




NWP Tranche 1 Report

Grantee	UNDP in Ukraine		
Project Title	Plastic waste management at the local level		
Country	Ukraine		
Reporting Period (From-To)	November 2019 – 14 May 2021		
Anticipated Project Completion	14 May 2021		
Project Funding (USD) In the table below; please indicate the amount of funding from each partner. Include the NWP funding contributions as well as external funding partners and contributions by implementing partners, communities, and others.			
Partner Name	Role	Financial Contribution	In-Kind Contribution
GWC	Donor	US\$ 49,550	
UNDP	Implementing Agency		Green Recovery Communications Advisor UNDP Senior Management
Submission Date		14 May 2021	
I, <i>Oleksandr Sushchenko, Team Leader Energy & Environment</i> , acting as the Authorized Person of UNDP in Ukraine confirm and certify that the information contained in this Final Report is correct and accurate to the best of my knowledge.			
Prepared by (Name and Signature):			Date:
Anton Shevchenko, UNDP Project Manager 			14 th May 2021



Summary of results achieved

Awareness Raising:

1. **Up to 250,000 persons exposed to public awareness campaign** on negative impact of single use plastic bags with billboards and posters placed in high traffic/pedestrian routes in Kyiv (see annex 4)
2. **Video** on negative impact of single use plastic bags aired on online media as well as intercity trains of the capital and main cities in Ukraine
3. **1,000 copies of Plastic Waste Business Case publications** (900 Ukrainian & 100 English) have been disseminated through UNDP NGO networks
4. **101,211 men and women** were informed on the negative impact of plastics use for the environment and health, as well as on the business opportunities from plastic waste recycling through awareness raising activities of the project, including Environmental Changemakers campaign.
5. **296 people (85 men, 212 women)** received training and evidence for advocacy via project events.
6. **SenseMaker® Project (micronarratives study on waste management practices)** developed, study designed and conducted. **493 personal experiences collected** to date from all regions of Ukraine.

Capacity Building

1. **Fourteen people (2 men, 12 women)** received train-the-trainer style training to facilitate project dissemination and support data collection to learn behavioral patterns, attitudes and actions related to current waste management practices through direct personal experience expressed as stories.

Assessment Studies

2. **Scoping study on plastic waste management** situation in regions and initial mapping of available plastic recycling and reuse infrastructure and after-use initiatives conducted.
3. **Detailed Assessment of Plastic Waste** situation and economic opportunities in Home Owners Associations of Kyiv, Kharkiv, Luhansk, Donetsk, Zhytomyr, Zaporizhia, Kherson and Cherkasy regions. Total residents included was **1,993 persons**

Business Case

1. Developed **business case for developing and increasing plastic waste recycling activities**
2. Developed **roadmap for improving the management of plastic waste** in residential / local communities with a focus on local authorities activities



INTENDED OUTPUTS	ACTIVITIES COMPLETED	COMPLETION
Output 1: Report/publication with information on a business case for using plastics as secondary material in Ukraine	<ol style="list-style-type: none"> 1. Meetings with stakeholders, mapping of available plastic recycling/reuse infrastructure and after-use initiatives. 2. Scoping study on plastic waste management situation in regions (visualisation for official statistics, assessment of results against targets outlined in the National Waste Strategy, analytical brief on plastic waste infrastructure in regions). 3. Contracting of company to assess plastic waste management situation and economic opportunities in specific pilot communities developed. 4. Business case/model developed and presented to 55 relevant stakeholders/experts to discuss/validate findings/recommendations (See Annex 5 for copy of the presentation) 5. Report has been finalised and published with 1,000 copies of Plastic Waste Business Case publications (900 Ukrainian & 100 English) disseminated through UNDP NGO networks 	14 th May 2021
Output 2: 2,000 MSMEs, local communities, HOAs and individuals are educated on the business opportunities from plastic waste recycling and innovative way of shifting from disposing of waste to recovery and reproduction	<ol style="list-style-type: none"> 1. Developed thematic materials or engaged experts for educational events 2. Conducted five virtual events for 296 participants (85 men, 212 women) (Reported in Interim Report November 2020) 3. Established thematic expert cluster on sustainable plastic waste management 4. Maintained communication with local communities engaged into project activities 5. Established synergies with other relevant UNDP projects, including the regional socio-economic development programme, to ensure wide dissemination of results among HoAs and MSMEs 6. 1,000 copies of Plastic Waste Business Case publications (900 Ukrainian & 100 English) have been disseminated through UNDP NGO networks <p><i>Note: Output 2 does not include for Training on the plastic business case within the revised funding of the project</i></p>	May 2021



INTENDED OUTPUTS	ACTIVITIES COMPLETED	COMPLETION
<p>Output 3: 500,000 men and women are informed on the negative impact of plastics use for the environment/health, and on the business opportunities from plastic waste recycling</p>	<ol style="list-style-type: none"> 1. Communications strategy and action plan developed for 2020 2. Developed communication products and conducted activities as envisaged in the communications Action plan (101,211 men and women reached). 3. Conducted nationwide public survey on attitudes and perceptions in sustainable energy and environment (including waste) 4. Conducted micronarratives research on waste management and first results obtained. Initial public workbench developed and released online. 5. Evaluated communications results for the period (Reported in Interim Report November 2020) 6. UNDP's Communications Advisor detailed to the Ministry of Environmental Protection and Natural Resources facilitated large-scale social campaign increasing awareness about the negative impact of plastic bags. 7. Collaborated with EcoPlusPlus (part of 1+1 Media Group) who provided pro bono support for design and dissemination of campaign. To be additionally pushed out May onwards to major media providers, including the TV channels as ICTV, Inter, STB, Ukrayina, Priamyl etc. 8. Disseminated campaign to entire constituency of over 400 Ukrainian MPs. 	<p>May 2021</p>

Way Forward

The following approach will be considered by UNDP for moving forward with improving plastic waste management (in line with general solid waste management programming) within residential communities in Ukraine, based on the findings and learnings from this NWP funded project:

<i>Task</i>	<i>1 year</i>	<i>2 year</i>	<i>3 year</i>	<i>4 year</i>	<i>5 year</i>
1. Adoption of a city (settlement) program for solid waste management.					
2. Conducting an information campaign					
3. Search for potential consumers of sorted secondary raw materials					
4. After collection and sorting, secondary raw materials are subject to sale					
5. Gradual installation of special containers for separate waste collection					
6. Installation of special containers for collecting the organic fraction of household waste and plastic waste					
7. Local authorities can be recommended to set up an enterprise that would produce certain products from sorted secondary raw materials.					
8. Eliminate landfills in cities and suburbs					
9. After setting up a system for processing plastic waste, prohibit their removal to landfill					



Annex 1. Financial Report as of 13 May 2021

Below current Budget Balance as of 13 May 2021. The final budget utilization values will only become visible on Atlas accounting system once the entries are cleared by UNDP GSSU. The final budget balance will be submitted once all costs have been cleared.



