

Gold Standard for the Global Goals Transition Annex



Version 1 – September 2017

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KEY PROJECT INFORMATION

Title of Project/PoA/Activity:	Greentech's Emission Reductions from PET Recycling, Romania
GS ID of the project/PoA/activity:	5099
GS Version:	1
Brief description of Project:	The Project "Greentech's Emissions Reductions from PET Recycling, Romania", developed by Greentech – a member company of Green Group - is the first project in Europe to apply PET waste frameworks through PET waste recycling, proactively reducing greenhouse gases emissions that would be otherwise required for the production of plastic products made of virgin inputs and accelerating progress towards many of the UN Sustainable Development Goals. GreenTech is the largest PET plastic recycler in Europe and an important producer of recycled flakes, recycled PET strap and recycled PET granules. The certified CO2 emissions reductions project also includes the recycling of PET from GreenFiber, which produces PET fiber, as output. GreenFiber is the only manufacturer of synthetic fiber in Romania and the largest European producer of polyester synthetic fiber from 100% recycled PET flakes. GreenFiber offers high-quality products using the latest technology for textile industry and mainly non-woven sector. Green Group is the only integrated recycling park in Romania and is the biggest in South-Eastern Europe. It is the first of its kind in Romania. The total GHG emission reductions for the 10 years crediting period (2016-2025) are estimated at 453,800 t CO2. The estimated annual average GHG emissions reduction is 45,380 t CO2/year. This project is in line with specific UN sustainable development goals since it contributes to local environmental sustainability, since recycling instead of using material from virgin inputs decreases the overall energy use, CO2 emissions and environmental burden caused by natural resources extraction. At the same time, PET waste recycling reduces the amount of waste to be disposed in the landfill. Therefore, the project activity has been looking to meet the following UN sustainable goals: 1. SDG 3 Good Health and Well Being 2. SDG 4 Quality Education 3. SDG 5 Gender Equality 4. SDG 7 Affordable and Clean Energy 5. SDG 8 Decent work and economic growth 6. SDG 9 Industry Innovation and Infrastructure 7. SDG 10 Reduce inequalities within and among countries 8. SDG 11 Sustainable Cities and Communities

	9. SDG 12 Responsible consumption and production 10. SDG 13 Climate Action What makes the project special? Apart from the economic benefits of reducing pollution in terms of CO2 emissions and plastic waste, the Project has other important economic and social benefits: • It is an unique integrated business model, from the waste input to the finished products, which offers solutions for all types of PET waste; • It offers a competitive advantage in the Central and Eastern Europe, being the foundation of the recycling business in this region • The Project has a well-proven, fair and reliable production process and a state-of-art technology. The high performant innovative quality output products out from waste are recycled PET, recycled Strap, recycled Fiber • Job creation and improved working conditions where the project is located (Buzau, Iasi, Frasinu/Romania): GreenTech and GreenFiber have 1300 employees, being the biggest employer in Buzau city, offering employment to many people coming from disadvantaged backgrounds • Gender equality approach, women being promoted in management position, including the high level management • Development of local technological capacity. The manpower and the technical maintenance are provided domestically in the country • Contributes to the local and social community development: Green Group promotes training classes on environment and recycling in the schools in the region and shares its expertise with the local municipality of Buzau and other local municipalities to create circular cities (Circular Economy partnerships) • It contributes to a large extent to the local municipalities' funds for social insurance, such as health and pension funds, and to local and social community development. • The project has a strong ESG function and regularly monitored and permanently grow
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	its impact on the achievement of the SDG targets
Project type: Energy/Land Use	Energy
For Renewable Energy Projects – intention to apply RECs Labels (y/n)	-
GS Stream (CDM/VER):	VER
Scale (large/scale/micro):	Small scale
GS Registration Date:	07/12/2018
GS Crediting period start date:	01/01/2017
CDM Registration Date:	-
CDM Crediting period start date:	-
Project Developer:	S.C. Greentech S.A.
Project Representative:	Carbon Expert International Srl.
Project Participants and any communities involved:	-
Host Country/Location:	Romania
Methodologies applied:	AMS-III.AJ. Recovery and recycling of materials from solid wastes - Version 6.0
SDG Impacts:	- SDG 3 Good Health and Well Being - SDG 4 Quality Education - SDG 5 Gender Equality - SDG 7 Affordable and Clean Energy - SDG 8 Decent work and economic growth - SDG 9 Industry Innovation and Infrastructure - SDG 10 Reduce inequalities within and among countries - SDG 11 Sustainable Cities and Communities - SDG 12 Responsible consumption and production - SDG 13 Climate Action
Estimated amount of SDG Impact (GSVERs and others)	SDG 3 Good Health and Well Being - Number of new health workforce recruited each year: 47 - Number of training sessions on safety and health at working environment: 7900 - Number of trainings on fire and safe protection: 24 SDG 4 Quality Education - Number of visits of school children to the plant to enhance environment education and climate change awareness: 12 - Number of children and students trained on recycling, sustainable development and circular economy: 747 - Number of training sessions to promote recycling and sustainable development: 10 SDG 5 Gender Equality

