukraine, solid waste management is a symbiosis of business opportunities and environmental needs of the country. Waste is a resource that can and should be converted into raw materials, saving minerals and other natural resources. The biggest success has been achieved in Switzerland, Germany and Sweden, where more than 80\% of waste is sorted within households. In Denmark, Belgium, Switzerland, the Netherlands, Austria, France, Italy, UA and Japan up to 50\% of sorted solid waste is used as secondary raw materials, while in Ukraine it is only 5\%\(^5\).

International experience shows that if the recycling process is regulated by tax policy and environmental legislation, processors receive significant revenue. In 2011, the UNDP estimated the value of raw material potential in case of introduction of separate waste collection and waste recycling would amount to UAH 1.3 bln (about EUR 120 mln.)\(^6\).

\(^1\) Solid Waste Management in Ukraine. Industry report by Invest Ukraine and Deloitte


\(^5\) http://en.for-ua.com/analytics/2013/07/18/154156.html

If Ukraine were to optimize its Municipal Solid Waste (MSW) management policy and implement modern technologies it could, by 2025, secure an environmentally safe MSW management system and recover up to 40 percent of waste. By 2025, therefore, more than 60 million metric tons of MSW could be recovered for use as raw materials and energy rather than being sent to landfill. Achieving a waste recovery rate of 30-40 percent in Ukraine, would require investment in the order of EUR13 billion. This would reduce demand for new landfill capacity by up to 30 percent and generate up to EUR 300 million in additional revenues from the sale of recovered materials and energy.\textsuperscript{7}

http://www.ifc.org/wps/wcm/connect/region__ext_content/regions/europe+middle+east+and+north+africa/ifc+in+europe+and+central+asia/publications/a+study+on+municipal+solid+waste+management+in+ukraine,+summary+of+key+findings
2. Strategic and Legal Framework for the Waste Sector

2.1 Sector EU Principles of Integrated Waste Management

Waste is one of the main environmental concerns within the European Union. In the 7th Environmental Action Plan, which entered into force in January 2014 the European Union has agreed to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste, by reducing the overall impact of resource use and improving the efficiency of such use, by applying the following waste hierarchy: prevention, preparing for re-use, recycling, other recovery, and disposal. Besides, special attention is being dedicated to turning waste into a resource.\(^8\)

Figure 1 Waste hierarchy

![](image)

Source: EC website

If we include circular economy and product design into the picture the waste hierarchy could be enriched in the following way:

---

\(^8\) General Union Environment Action Programme to 2020. Living well, within the limits of our planet
There has been a consensus among analysts that the EU waste policies developed in the past 20-30 years have changed the way waste is handled and therefore the waste-related green economy dramatically. Due to the variety in waste types and the way it is managed the European Union has adopted a relatively big number of waste acquis. The Waste Framework Directive 2008/98/EC and the Directive on Waste 2006/12/EC provide the overall frame, philosophy and definitions for the EC approach to waste. There are several directives which address different waste treatment operations. The Waste Landfill Directive 1999/31/EC emphasizes the importance of preventing bio-waste from landfill and also bans the landfilling of such waste streams as tyres and ELV. The Waste Incineration Directive 2000/76/EC sets up strict exploitation standards for incineration plants whose environmental impact had been contradictory for a long time.


2.2 National Strategic, Legal and Institutional Framework in the Waste Sector.

The main document, defining waste management in Ukraine is Law on Waste on 05/03/1998 # 187/98-BP with amendments of 2002, 2005 and 2010. The Law On Waste defines legal, organizational and economic principles of activity connected with prevention or reduction of volumes of waste, their
gathering, transportation, storage, processing, utilization and removal, making harmless and burial, as well as prevention of negative influence of waste on the environment and human health on the territory of Ukraine.

The policy framework does not address:

- implementation of the principle of **producer responsibility** for collection of some types of production after its use;
- establishment of **market principle** of waste treatment of recyclables;
- economic incentives for **increased volumes of production of goods and products, made of recyclables**\(^9\).