UN Development Programme
Report ID: UNPMPBB

Project Budget Balance (Detail Level)

Page 1 of 2
Run Time: 13-05-2021 21:05:06

Business Unit:	UKR10	Project:	00125464
Budget Period:	2021	Budget Department/s:	

Project Summary :
Project Number : 00125464
Project Title : Plastic waste management at the local level
Start Date : 23-DEC-2019
End Date : 14-MAY-2021
Total Project Budget :
Total Project Prior Years Expenditures : 14,721
Full Asset Cost : 0
Project Manager : SHEVCHENKO Anton

Output Summary 1:
Output : 00119822
Output Description : Development of a business case for using plastics as secondary material in Ukraine and awareness raising campaign to educate on the negative impacts of the plastic use for the environment and on the business opportunities from plastic wa
Status : On Going
Implementing Partner : UNDP

Activity	Responsible Party	Budget Dept	Fund	Donor	Account	Approved Budget	Commitments	Expenses+Full Asset Cost	Outstanding NEX Advances	Budget Balance	Budget Util%	
ACTIVITY 1:Activity 1	UNDP	B0582	30000	12984-Glob	71300-Loca	7,000	0	0	0	7,000	0	
	UNDP	B0582	30000	12984-Glob	71400-Cont	4,200	0	0	0	4,200	0	
	UNDP	B0582	30000	12984-Glob	71600-Trav	3,000	0	0	0	3,000	0	
	UNDP	B0582	30000	12984-Glob	72100-Cont	19,161	5,456	7,616	0	6,089	68	
	UNDP	B0582	30000	12984-Glob	72400-Comm	0	639	0	0	-639	0	
	UNDP	B0582	30000	12984-Glob	74200-Audi	3,000	1,651	726	0	623	79	
	UNDP	B0582	30000	12984-Glob	74500-Misc	300	0	0	0	300	0	
	UNDP	B0582	30000	12984-Glob	75100-Faci	2,933	0	376	0	2,557	13	
	UNDP	B0582	30000	12984-Glob	75700-Trai	0	15,842	0	0	-15,842	0	
TOTAL ACTIVITY 1:Activity 1						39,594	23,588	8,718	0	7,288	82	
TOTAL FOR OUTPUT 00119822						39,594	23,588	8,718	0	7,288	82	
FUND TOTAL FOR OUTPUT 00119822						30000	39,594	23,588	8,718	0	7,288	82
TOTAL FOR PROJECT 00125464						39,594	23,588	8,718	0	7,288	82	
FUND TOTAL FOR PROJECT 00125464						30000	39,594	23,588	8,718	0	7,288	82



Annex 2. M&E Indicators

COMMON BASELINE					
			Baseline	May 2021	Explanation (If Needed)
Baseline Indicators: Community Assessment	1	Community population	TBD	432,263	25 communities, representatives of which expressed interest to participate in UNDP activities and attended project events: Lysyanska community Chyhyryn amalgamated community Chervonoslobidska amalgamated community Belozirska amalgamated community Sosnytska amalgamated community Lyubetska amalgamated community Pokrovska amalgamated community Pidgorodnenska amalgamated community Vugledarska amalgamated community Novytska amalgamated community Tlumatska amalgamated community Merefa city amalgamated community Stanislavska amalgamated community Dunayevetska amalgamated community Novoaydarskaya amalgamated community Kiliyska amalgamated community Serhiivska amalgamated community Novoslobidska community Konotop city amalgamated community Biletska amalgamated community Tulchyn city amalgamated community Torchynska amalgamated community Kivertsy city amalgamated community Chernihiv village amalgamated community Dovbyska amalgamated community
		% Female Adults (over 24)	TBD	N/A	
		% Male Adults (over 24)	TBD	N/A	
		% Female Youth (15-24)	TBD	N/A	
		% Male Youth (15-24)	TBD	N/A	
		% Female Children (5-15)	TBD	N/A	
		% Male Children (5-15)	TBD	N/A	
		% Female Children (0-5)	TBD	N/A	
		% Male Children (0-5)	TBD	N/A	
	2	Number of households in community, average household size	TBD	N/A	
	3	Proportion of population below international poverty line	N/A	N/A	
	4	Geographic size of area included under program activities	TBD	N/A	
	5	Rural, urban, or peri-urban?	TBD	Urban and rural	
	6	Percent of population employed outside the home	N/A	N/A	
		Males 16-24 (agricultural labor)	N/A	N/A	
		Males 16-24 (non-agricultural labor)	N/A	N/A	
		Males over 24 (agricultural labor)	N/A	N/A	
		Males over 24 (non-agricultural labor)	N/A	N/A	
		Females 16-24 (agricultural labor)	N/A	N/A	
		Females 16-24 (non-agricultural labor)	N/A	N/A	
		Females over 24 (agricultural labor)	N/A	N/A	
		Females over 24 (non-agricultural labor)	N/A	N/A	
	7	Number of schools within community	N/A	112	
	8	Total number of students in school	N/A	N/A	
		% Male Students	N/A	N/A	
		% Female Students	N/A	N/A	
	9	Proportion of youth (aged 15–24 years) not in education, employment or training	N/A	N/A	