	3.1. Number of women employed by project activity: 377 3.2. Proportion of women in total employment: 38% 3.3. Number of women in managerial positions: 18 3.4. Proportion of women in managerial positions in total management positions: 72% 4. SDG 7 Affordable and Clean Energy 4.1 Energy Savings: 35,008 MWh 4.2. Fuel Savings: 208,849 MWh 5. SDG 8 Decent work and economic growth 5.1. Number of staff employed in the project activity: 994 5.2. Number of trainings regarding the technical services required to operate the recycling plant: 1 5.3. Number of suggestions, recommendations made by the employees: 3 5.4. Wage bonuses offered by the employer to the employees: 124,935 euro 6. SDG 9 Industry Innovation and Infrastructure 6.1. Number of local people employed in the project activity: 945 6.2. Proportion of local people employed in total number of employees: 95% 7. SDG 10 Reduce inequalities within and among countries 7.1 Foreign exchange saved by the project: 2,797,657 euro 8. SDG 11 Sustainable Cities and Communities 8.1. Quantity of the municipal plastic waste collected by the project activity: 72,885 tons 8.2. Project plastic waste collected quantity: 19,413 tons 9. SDG 12 Responsible consumption and production 9.1. Quantity of plastic material recycled per year: 52,081 tons 9.2. Number of programs to encourage more environmentally-friendly and responsible products and services: 9 10. SDG 13 Climate Action 10.1 Emissions reductions: 45,380 tCO₂e

NOTE: This Annex shall be used for all PoAs if the sustainable development assessment is conducted at PoA level. In case sustainable development assessment is conducted at activity level, then this Annex shall be filled for each of the activities.

SECTION A Sustainable Development Goals (SDG) outcomes

A.1 Relevant target for each of the three SDGs

>> (Specify the relevant SDG target for at least each of three SDGs addressed by the project. Refer most recent version of targets [here](#). Contribution to SDG 13 is mandatory to be demonstrated for all projects and activities. Contribution to SDG 7 is recommended to be demonstrated for all community service projects and activities)

The Project is in line with the following ten SDGs:

1. SDG 3 Good Health and Well Being
2. SDG 4 Quality Education
3. SDG 5 Gender Equality
4. SDG 7 Affordable and Clean Energy
5. SDG 8 Decent work and economic growth
6. SDG 9 Industry Innovation and Infrastructure
7. SDG 10 Reduce inequalities within and among countries
8. SDG 11 Sustainable Cities and Communities
9. SDG 12 Responsible consumption and production
10. SDG 13 Climate Action

For each of these SDGs, the following targets apply and the project shall monitor the below indicators of the applicable targets as per the validated PDD and the GS Passport Sustainable Development Matrix.

1. SDG 3 Good Health and Well Being

Target 3.c: „Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.”

Indicators:

- 1.1. Number of new health workforce recruited each year
- 1.2. Number of training sessions on safety and health at working environment
- 1.3. Number of trainings on fire and safe protection (PSI trainings)

2. SDG 4 Quality Education

Target 4.7: „By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development.”

Indicators:

- 2.1. Number of visits of school children to the plant to enhance environment education and climate change awareness
- 2.2. Number of children and students trained on recycling, sustainable development and circular economy.
- 2.3. Number of trainings organised with the occasion of different events and fairs to promote recycling and sustainable development

3. SDG 5 Gender Equality

Target 5.5: „Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.”

Indicators:

- 3.1. Number of women employed by project activity
- 3.2. Proportion of women in total employment
- 3.3. Number of women in managerial positions
- 3.4. Proportion of women in managerial positions

4. SDG 7 Affordable and Clean Energy

Target 7.3: „By 2030, double the global rate of improvement in energy efficiency.”

Indicators:

- 4.1 Energy Savings
- 4.2. Fuel Savings

5. SDG 8 Decent work and economic growth

Target 8.5: „By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.”

Indicators:

- 5.1. Number of staff employed in the project activity
- 5.2. Number of trainings regarding the technical services required to operate the recycling plant
- 5.3. Number of suggestions, recommendations made by the employees
- 5.4. Wage bonuses offered by the employer to the employees

6. SDG 9 Industry Innovation and Infrastructure

Targets 9.2: „Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry’s share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.”