The main regulatory authorities in the waste management sector are the Ministry of Ecology and Natural Resources of Ukraine, the State Sanitary-Epidemiological Service of Ukraine and the Ministry of Regional Development, Construction, Housing & Municipal Economy, which oversees the implementation of the waste policy at national, regional and municipal levels, and municipal authorities. Waste collection tariffs are set by the National Commission of the State Public Utilities Regulation. Local authorities approve the tariffs for the transportation and disposal of waste. Monitoring of the places of production, collection and disposal of waste is part of the system of state environmental monitoring. System and forms of reporting, order of provision and use of the relevant information about the waste as well as the order of review of the nomenclature are done on the basis of the State Register of Waste. The reporting is approved by specially authorized statistical body upon the request of State environmental authority.

Treatment of dangerous waste, as well as collection and recycling of certain kinds of waste (e.g. metal scrap), requires obtaining of a license. Trans-border transportation of waste is subject to obtaining a special permit. Each facility for storage or disposal of waste shall also be operated only upon obtaining a special permit\(^10\).

According to the order of the President of Ukraine of 30 May 2011 № 1-1/1047 «On improving the effectiveness of public policy in the field of waste management» MENR drafted the Resolution of the Cabinet of Ministers of Ukraine «On Approval of the Concept of National Environmental Program on Waste Management» accepted with order of the Cabinet of Ministers of 03.01.2013 № 22-r.

MENR prepared a draft National Program on waste management, last draft considers proposals already submitted by central and local authorities.

Pursuant to paragraph 7 of order of the President of Ukraine dated 30 May 2011 «On improving the effectiveness of public policy in the field of waste management» MENR developed draft resolutions of the Cabinet of Ministers of Ukraine on:

---

\(^9\) [www.wastegovernance.org](http://www.wastegovernance.org)

• some aspects of collecting, storing and disposal of waste electrical and electronic equipment;
• approval of the plan for medical waste management.

The main targets of the Strategy in waste management sector include:

• depositing municipal waste of cities with population more than 250,000 inhabitants at the specialized and environmentally safe landfills till 2015;
• the conservation of the whole volume of such waste till 2020;
• decrease of the municipal waste for the basic level of bio-degradable waste part in the special landfills till 2020;
• 1.5 times increase of the volumes of waste provision, utilization and use as recyclable materials till 2020;
• implementation of latest technologies of Municipal Solid Waste utilization11.

Under the Association Agreement with the European Union, Ukraine has committed to transpose the Waste Framework Directive 2008/98/EC within five years after signature. The Agreement does not refer explicitly to the need of transposing Waste electrical and electronic equipment Directive 2012/19/EC and the Battery Directive 2006/66/EC, but as the Ukrainian National Action Plan (NAP) and National Environmental Strategy (NES) state that a mechanism should be introduced in Ukraine for the collection and recycling of waste electrical and electronic equipment (WEEE)12, the transposition, even partial, of these two Directives on wastes and on batteries in the Ukrainian context is fully justified. In essence, the EU WEEE Directive aims at preventing harm to the environment and human health from hazardous substances contained in WEEE and to increase their recycling. It provides for the creation of collection schemes where consumers can return their WEEE free of charge to producers, for retreatment, on the basis of the Extended Producer Responsibility (EPR). Collection targets in the EU were 4 kg per year and capita till 2012; they will increase to roughly 20 kg per year and capita as per 2019 (equivalent to 85% of the approximately 20 million tons of WEEE generated yearly in the EU by 202013).