COMMON CORE INDICATORS		Target	Nov 2020	Explanation
General	1	Number households benefitting directly from project	0	
	2	Number of schools benefitting directly from project	0	overlaps with common core Training Indicator #5
		Number of community members benefitting directly from project	0	overlaps with common core Training Indicator #5
	3	Men	n/a	
		Women	n/a	
		Boys	n/a	
		Girls	n/a	
	4	Number of people benefitting indirectly from project (must explain how indirect benefit is achieved through project activities)	500,000	351,211
		Men	250,000	175,605
		Women	250,000	175,606
Training		Boys	n/a	
		Girls	n/a	
		Number of people who received training through project activities	1,990	296
	5	Men	995	85
		Women	995	211
		Boys	0	
		Girls	0	
		Number of people who received "Train the Trainer" style trainings to facilitate project dissemination	10	14
	6	Men	5	2
		Women	5	12
Economy		Boys	0	n/a
		Girls	0	n/a
		Number of people employed through project activities	1	3
		Short-Term (work that is completed within project duration)	1	3
		Males between 16-24	0	
		Males over 24	0	1
		Females between 16-24	0	
	7	Females over 24	1	2
		Long-Term (work that will extend beyond project duration)	N/A	
		Males between 16-24	N/A	
		Males over 24	N/A	
		Females between 16-24	N/A	
		Females over 24	N/A	
		Number of people receiving skills development training that promotes current or future employment opportunities	N/A	
	8	Males between 16-24	N/A	
Environment		Males over 24	N/A	
		Females between 16-24	N/A	
		Females over 24	N/A	
	9	Number of women placed in leadership roles through project	N/A	1
	10	Increase in renewable energy as a result of project activities	N/A	
	11	Number of hectares under productive and sustainable agriculture as a result of project activities	N/A	
	12	Reduction in amount of highly toxic pesticides (e.g organophosphates) applied to crops as a result of project activities (by volume)	N/A	
Project Sustainability	13	Hectares under improved water resource, watershed, or forestry management as a result of project activities	N/A	
	14	Increase in water-use efficiency as a result of project activities	N/A	
	15	Total amount of New World funding used for development, transfer, dissemination or diffusion of environmentally sound technologies	N/A	
		Number of partnerships established or strengthened through project activities	10	675
		Community organizations (WMCs, Cooperatives, etc.)	10	25
		Municipal/Regional Government	N/A	
	16	National Government	N/A	400
		NGOs	N/A	250
	17	Number of partners with long-term investment (labor and/or resources) in project	N/A	
	18	Additional amount of (non-New World) funding provided by external partners	20,000 USD	
	19	Number of community members capable of continuing to implement project objectives independently upon project conclusion	TBD	



PILLAR-SPECIFIC INDICATORS					
		Indicator	Target	May-20	Explanation
Water and Sanitation	1	Number of people using safely managed drinking water services	N/A	N/A	
	2	Amount of water available per person per day	N/A	N/A	
	3	Hours per day that safely managed drinking water is available	N/A	N/A	
	4	Number of people using safely managed sanitation services, including a hand washing facility with soap and water	N/A	N/A	
	5	Number of schools with access to basic drinking water, single-sex sanitation facilities, and basic handwashing facilities	N/A	N/A	
	6	Number of people trained in WASH	N/A	N/A	
		System/equipment operation and maintenance	N/A	N/A	
		Safe water treatment and handling	N/A	N/A	
		Hygiene training	N/A	N/A	
	7	Average distance to nearest functioning, improved latrine	N/A	N/A	
Women & Youth Empowerment	1	Number of children and young people enrolled in free/public education:	N/A	N/A	
		Primary school	N/A	N/A	
		Secondary school	N/A	N/A	
	2	Ratio of male to female students in:	N/A	N/A	
		Primary school	N/A	N/A	
		Secondary school	N/A	N/A	
	3	Number of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	N/A	N/A	
	4	Number of youth and adults with information and communications technology (ICT) skills, by type of skill	N/A	N/A	
	5	Number of students trained in global citizenship education, including sustainable development, gender equality, and human rights	N/A	N/A	
	6	Number of women in leadership or managerial positions	N/A	N/A	
Climate Resilience	7	Number of women involved in entrepreneurial initiatives and/or trained in basic financial literacy skills, by age	N/A	N/A	
	8	Share of women among owners or rights-bearers of agricultural land, by type of tenure	N/A	N/A	
	1	Reduction in energy use (number of KWHs) as a result of project activities	N/A	N/A	
	2	Number of people involved with informal recycling efforts, by age and sex	TBD	TBD	
	3	Number of formal recycling programs in place (include name/type of responsible organization)	N/A	N/A	
	4	Proportion of community refuse regularly collected by informal/formal entities	N/A	N/A	
	5	Total metric tons of refuse collected as part of organized cleanup efforts associated with project activities (e.g. International Coastal Cleanups)	N/A	N/A	
	6	Total metric tons of refuse recycled (include proportion of total waste it represents)	N/A	N/A	
	7	Number of people trained in sustainable consumption, waste management, climate change mitigation/adaptation, and impact reduction, by age and sex (indicate which topics included in training)	2,000	296	Reduced funding / scope means this target not completed
	8	Hectares of marine and coastal ecosystems under improved management as a result of project activities	N/A	N/A	
	9	Number of people trained in sustainable tourism strategies, by age and sex	N/A	N/A	



Annex 3. Event Report for the period November 2020 – May 2021

No.	Date	Location	Title	Participants
1	February 2021 - ongoing	Kyiv	“Stop using single use plastic bags” campaign in public spaces of Kyiv	Up to 250,000 inhabitants exposed
2	February 2021 - ongoing	Nationally online media and TV	“Stop using single use plastic bags” video campaign on media, intercity trains and TV upcoming	Not recorded
3	April 2021	Government	“Stop using single use plastic bags” campaign disseminated to Government Ministries and MPs	400 Ukrainian MPs exposed to the campaign
4	12 th May 2021	Virtual via Zoom	Presentation on Plastic Waste Assessment and Business Case to main Ukrainian stakeholders, Ministries and private sector	55 stakeholders, local authorities, NGOs and experts
5	May 2021 - ongoing	NGO Network	1,000 copies of Plastic Waste Business Case publications (900 Ukrainian & 100 English) disseminated through UNDP NGO networks	Up to 150 organizations



Annex 4.

Stop Using Single Use Plastic Campaign

UNDP worked with the Ministry of Environmental Protection and Natural Resources on a large-scale social campaign #ПакетНеПотрібен aimed at increasing awareness about the negative impact of plastic. This campaign, launched on 07 April 2021 and facilitated by UNDP's Communications Advisor detailed to the Ministry, became the first of its kind to be launched by the Ministry since its inception in June 2020.