Ukraine adopted the Framework Law on Environmental Protection in 1991. Since then it has adopted several legislative initiatives for harmonization of domestic standards with the relevant EU directives and complying with European requirements. Among them:

• Expansion of local communities’ rights regarding the ownership of waste, allowing for better monitoring of the performance of waste collection services;

11 http://eco-invest.org.ua/en/law/Environmental-Policy.htm#.Uxb9hs6euAc
12 NES section 1, art. 4.8; NAP. Art. 119
• Obliging citizens to perform separate collection of waste and obliging legal entities-providers of waste collection services - to ensure such separate collection;
• Implementation of “green tariff” for electricity produced from waste;
• Amending the Code of Ukraine on Administrative Offences, by establishing penalties for violations of waste management laws, such as lack of an agreement with collection companies on disposal of unprocessed waste.
• Status of transposition into national law in implementation of Directive 1999/31/EU from 26th of April 1999 in Ukraine is evaluated as well-developed
• Status of transposition into national law in implementation of Framework Directive on Waste 2008/98/EU is evaluated as well-developed
• Status of transposition into national law in implementation of Directive 2006/21/EU on Waste Management in Mining Industry is evaluated as the one at early stage.

Given the heavy reliance in Ukraine on dumping waste in poorly-controlled sites for solid waste disposal, the greatest immediate practical benefit in terms of reducing threats to human health and the environment would ultimately be achieved by implementing the European Union’s Landfill Directive 1999/31/EC.

Ukraine faces difficulties with implementation and enforcement of environmental legislation due to lack of administrative capacity and insufficient financial resources, especially at regional and local levels. In the area of waste management, in particular, mechanisms for implementation of the legislation are lacking. Existing legislation has had only limited effect. Besides, “there is no relevant coordinated system of waste management. Among state agencies there is a fragmentation of responsibilities on this issue, which makes some of them fail to consider it as a priority topic in their activities. The market mechanism on waste management of secondary resources hasn’t yet been established. There is no government support for the use of waste processing technologies and know-how. Furthermore, according to Tatiana Timochko, the Head of the All-Ukrainian Ecological League, there are no effective mechanisms for identifying norms of payment for generated waste that could incentivize producers.

3. Waste management situation in Ukraine

Similarly to the situation in some EU countries several decades ago, in Ukraine, there is no systematic collection and retreatment of the 1.2 million tons of wastes generated every day in the country.

In 2012, Ukraine had to dispose of 450.7 million tons of waste, according to the State Statistical services\(^\text{16}\).

The NES acknowledges that "disposal of household wastes represents an acute environmental problem; the annual indicators for waste production average from 220 to 250 kg/person, reaching as high as 330 to 380 kg in large cities". Only an estimated 70% of household wastes are officially collected, mostly by private operators contracted by municipalities.

At least 0.1% of these household wastes are hazardous. An estimated 4.500 tons of AA cell batteries are sold every year in Ukraine (12 tons a day)\(^\text{17}\); after use, in the absence of any collection scheme, they all end up in dumpsites, like thousands of tons of Electric and Electronic Equipment (EEE) entering the Ukrainian market every year, without any particular sorting or reprocessing. Their remains are buried at landfills or incinerated. Scientists estimate that one AA battery taken to a dumpsite can contaminate up to 50m\(^2\) of soil or over 400 liters of water. The mercury they contain is especially dangerous to developing fetuses and young children, attacking the brain and the nervous system. WEEE is indeed the fastest growing waste stream in Ukraine and an area for which neither collection nor reprocessing mechanism exist today in the country, while the EU has been regulating it since the 1990s with very tangible positive results.

Ukraine also has the largest area of agricultural land in Europe with approximately 43 m ha of land out of which 32.5 m ha are used for crop production. Large quantities of pesticides were used for agriculture in Ukraine since 1950. Continued production of pesticides in excess of amounts used resulted in extensive accumulation of unused pesticides. Each collective farm in Ukraine had a storehouse for storage of pesticides and mineral fertilizers. The quantity of obsolete pesticides that accumulated in these storehouses differs among different regions of Ukraine. The following four regions accumulated the largest quantities of obsolete pesticides: Sumy (2,426 t), Kyiv (1,933 t), Kirovograd (1,310 t) and Zaporizhia (1,214 t). Currently Ukraine has to manage an estimated stock of 20,000 to 25,000 metric tons of pesticides.