Design of all products was provided by EcoPlusPlus (part of 1+1 Media Group) pro bono based on the provisions of the Memorandum signed. We managed to get the status of social advertising, and with a minimum investment (the only direct expense was printing costs, no fees for ads placement), to launch a large-scale campaign reaching out to the thousands of Ukrainians with our key messages.

This campaign will further be pushed to major media providers, including the TV channels as ICTV, Inter, STB, *Ukrayina*, *Priamyi* etc., for airing the video in the coming months of 2021. The proposal is currently being considered by the media companies.

The project also supported awareness-raising in the parliament during the hearings and voting on a bill restricting the circulation of single-use plastic bags. Awareness-raising images were created, printed and disseminated for that purpose making us safely assume that the entire constituency of over 400 Ukrainian MPs should have been made aware of the issue.

Number of posters / images

Under the campaign we have released an awareness-raising video produced by 1+1 media group and a series of printed materials. The video has been posted on the 1+1 and UNDP social media pages as well as aired in Intercity trains connecting Kyiv with the cities of Kharkiv, Odessa, Lviv, Dnipro, Zaporizhia, and Kostiantynivka so basically with all of Ukraine's most densely populated areas and major population centers.

The printed materials, namely 10 billboards, 20 lightposters and 10 metrolight boxes were placed around the city of Kyiv.

Number of locations

Ten billboards have been placed in the six of Kyiv's districts (Darnytsia, Dnieper, Obolon, Podil, Sviatoshyn, Solomianka) at busy roads/road intersections. 20 lightposters have been installed in the areas of an intense pedestrian traffic where larger numbers of passers-by could see those, namely in the five Kyiv's districts situated mostly in the downtown or around the city centre

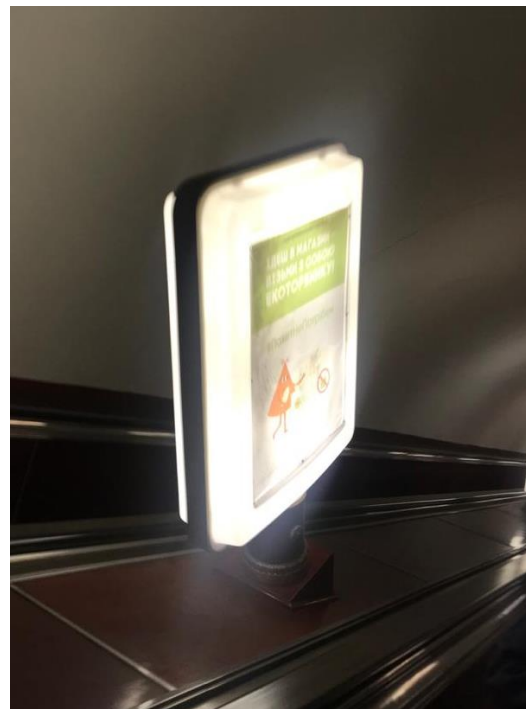
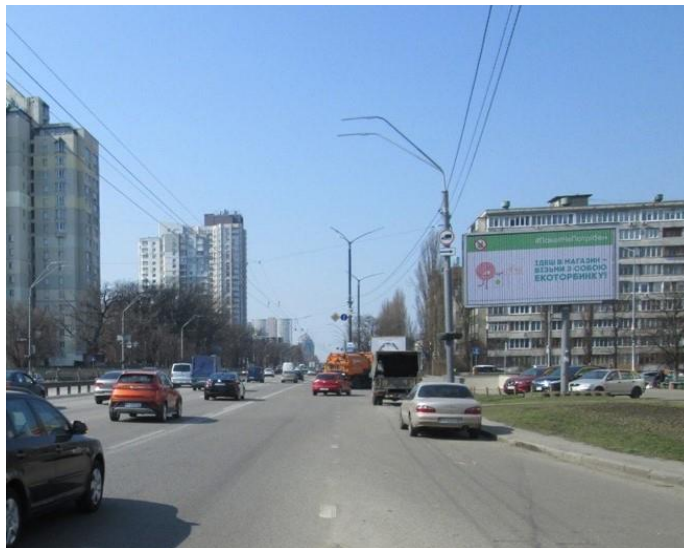


(Holosiiv, Dnieper district's embankment, Pechersk, Podil, Shevchenko). Ten metrolight boxes were placed in Kyiv's busiest subway stations, including those of Khreschatyk and Pecherska.

Projection on number of people who saw the posters / video

Within the project there was neither specific budget allocated nor time for monitoring and we would have been constrained by COVID-19 restrictions for monitoring, e.g. on public transport. However, based on traffic data projections for Kyiv we estimate that over 250 thousand people saw the images on public transport.

Photos from Single Use Plastic Bag campaign billboards, street posters and lightboxes in stations.





Annex 5.

12th May 2021 Presentation and Participants List for

“Plastic waste management at the local level”



UNDP Project «[Plastic waste management at the local level](#)», Final Conference, 12 May 2021

Participant List

- 1 Anton Shevchenko
- 2 Ievgeniia Rudnytska
- 3 Martin Bjerregaard
- 4 Natalia Kozenko
- 5 Viacheslav Potapenko
- 6 Ludmyla Davydova
- 7 Mykola Zhukov
- 8 Iryna Halaiko
- 9 Andrii Besedin (Interpreter)
- 10 Lesia Popeliukh
- 11 Viktoriya Yershova
- 12 Oksana Matiushina
- 13 Anastasiia Lanina



- 14 Chuck Chaitovitz
- 15 Dmytro Iakymchuk
- 16 Hennadii Ustimov
- 17 Ihor Stefaniv
- 18 Iryna Boiko
- 19 Iryna Kyrychenko
- 20 Liubov Pavlovytch
- 21 Mykola Smirnov
- 22 Oleksii Pyrikov
- 23 Olena Kharchenko
- 24 Olga Kashevska
- 25 Sergiy Ivanov
- 26 Tamara Kharchenko
- 27 Tetiana Hvozdz
- 28 Veslana Ianovska
- 29 Alina Podstavkina
- 30 Galyna Serova
- 31 Yevgenii Shevchenko
- 32 Kristina Mandach
- 33 Larysa Kapchinska
- 34 Lilia
- 35 Maksym Zabara
- 36 Oksana Kraplych
- 37 Oleg Kozachenko
- 38 Oleksandr Dereka
- 39 Oleksandr Ivanov