Measures of the National Plan for implementation of the Stockholm Convention on Persistent Organic Pollutants were carried out. In particular, the Cabinet of Ministers of Ukraine 25 July 2012 adopted a decree № 589-p «On Approval of the National Plan for implementation of the Stockholm Convention on Persistent Organic Pollutants».

As a part of Ukraine’s commitments under international agreements in the field of management of hazardous chemicals and wastes, MENR developed draft resolution of the Cabinet of Ministers of Ukraine «On Amending Resolution of the Cabinet of Ministers of Ukraine of March 29, 2000 № 574» (in connection with liquidation of the State Enterprise «National Center of hazardous waste»).

\(^\text{16}\) http://www.ukrstat.gov.ua/operativ/operativ2013/ns_rik/ns_e/utvut_e2012.html

\(^\text{17}\) Company "Argentum".
Ukrainian waste infrastructures are largely outdated (some landfills were built more than 40 years ago), saturated and unsafe. The legal framework is complex\(^{18}\) and does not stimulate the participation of the private sector. This is problematic, as EU experience shows that Public-Private Partnerships (PPP) are key to sustain efficient collection and processing mechanisms for wastes. Collection tariffs are too low to cover retreatment costs. This discourages private investors to enter the recycling market.

Prior to governmental change in February 2014, the government intended to implement a number of initiatives at the national level:

- National project “Clean City” (under the patronage of the President of Ukraine) – construction of waste processing plants in 10 regions of Ukraine on terms of public-private partnership;
- Implementation of a number of legislative initiatives in order to reform and harmonize domestic standards with the relevant EU directives.

Legislative initiatives Planned by former government were the following:

- Expansion of local communities’ rights regarding the ownership of waste, allowing for better monitoring of the performance of waste collection services;
- Obliging citizens to hold separate collection of waste and obliging legal entities providers of waste collection services – to ensure separate collection;
- Starting from January 1, 2013 – obliging all citizens to sign agreements with the companies for collection of domestic waste;
- Starting from January 1, 2016 – prohibition of unprocessed waste disposal;
- Implementation of “green tariff” for electricity produced from waste;
- Amending the Code of Ukraine on Administrative Offences, by establishing penalties for violations of waste management laws, such as lack of an agreement with collection companies on disposal of unprocessed waste\(^{19}\).

It remains to be seen if the new government will follow up on these initiatives.

### 3.1 Recycling

Recycling used to be relatively developed in the USSR with several Ukrainian state companies dealing with collection and transformation of old papers, glasses, metal and fluorescent bulbs\(^{20}\). Some recycling is still performed in Ukraine for paper, glass bottles, metals, and, since more recently, plastics.

\(^{18}\) The 2006-2011 State Programme for Solid Waste Management resulted in more than 20 legal documents adopted on waste governance. They are listed in Annex 2.


\(^{20}\) A factory was for instance built in the late 1980s to recycle in Ukraine all the "Tetrapak" packages collected from the entire Soviet Union.
This works both in the "B2B" mode and via purchase from citizens at recycling points or from scavengers collecting materials from wastes containers.

Over the last decade, a few private companies have started investing in the recycling of different categories of waste in Ukraine, but with modest successes due to low volumes collected. A few sorting factories were built, for example in Kyiv, Donetsk, Ivano-Frankovsk or Kramatorsk, but they remain underutilized. Waste collection tariffs are indeed too low to cover transportation costs incurred by sorting and recycling facilities. Moreover, awareness of the population remains very low and separate collection is hardly ever done – even for the most hazardous items. Andriy Slonski, an expert on waste recovery from “ABE-Lviv” company told ForUm that Ukrainian recycling enterprises process only three waste streams: PET bottles, glass and paper. In some cities the system of waste sorting has been working for some time already. However, even if sometimes people separate plastic bottles by tossing them in special containers, paper and glass containers are commonly stuffed with mixed waste. Collecting centers for waste paper and glass are also a problem. Homeless people simply take paper and glass from garbage containers and deliver the waste themselves.21

Recycling companies who had an economic model based mostly on the sales of raw materials have hardly survived the current economic crisis. Recycling enterprises have difficulties with finding suppliers of waste paper and glass bottles and had to import it from abroad. Besides, in Ukraine there is no company specialized in the processing of WEEE with the exception of the "Argentum" company based in Lviv (Western Ukraine)22. This company has managed to collect a few tons of used batteries over the last years with the help of a few NGOs. However, its activity will become really sustainable only when it will be able to count on predictable streams of WEEE and batteries for processing.

Waste processing enterprises say that the recycling system in Ukraine will work if the mentality and the level of awareness of people change23.

The level of recovery of waste of I-III Hazard Class is determined on the basis of statistical observation - form number 1 - Waste (annual) and is given in Table 1 below:

Table 1: Level of recovery of waste of I-III Hazard Class

<table>
<thead>
<tr>
<th>Wastes of I – III Hazard Class</th>
<th>Generated</th>
<th>Reused or recycled (processed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thousand tons</td>
<td>Thousand tons</td>
</tr>
<tr>
<td>2010</td>
<td>1659,8</td>
<td>642,4</td>
</tr>
<tr>
<td>2011</td>
<td>1434,5</td>
<td>597,5</td>
</tr>
<tr>
<td>2012</td>
<td>1368,1</td>
<td>541,4</td>
</tr>
</tbody>
</table>

21 http://en.for-ua.com/analytics/2013/07/18/154156.html
22 http://www.batteryrecycling.inf.ua/
At the same time, in 2012, according to the state statistics, in Ukraine was generated 1368.1 thousand tons of waste of I – III hazard class, which is 18% less than 2010 level, of which was reused or recycled (processed) -541.4 thousand tons, this is 16% less than level of recycling processing (processing) achieved in 2010. Most of these wastes were generated in the Autonomous Republic of Crimea, Mykolaivska, Sumska, Poltavska, Donetska, Kharkivska and Khersonska oblasts (see map below).
In total those regions generated 83% of the total amount of waste generated in Ukraine in 2012 (see figure below).
In this case, reusing or recycling (processing) of waste of I – III hazard class in absolute figures is the most advanced Donetska, Sumska, Poltavska, Mykolaivska, Khersonska and Dnipropetrovska oblasts, but in relative figures the leaders of utilization (relative to the amount of generated waste) are Ternopilska, Kievska, Zaporizhska, Donetska, Dnipropetrovska, Sumska and Poltavska oblasts.

**Figure 5**: Level of hazardous wastes utilization (%) relatively to level of their generation in regions of Ukraine in 2012


### 3.4 Tariffs

The costs for recycling waste are incorporated in tariffs for household waste. This is reported by the Association of Experts on Waste Management "Clean Country". Fees for services are currently regulated by the resolution of the Cabinet of Ministers of Ukraine "On approval of the formation of tariffs for household waste." According to the document, tariff is a fee for the collection, storage, transport, processing, recycling, disposal and dumping of 1 m³ or 1 ton of waste. Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine develop regulations on the formation of tariffs for communal services, while local authorities determine and set these rates. According to the Law on "On Housing and Communal Services" services for the waste collection are included to total utilities' cost. Now the average rate for waste collection in Ukraine is 35 UAH (2 EUR) per 1 m³, while a level from 50 to 100 UAH is economically justified. According to Ivan Oleksiyevets, a Clean Country project manager, the exact calculations were not done, but in order to make recycling attractive for waste processing companies, tariffs should be increased on average by 50%.