- 40 Tetiana Ozymai
- 41 774552 (No Name)
- 42 Aleksandra Buglak NGORC
- 43 Anastasiia (Interpreter)
- 44 Anna Anisimova
- 45 Tetiana Maiak
- 46 Oleksandr Melanchenko
- 47 Maryna Nagorna
- 48 Oksana Nitchenko
- 49 Vitalii Seredenko
- 50 Yaskivska village council



UNDP Project «Plastic waste management at the local level»

Review of legislation in the field of plastic waste management in Ukraine and EU

Ludmyla Davydova, Project manager of Ukraine de Lage Landen Consulting Group LLC

Regulations and laws at the local level in Ukraine

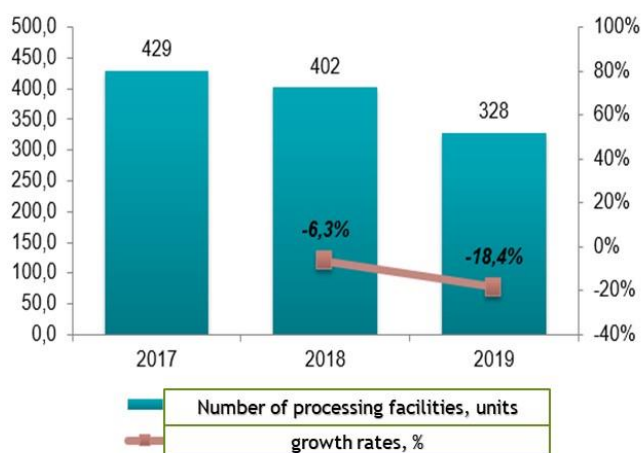
- ▶ Waste management strategy until 2030
- ▶ Association Agreement between Ukraine and the EU
- ▶ Law of Ukraine "On Waste"
- ▶ Law "On improvement of settlements"
- ▶ Law "On housing and communal services"
- ▶ Resolution of the Cabinet of Ministers of Ukraine of December 10, 2008 № 1070 "On approval of the Rules for the provision of services for the removal of household waste"
- ▶ Resolution of the Cabinet of Ministers of Ukraine of 04.03.2004 №265 "On approval of the Program of solid waste management"
- ▶ Resolution of the Cabinet of Ministers of Ukraine of December 27, 2018 №1145 "On approval of the Procedure for checking the quality of certain utilities and apartment building management services to the parameters provided by the contract for the provision of relevant services"
- ▶ Order of the Ministry of Housing and Communal Services of Ukraine as amended by the Order of the Ministry of Development of Communities and Territories dated 01.12.2020 №295 "On approval of the Rules for determining the rules for providing services for the removal of household waste"

Solid waste management in the EU and Ukraine

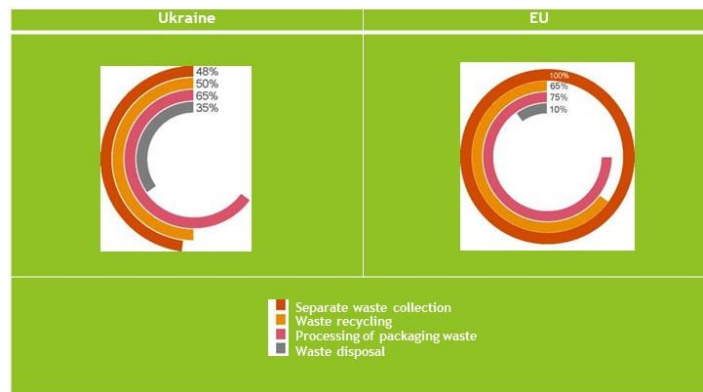
EU	Ukraine
23% municipal waste is buried in landfills	94% municipal waste is buried in landfills
48% municipal waste is recycled (including composting)	3% municipal waste is recycled (including composting)
89% countries have a system of extended producer responsibility (EPR), which encourages separate waste collection	5% the share of settlements in which separate collection of municipal waste has been introduced
€5000 maximum fine for systemic violations of separate waste collection by households in Germany	€45 maximum fine for violations in the field of waste disposal for households

Region	Program
Vinnitsia	Regional environmental budget program of Vinnitsia region for 2019-2023
Volyn	Regional environmental program "Ecology 2016-2020"
Dnipro	Dnipro regional strategy for solid waste management
Zhytomyr	Environmental protection program in Zhytomyr region for 2018-2022
Zakarpattia	The program of solid waste management in Zakarpattia region for 2016-2020
Zaporizhia	Comprehensive program of environmental protection, rational use of natural resources and environmental safety in Zaporizhia region for 2013-2020.
Ivano-Frankivsk	Regional environmental protection program until 2020
Kyiv	Solid Waste Management Program in Kyiv Oblast for 2017-2020
Kirovohrad	Comprehensive environmental protection program in Kirovohrad region for 2016-2020
Lviv	Waste management strategy in Lviv region until 2030
Mykolayiv	Program for Solid Waste Management in the Mykolaiv region until 2020.
Odessa	Program of solid waste management in Odessa region for 2013-2017
Poltava	Solid Waste Management Program for 2012-2018
Rivne	Regional environmental protection program for 2017-2020
Sumy	Comprehensive waste management program in Sumy region for 2016-2020
Ternopil	Program for Environmental Protection in Ternopil region in 2014-2020
Kharkiv	Regional solid waste management program in Kharkiv region for 2015-2020
Kherson	Strategy for solid waste management in Kherson region for 2018-2020
Khmelnysky	Waste management program in Khmelnytsky region for 2018-2022
Cherkasy	Regional program of environmental protection for 2016-2020
Chernivtsi	Comprehensive program for environmental protection "Ecology" in Chernivtsi region for 2016-2018
Chernihiv	Environmental protection program of Chernihiv region for 2014-2020

The dynamics in the number of facilities engaged in waste processing in Ukraine (2017-2019)



Targets for household waste and plastic waste in particular in Ukraine and the EU until 2030



UNDP Project «Plastic waste management at the local level»

Plastic Waste Management Practices in Local Communities/Homeowners Association (HoAs). Value chain analysis with presentation of costs and prices relating to the management, recycling and disposal of plastics

Mykola Zhukov, Project expert on household waste management

Regions of Ukraine in which the survey was conducted.