In this case, according to Forbes.ua, market size of waste processing industry in Ukraine will reach 1 billion UAH (55 million EUR) (9.04.2014). The planned and existing recycling plants require an oversight in order to ensure compliance with the recycling protocols and processes so that the government increases its chances of receiving foreseen

---

23 [http://news.finance.ua/ua/~2/0/all/2013/01/08/294370](http://news.finance.ua/ua/~2/0/all/2013/01/08/294370)
return on investment. But although formally laws transferred all the power to the National Commission for Regulation of Public Utilities, they did not give it any real mechanisms for enforcement and compliance. For example, thanks to the efforts of ministerial deputies, the rules regulating acquisition of a licence from National Commission for the disposal of garbage disappeared from the laws. In fact, it essentially eliminates any tools through which the National Commission could influence the situation. The people’s and businesses’ rights to sign the contracts not only for the waste collection, but also for sorting and recycling of garbage were also removed from the laws and regulations. Moreover, the fine for improper disposal was significantly reduced and is planned to be applied only from January 2018.

Within the national project "Clean City" it was calculated that in the case of successful project realization, the average tariff for waste collection in Ukraine will grow at least 1.5 times. At the same time, the level of waste processing will reach close to 70% (considering that according to the plans of national project Clean City, in 2016 the unprocessed debris burial will be completely prohibited). Forbes.ua assumes that tariffs for solid waste processing will increase in proportion to the waste collection tariffs, which means that companies involved in waste collection, will be giving to waste processing companies close to 50 % of their income.

4. Waste as a Business Opportunity

Waste management market in Ukraine is currently being developed and despite of some challenges there is some interest from both national and international investors. This interest is mostly triggered by “green” (feed in tariff - one of the planned initiatives of the government) for electricity produced from waste, which reduces the payback period 1.5-2 times.

According to the leading investment agency in Ukraine InvestUkraine, currently, the most challenging, yet the most promising areas for development and investment within the industry are:

- Establishment of accounting and control systems of MSW disposal;
- Improvement of management of MSW disposal system and MSW utilization;
- Implementation of educational projects and other measures for shaping public culture of separate waste collection;
- Introduction of separate solid waste collection;
- Construction of modern plants for processing MSW;
- Construction or modernization of plants for processing secondary raw materials and/or usage of secondary fuel (RDF);
- Construction of new landfills;

24 [http://news.finance.ua/ua/~1/2/0/all/2013/01/08/294370](http://news.finance.ua/ua/~1/2/0/all/2013/01/08/294370)
• Extension of existing landfills and reclamation of closed landfills\textsuperscript{26}.

Forbes magazine estimated that current waste management market size is 2.8 billion UAH where 1 billion could potentially go to waste processing industry.

\textbf{Figure 6:} Market volume of solid waste collection, mln. m\textsuperscript{3}\textsuperscript{29}

\hspace{1cm}

\textbf{Figure 7:} Market size of solid waste collection, mln. UAH\textsuperscript{29}

\hspace{1cm}

\textsuperscript{26} http://investukraine.com/sectors/solid-domestic-waste-management
Figure 8: Potential market size of solid waste collection, mln. UAH

Figure 9: Potential income of solid waste processing companies, mln. UAH
4.1 Public Private Partnership in Waste Management

The public private partnerships (PPP) concept has been widely adopted around the world in recent years. The current Ukrainian’s PPP legal framework consists of a number of special laws and regulations governing certain types of PPPs:

- **concessions** (The legal status of such concessions in Ukraine is regulated by the Act On Concessions which came into force on 16 July 1999. It provides for an extensive list of the spheres in which objects of state and municipal property may be constructed, renovated and/or operated under a concession. Concessionaires are selected by way of an open tender. Both national and foreign bidders can participate in the tender on an equal basis) (Law of Ukraine on Concessions from 16.07.1999 № 997-XIV);

- **joint activity agreement** (JAA) (Joint activity is carried out via a contractual joint venture organized by a combination of funds or assets of participants or without combination of contributions in order to achieve joint business purposes) (Law on Public Private Partnership from 21.09.2006 №2404-VI);

- **state property leases** (The lease of integral property complex or individual item of movable (immovable) property) (Law of Ukraine on Financial Leasing);

- **management** (Under the property management agreement a settler shall transfer to a manager the property into management for a specific period of time and the manager shall be obliged to manage this property for fees on its behalf to the interests of the management settler or a person (beneficiary) determined by him) (Law of Ukraine on Management of State Property from 21.09.2006 №185-V)).

The major weaknesses of public private partnership in Ukraine are as follows:

- poor cooperation between central and local authorities;
- unfinished administrative and territorial reform;
- the problem of the state vs. municipal ownership on land plots and other objects, and other land related problems;
- cumbersome and lengthy procedures for obtaining licenses and permits, including in construction;
- opaque procurement procedures;
- choice of law and dispute settlement;
- poor law enforcement;
- the lack of trust.

---

One of the first and the most successful initiatives in public private partnership in waste management area is Clean City project. The task of the Project “Clean City” – construction and ongoing management of a network of 10 industrial waste landfills and introducing of new waste processing technologies.

**Project objectives**

- Comprehensive solution of environment pollution due to solid urban waste and reduction of CO2 emission;
- Reduction of the urban waste stored on the landfill sites without previous processing;
- Increasing of recoverable resources derived from modern waste processing;
- Increasing the depth of waste processing to 50%;
- Using the residuals of waste processing as alternative energy source to generate electricity and heat.

First of all the project is aimed at successful implementation of pilot projects construction of 10 waste processing plants (see picture below) but also extension in all cities of Ukraine\(^2^8\).

**Figure 10: Planned regions for construction of 10 waste processing plants**

Source: www.investukraine.com

---

Clean City partnership model will look as follows:

**Figure 11: Clean City Partnership Model**

USAID (United States Agency for International Development) implements Public-Private Partnerships Development Program in Ukraine (P3DP), which designed to promote the use of public-private partnerships (PPPs) to expand public infrastructure and improve public services for the citizens of Ukraine. There is a knowledge sharing component of the project, which envisages building of 2 landfill biogas extraction plants – in Vinnytsya and Ivano-Frankivsk.

5. **Donors’ International Technical Aid in Ukraine**

Most Donors have been supporting the modernization of the waste management system of Ukraine. Several past and ongoing projects can be quoted at national and above all regional/municipal levels; one of the most relevant is certainly the ongoing EU-funded regional project on waste-governance. It has a strong focus on the Zakarpattya oblast (Western Ukraine) for which a regional waste management strategy has been developed and approved in late 2011.

---

30 [http://kdid.org/projects/field-support/p3dp](http://kdid.org/projects/field-support/p3dp)
31 Full presentation at: [http://wastegovernance.org/index_eng.html](http://wastegovernance.org/index_eng.html)
Ukraine has not yet joined the UNEP "Enlighten" initiative to phase-out inefficient lighting and to reprocess used bulbs. UNEP estimates that Ukraine could save up to $1.4 bln by switching to more efficient lighting.

The European Union has financed in the past a TACIS project for the preparation of a waste governance strategy for the Donetsk region (Eastern Ukraine). In addition, in 2012, the EU Delegation produced and aired on a national channel a TV spot encouraging people to sort and recycle their wastes: it was seen by an estimated 4.6 million persons.

In May 2013, the EU launched in Kyiv a large regional project on "Green Economy" (EaP Green) that will promote, inter alia, recycling in the Eastern neighbourhood.

In addition, MoR (management of risks) representatives participate regularly to TAIEX events organised by the European Commission on waste management and related issues, like the "Workshop on Waste Framework Directive's Implementation into National Legislation" held in Bratislava in December 2012 or the 4-day "Expert mission on Wastes Statistics Quality" organised in Kyiv in January 2013.

The EBRD and EIB offer attractive funding opportunities to finance large projects. The "E5P initiative" (Eastern Europe Energy Efficiency and Environment Partnership Fund), managed by the EBRD and majorly funded by the EU (40 M€ pledged over 2011-2013), is a source that could be considered for financing specific WEEE collection and recycling infrastructures in Ukraine.