Questionnaires local community- ●

Questionnaires HoAs - ○



QUESTIONNAIRE on the organization of solid waste management in particular plastic in the local community

- ▶ 1.Are there any container sites in your area for collecting solid waste from residents?
- ▶ 2.Are there containers for separate collection of resource-intensive components (glass, plastic, metal, waste paper, food waste)?
- ▶ 3.Have studies been conducted on the composition of waste for the content of resource-intensive components?
- ▶ 4.Have you conducted research in your local community on the number of solid waste generated and its morphological composition?
- ▶ 5.Are there premises on the territory of your territorial community that are used as sites for collecting solid waste from residents?
- ▶ 6.Do businesses located on the territory of or in the premises owned by the territorial community use waste container yards?
- ▶ 7.Do you have information on the amount and composition of waste generated by business entities in the local community?
- ▶ 8.Do you know how the fee for the removal of solid waste in the local community is calculated?
 - Have these the norms been approved by the self-governing bodies of the territorial community?
 - Have these calculations been made by the organization that carries out the removal of waste?

- ▶ 9. Is the calculation of the fee for solid waste removal based on the norms of formation or on the capacity of garbage containers and the frequency of removal?
- ▶ 10. Does the local community spend money on the elimination of unauthorized landfills, cleaning the area littered with plastic waste?
- ▶ 11. Is the local community involved in the establishment and operation of sorting or separate waste collection points?
- ▶ 12. Is it possible in your local community to equip sites for sorting solid waste and organizing separate collection of solid waste components?
- ▶ 13. Do you have information on a business entity that could provide its own containers for separate collection of secondary raw materials and pay the cost of sorted raw materials to local communities?
- ▶ 14. Is plastic disposed of in your local community?
- ▶ 15. Is there plastic recycling in your local community?
- ▶ 16. Are you satisfied with the existing recycling system in your community?
- ▶ 17. How much plastic waste did your local community collect in 2020 (kg)
- ▶ 18. How much plastic waste did your local community recycle in 2020 (kg)

QUESTIONNAIRE on the organization of solid waste management in particular plastic in HoAs

- ▶ 1. Are there any container sites for collecting solid waste from residents on the territory of your HoAs?
- ▶ 2. Are there containers for separate collection of resource-intensive components (glass, plastic, metal, waste paper, food waste)?
- ▶ 3. Have studies been conducted on the composition of waste for the content of resource-intensive components?
- ▶ 4. Have your HoAs conducted research on the number of solid waste generated and its morphological composition?
- ▶ 5. Are there premises on the territory of your HoAs that are used as sites for collecting solid waste from residents?
- ▶ 6. Do businesses located on the territory of or in the premises owned by HoAs use waste container yards?
- ▶ - Do you have information on the amount and composition of waste generated by business entities in HoAs?
- ▶ 7. Do you know how the fee for the removal of solid waste from the territory of HoAs is calculated?
- ▶ - Have these norms been approved by the self-governing bodies of the territorial community?
- ▶ - Have these calculations been made by the organization that carries out the removal of waste?
- ▶ - What are the HoAs calculations
- ▶ 8. Is the calculation of the fee for solid waste removal based on the norms of formation or on the capacity of garbage containers and the frequency of removal?
- ▶ 9. Is it possible for your HoAs to equip a site(s) for sorting solid waste and organizing separate collection of solid waste components?
- ▶ 10. Do you have information about a business entity that could provide its own containers for separate collection of secondary raw materials and pay HoAs the cost of sorted raw materials?

HoAs questionnaire analysis:

- ▶ 1 All HoAs respondents have sites for collecting solid waste in containers
- ▶ 2. 67% of HoAs have containers for separate collection of resource-intensive components.
- ▶ 3. In the vast majority of HoAs (89%), research on the resource composition of solid waste was not conducted.
- ▶ 4. Research on the number of solid waste generated by residents and their morphological composition in HoAs was conducted in only 44% of respondents.
- ▶ 5. There is a use of areas, premises, which are on the balance of HoAs, for business activities (44%). Waste generated as a result of their economic activities is placed in HoAs containers.
- ▶ 6. Only 11% of HoAs managers have an idea of the quantitative and qualitative composition of waste generated in the business entity located on the territory of HoAs
- ▶ 7. In general, HoAs managers are familiar with the method of calculating the fee for the removal of solid waste from the territory of HoAs (100%).

HoAs questionnaire analysis :

- ▶ 8. 75% of HoAs are paid for solid waste removal services according to the norms approved by local authorities (Education Standards).
- ▶ 9. 100% of HoAs respondents make payments for the removal of solid waste according to the invoices issued by the provider of removal services - the frequency of removal and capacity of containers installed on container sites. The level of filling of containers is not controlled by HoAs.
- ▶ 10. No HoAs conducts its own calculations for the formation of solid waste.
- ▶ 12. The vast majority of HoAs (89%) has the opportunity to arrange a special site for the organization of separate collection of solid waste.
- ▶ 13. 56% of HoAs managers do not have information on existing business entities that could cooperate with HoAs in terms of separate waste collection and resource of evaluation components.

Formation of solid waste in HoAs

Number of inhabitants in HoAs	200	120	420	70	187	109	400	267	220
Annual estimated amount of solid waste generated	60000	36000	126000	21000	56100	32700	120000	80100	66000
including plastic (5% of the total amount of solid waste)	3000	1800	6300	1050	2850	1635	6000	4005	3300
kg/day	8,2	4,9	17,3	2,9	7,8	4,5	16,4	11,0	9,0
The volume of metal, the resulting cube / day	0,16	0,10	0,35	0,06	0,16	0,1	0,3	0,2	0,18
Daily need for containers, V = 1 cubic meter. m	1	1	1	1	1	1	1	1	1
Disposed, kg (extraction ratio = 0.5)	1500	900	3150	525	1425	817,5	3000	2000	1650
Purchase cost of sorted plastic at the purchase price of 5.5 UAH/kg	8250	4950	17325	2887,5	7837,5	4496,3	16500	11000	9075

Based on the averaged data on the morphological composition of solid waste for apartment buildings, based on the experience of waste management, the following data on the content of resource-intensive components in HoAs, numbering 200 people:

- ▶ The amount of solid waste generated in HoAs - $300 \text{ kg} / \text{year} * 200 \text{ people} = 60,000 \text{ kg} / \text{year}$, or $60,000 : 365 = 164.4 \text{ kg} / \text{day}$.
- ▶ The share of plastic in the composition of solid waste (total) is 5%, or $3000 \text{ kg} / \text{year}$;
- ▶ The extraction rate of resource-intensive types of plastic (recyclable) is 50%.
- ▶ Thus, the amount of sorted plastic per year can be $3000 * 0.5 = 1500 \text{ kg}$. At the current purchase price of pure plastic 5.5 UAH / kg, the income from its sale is $8250 \text{ UAH} / \text{year}$.
- ▶ Similarly for glass, the content of which by weight is 2.5% ($60000 * 0.025 = 1500 \text{ kg}$), the purchase price - 4.0 UAH. Kg - $6000 \text{ UAH} / \text{year}$;
- ▶ The metal content in the total mass of solid waste is about 4%. The cost of admission is UAH 5.0 / kg. The total income from sorting in annual terms is $60,000 * 0.04 * 5.0 = 12,000 \text{ UAH} / \text{year}$;
- ▶ The content of waste paper in the mass of solid waste is 20%. The coefficient of removal of quality waste paper from the total mass of contaminated solid waste is 50% (0.5).
- ▶ The annual income from waste paper sorting (at the purchase price of UAH 3.0 / kg) can be: $60,000 * 0.2 * 0.5 * 3.0 = \text{UAH } 18,000 / \text{year}$.

Thus, the organization of separate collection of resource-intensive components in the HoAs numbering 200 people can give an income of 44 250 UAH.

- ▶ The consolidated cost of an anti-vandal (closed) site for separate collection of resource-intensive waste is about UAH **250-300 thousand**. The construction of such a site in HoAs will pay off in 4 years.
- ▶ The presence of business entities on the territory or in the facilities of HoAs, which generate mainly waste plastic (packaging), waste paper, etc., and the cooperation of the management of HoAs with SPC may allow on a partnership basis to build sites for separate collection of solid waste components. We consider it necessary to involve the relevant local community services.
- ▶ The introduction of a separate waste collection system will reduce tariffs for waste disposal.

Analysis of local community surveys:

- ▶ 1. **79%** of the surveyed local communities have container sites for collecting solid waste from residents. Basically, it is a multi-storey building. The private sector does not have container sites.
- ▶ 2. Out of 100% of answers, **47%** of local communities, where special containers for collection of resource-intensive components of waste are installed, mainly - plastic (PET), answered in the affirmative.
- ▶ 3. Only **5%** of local communities conducted research on the morphological composition of waste for the content of resource-intensive components
- ▶ 4. Only **11%** of local communities conducted research to determine the amount of waste generated and their morphological composition
- ▶ 5. **16%** of local communities on the territory have special premises where solid waste from residents is placed.
- ▶ 6. In **79%** of local communities where there are container sites, business entities use them. Entrepreneurs set up their own containers in **2** local communities
- ▶ 7. **21%** of local communities have information on the amount and composition of waste that is placed on the container sites of local communities by business entities.
- ▶ 8. **84%** of local communities have information on how the fee for the removal and placement of solid waste is calculated

Analysis of local community surveys :

- ▶ 9. **100%** of local communities pay for the removal and placement of solid waste in accordance with regulations
- ▶ 10. The organization that carries out the removal and disposal of solid waste pays the residents according to the approved standards (cubic meters per 1 inhabitant, container capacity and frequency of removal, as well as the declared amount of solid waste to be removed from the private (individual) sector.
- ▶ 11. The vast majority of local communities spend money on the elimination of illegal landfills (**89%**)
- ▶ 12. At the same time, only **53%** of the surveyed local communities somehow participate in the establishment of points for sorting and separate collection of solid waste components.
- ▶ 13. **74%** of territorial communities have the opportunity to arrange on their territory specialized sites for separate collection of resource-intensive components of solid waste.
- ▶ 14. **26%** of surveyed local communities have information about the presence on their territory of private company, which provides services in terms of sorting, separate collection of solid waste components.
- ▶ 15. Only **5%** (one local community) are engaged in plastic recycling, while the first stage is implemented - cleaning.

To create an effective system of separate collection of resource-intensive components of solid waste in HoAs we propose the following measures:

- ▶ Conduct a survey of HoAs members on their readiness to introduce separate collection of resource-intensive waste.
- ▶ Negotiate with the city authorities on the readiness to include the creation of infrastructure for separate collection and sorting of waste on the territory of HoAs, as well as co-financing the construction of the appropriate sorting site.
- ▶ Create a separate site for containers for separate collection of resource-intensive components of solid waste;
- ▶ Involve private company, which is engaged in the collection of secondary raw materials, to participate in the project to create a site, or involve an organization that exports solid waste, provided that they install containers for separate collection of resource-intensive components.
- ▶ Purchase containers for separate collection of valuable waste

To create an effective system of separate collection of resource-intensive components of solid waste in HoAs we propose the following measures:

- ▶ Constantly inform the residents of HoAs about the rules of separate (separate), collection of solid waste components - glass, plastic, paper, metal.
- ▶ Introduce supervision and maintenance of the separate waste collection site to the janitor or other HoAs technician.
- ▶ Adjust the contract for the removal of solid waste from HoAs in accordance with the requirements of Article 25 of the Law of Ukraine "On Housing and Communal Services" in order to reduce the fee for waste removal.
- ▶ Conduct an information and education campaign on the importance of waste sorting. Disseminate positive examples of separate waste sorting through publications and mass media.
- ▶ The total cost of creating the infrastructure in HoAs for separate collection of resource-intensive components is estimated at UAH 250.0-300.0 thousand. The payback period of the event is 4-5 years.



UNDP Project «Plastic waste management at the local level»

*Findings and conclusions on business case for using
plastics as secondary material in Ukraine
Recommendations for selected HoAs / local
communities on possible ways to improve plastic
waste management practices*

Vyacheslav Potapenko, Project manager, Assessment analyst

The main steps to optimize the management of plastic waste based on best foreign practices:

1. Formation of public policy

- ▶ 1. The problem of plastic waste requires the formation of state policy by the Government and the Verkhovna Rada in partnership with stakeholders.

In particular, it is necessary to accelerate the development and adoption of regulations to implement the principle of extended producer responsibility, creating conditions for the development of a cyclical economy and encourage investment and innovation in the development of new technologies for plastic processing and new quality plastic packaging.