Ukrainian media regularly denounce and deplore the absence of systematic state-organised wastes collection/recycling schemes in Ukraine.

5.1 Donor Organizations

USAID - U.S. Government agency
CIDA – Canadian International Development Agency
GEF – German Federal Department
SDC – Swiss Agency for Development and Cooperation
SIDA – Swedish International Development Cooperation Agency
European Union
World Bank
European Bank for Reconstruction and Development
United Nations
OSCE – Organization for Security and Co-operation in Europe

34 Data provided by the contractor, the M1 TV channel. The spot was shown 100 times in prime time.
35 This large programme will run till 2016. It is implemented by the EU, OECD, UNEP, UNECE and UNIDO.
37 http://www.kyivpost.com/content/business/battery-recycling-starts-as-environmental-fears-rise-319004.html
### 5.2 Projects

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Budget</th>
<th>Duration</th>
<th>Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-border improvement of solid municipal waste management in Republic of Moldova, Romania and Ukraine (SMWM)</td>
<td>80 332 Euro</td>
<td>12.05.2012 – 11.05.2014</td>
<td>Novoselytska local government Chernivetska Regional State Administration</td>
</tr>
<tr>
<td>Creating municipal system for handling waste household electronic and electrical equipment in Lviv with the experience of Lublin</td>
<td>979 788, 60 Euro</td>
<td>01.02.2013 – 31.01.2015</td>
<td>Department of City Planning Lviv city, NGO &quot;Environmental Initiatives&quot; Lviv Regional State Administration</td>
</tr>
<tr>
<td>Supporting the development of regional policy in Ukraine</td>
<td>-</td>
<td>2014-2017</td>
<td>Local Authorities</td>
</tr>
<tr>
<td>Decentralization Support to Ukraine - Planning for integrated management of municipal solid waste (IPTPV) in Tulchin area</td>
<td>-</td>
<td>2011-2012</td>
<td>Vinnytsia Regional State Administration</td>
</tr>
<tr>
<td>Sustainable Development Programme of Lugansk region</td>
<td>11.1 million dollars</td>
<td>2006-2012</td>
<td>Lugansk Regional State Administration</td>
</tr>
<tr>
<td>Improving the quality of municipal services</td>
<td>-</td>
<td>2010 - 2013</td>
<td>Luhansk Regional State Administration</td>
</tr>
<tr>
<td>The &quot;Local Economic Development of Ukraine&quot; - Creating an effective integrated system of solid waste management in the sub-region &quot;Western Donbass&quot;</td>
<td>-</td>
<td>2012-2014</td>
<td>Dnipropetrovsk Regional State Administration</td>
</tr>
</tbody>
</table>
6. Conclusions

Ukraine is a new large waste management market. Ukraine has an area of 576,664 km$^2$ with population of 46 million people and no waste processing available. 95% of waste is buried on landfills without any processing, which could be used as resource – recycled and/or recovered (turned into energy). Currently in the whole country there are two incineration plants, 15 waste separation plants and no waste processing plants. Ukrainian waste market is just forming and despite of some challenges (the lack of awareness, imperfection of legislation, the lack of trust between businesses and government for creation of PPP, economically unjustified tariffs for waste collection and waste processing) there is interest of both international and national investors. International experience shows that if the recycling process is regulated by tax and environmental legislation, investors receive significant revenue. In 2011, the UNDP estimated the value of raw material potential in case of introduction of separate waste collection and waste recycling would amount to UAH 1.3 bln (about EUR 120 mln.). Understanding importance of the issue of waste management in Ukraine as well as opportunities of waste management market development, international bank institutions and donor organizations are developing projects which aim to help Ukrainian cities to reduce GHG, increase waste recovery rates, eliminate environmental and health risks by reforming its solid waste management sector and show that waste can be a resource and business opportunity.