2. Legislative initiatives

- ▶ The draft law "On Restricting the Circulation of Plastic Bags on the Territory of Ukraine" was prepared in December 2020 and envisages a ban on distribution in retail, catering and service facilities:
- ▶ 1) ultra-thin plastic bags (with walls less than 15 micrometers thick);
- ▶ 2) thin plastic bags (with walls 15 to 50 micrometers thick);
- ▶ 3) oxo-decomposable plastic bags (material for the manufacture of which consists of polyethylene and oxo-decomposable impurities)

3. Local authorities

- ▶ On the basis of regional plans, the city authorities and united territorial communities will start creating important infrastructure facilities for garbage collection, transportation and processing, using, among other things, the tools of inter-municipal cooperation.
- ▶ Financing of infrastructure facilities for the collection, transportation and processing of plastic waste is possible, primarily through municipal environmental tax funds, government funding or international needs additional processing at the level of government programs and interstate agreements.

Business and consumers

- ▶ 4. Prohibit the free distribution of plastic bags in supermarkets and impose appropriate sanctions in case of violation. Explain and advertise, distribute alternative types of reusable bags for use in supermarkets
- ▶ 5. Educate consumers, starting from the school desk, on the negative impact of waste and plastics in particular on the environment and encourage the creation of grassroots initiatives and innovations to solve the problem.
- ▶ 6. Citizens should not wait for someone to solve this problem for them, but start from their own home, simply reducing the use of plastic in everyday life. Start collecting and sorting waste, mobilize and actively participate in similar public projects and initiatives.

Plastic as a resource

Under construction: roads, windows, pipes, insulation, corrugated board, floor. In 2015, the Indian government made the use of plastic waste mandatory in the construction of most highways

In the package: beverage bottles, garbage bags, buckets and barrels, packing tapes, pallets, bubble wrap. By 2025, the French company Bouiap has committed itself to producing only recyclable bottles

In the automotive industry: bumpers, handles in vehicles, some parts. In 2018, Ford announced that each of its vehicles contained recycled plastic from 250 bottles, which means reusing 1.2 billion bottles a year

In the agricultural sector: greenhouses, rain barrels, composters, hoses, irrigation pipes, pallets, flowerpots, foil and film for gardening

In Ukraine there are:

18

polymer processing plants

17

waste paper processing enterprises

19

enterprises for processing PET raw materials

16

slag processing enterprises

Capacity of PET bottle processing enterprises loaded by 65%

160 thousand tons of polymers and 50 thousand tons of PET bottles

Annually the processing enterprises of Ukraine receive:

Recommendations for selected HoAs / local communities on possible ways to improve plastic waste management practices

Task	1 year	2 year	3 year	4 year	5 year
1. Adoption of a city (settlement) program for solid waste management.					
2. Conducting an information campaign					
3. Search for potential consumers of sorted secondary raw materials					
4. After collection and sorting, secondary raw materials are subject to sale					
5. Gradual installation of special containers for separate waste collection					
6. Installation of special containers for collecting the organic fraction of household waste and plastic waste					
7. Local authorities can be recommended to set up an enterprise that would produce certain products from sorted secondary raw materials.					
8. Eliminate landfills in cities and suburbs					
9. After setting up a system for processing plastic waste, prohibit their removal to landfill					

Recommendations for integrated tasks for local communities and HoAs

- ▶ Based on the study, we can identify the main areas of complex tasks for local communities and HoAs, which, in our opinion, will be most important for the successful implementation of plastic waste management reform in Ukraine.
- ▶ Introduction of mandatory separate collection of household waste
- ▶ Implementation of the extended producer responsibility system (EPR)
- ▶ Raising public awareness, educational activities
- ▶ Increasing control and responsibility in the field of waste management
- ▶ Waste prevention and reuse
- ▶ Development and renewal of waste management infrastructure
- ▶ Ensuring transparency of data in the field of waste management



Annex 6.

PWM Assessment and Business Case Report

Executive Summary

Due to the lack of basic data on the practice of plastic waste management in Ukraine, there is a limitation of action to address unstable practices in local communities, homeowners' associations, which in turn endangers human health and the environment in Ukraine. To this end, Ukraine de Lage Landen Consulting Group together with the Institute of Green Economics conducted an assessment of the practice of plastic waste management in Ukraine in general, in particular selected homeowners' associations and local communities identified by the project.

As part of the analysis of the legislation of Ukraine, the adequacy of the regulatory framework for the organization of separate collection of solid waste components at the local level, including acts of local self-government, was assessed. A survey of selected HoAs and local communities provided an opportunity to assess the real situation with solid waste management, including plastic waste. The picture of primary solid waste management at the level of HoAs and local governments is summarized.

The experts identified the areas of implementation and economic efficiency of separate collection of solid waste components, including plastic. Data on the morphological composition of solid waste by cities where the survey was conducted were collected. The aggregated data have been derived and the amount of waste per inhabitant of HoAs has been calculated. The amount of waste that could potentially be generated during the month, quarter, year has also been calculated.

The level of readiness of the population for separate collection of solid waste components and directions for introduction of such collection have been determined, in parallel with the survey, as per the opinion of the HoAs residents.

On the basis of ecological and economic calculations, a business model for the management of sorted components of solid waste for HoAs and local communities has been developed. Recommendations have been developed for the organization of separate collection of solid waste components for representatives of the AHR and local communities.

The study used materials from the reports of the Ministry of Community and Territorial Development of Ukraine, as well as analytical studies of PwC Ukraine in 2020 on waste management reform in Ukraine.



The assessment experts have identified the main areas of complex tasks for ATC and HoAS which, in their opinion, will be crucial for the successful implementation of the plastic waste management reform in Ukraine:

1. Introduction of mandatory separate collection of household waste
2. Implementation of the extended producer responsibility (EPR) system
3. Raising public awareness, educational activities
4. Increasing control and liability in the field of waste management
5. Waste prevention and reuse
6. Development and renewal of waste management infrastructure
7. Ensuring transparency of data in the field of waste management.

Based on the research conducted, the experts have developed recommendations for HoAs and local communities. Namely, a roadmap is proposed for the implementation of the optimal scenario of solid waste and plastic waste management, in particular, in the regions of Ukraine.

Full report prepared by De Lage Landen Consulting Group is appended to this Tranche 1 Report