Indicators:

- 6.1. Number of local people employed in the project activity
- 6.2. Proportion of local people employed in total number of employees

7. SDG 10 Reduce inequalities within and among countries

Targets 10.3: „Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this.”

Indicators:

- 7.1. Foreign exchange saved by the project

8. SDG 11 Sustainable Cities and Communities

Targets 11.6: „By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.”

Indicators:

- 8.1 Quantity of the municipal plastic waste collected by the project activity
- 8.2. Project plastic waste collected quantities

9. SDG 12 Responsible consumption and production

Target 12.5: „By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse”

Indicators:

- 9.1. Quantity of plastic material recycled per year
- 9.2 Number of programs (communication campaigns) to encourage more environmentally-friendly and responsible products and services

10. SDG 13 Climate Action

Indicators:

- 10.1. Emissions Reductions of the Project activity

A.2 Explanation of methodological choices/approaches for estimating the SDG outcome

>> (Explain how the methodological steps in the selected methodology(ies) or proposed approach for calculating baseline and project outcomes are applied. Clearly state which equations will be used in calculating net benefit.)

According to the applied methodology AMS.III.AJ_version 06.0, the approach of calculating the outcome of SDG 13 is shown below.

Emission reductions

The emission reductions achieved by the project activity shall be determined as the difference between the baseline emissions and the project emissions and leakage.

$$ER_y = BE_y - PE_y - L_y$$

Where:

ER_y = Emission reductions in year y (t CO₂e)

L_y = Leakage emissions in year y (t CO₂e)

Since MSW collected does not contain organic biogenic waste segregated in the recycling facility, no leakage calculation is required.

The emission reductions achieved by the project activity will be the difference between the baseline emissions and the project emissions.

Equation (1): $ER_y = BE_y - PE_y$

Where:

ER_y : Emission reductions in year y (tCO₂)

BE_y : Baseline emissions in year y (tCO₂)

PE_y : Project emissions in year y (tCO₂)

Baseline emissions are calculated using the following equation:

Equation (2):

$$BE_y = (Q_{PET\ FLAKES}) * L_{PET} * B_i * (SEC_{BL,PET} * EF_{el\ CO_2,PET} + SFC_{BL,PET} * EF_{FFCO_2,PET})$$

Where:

BE_y : Baseline emissions in year y (tCO₂/y)

$Q_{PET\ FLAKES}$: Quantity of PET FLAKES recycled in year y, (t)

L_{PET} : Net to gross adjustment factor to cover degradation in material quality and material loss in the production process of the final product using the recycled material = 0,75

$EF_{elCO_2,PET}$: CO₂ emission factor for energy consumption in the production of virgin PET (t CO₂/t INPUT PET Waste)

$SEC_{BL,PET}$: Specific electricity consumption at virgin PET production facility (MWh/t)

$EF_{FFCO_2,PET}$: CO₂ emission factor for natural gas consumption (tCO₂/GJ)

$SFC_{BL,PET}$: Specific fuel consumption at virgin PET production facility (GJ/t)

$B_i = 1$

Project emissions for the monitoring report are calculated using the following equation:

As per Equation (5) of the applied methodology:

$PE_y = PE_{PET\ FLAKES,y} \text{ (tCO}_2\text{)}$

$PE_{PET\ FLAKES,y} = EC_{PET\ flakes,y} * EF_{el,y} + FF_{LFO\ flakes,y} * EF_{LFO\ flakes,y} + FF_{diesel\ for\ flakes,y} * EF_{diesel\ for\ flakes,y} + FF_{gasoline\ for\ flakes,y} * EF_{gasoline\ for\ flakes,y} + FF_{natural\ gas\ for\ flakes,y} * EF_{natural\ gas\ for\ flakes,y} \text{ (tCO}_2\text{)}$

Where:

PE_y : Project emissions in year y, (tCO₂)

Where:

$EC_{PET\ flakes,y}$ = Electricity consumption (production +administration) for flakes in year y, (MWh)

$EF_{el,y}$ = Emission Factor for Electricity Generation for flakes in year y, (tCO₂/MWh)

$FF_{LFO\ flakes,y}$ = Fossil fuel LFO consumption (light liquid fuel) for flakes in year y, (MWh)

$EF_{LFO\ flakes,y}$ = Emission Factor for LFO for flakes in year y, (tCO₂/MWh)

$FF_{diesel\ for\ flakes,y}$ = Fossil fuel Diesel consumption for flakes in year y, (MWh)

$EF_{diesel\ for\ flakes,y}$ = Emission Factor for Diesel for flakes in year y, (tCO₂/MWh)

$FF_{gasoline\ for\ flakes,y}$ = Fossil fuel gasoline consumption for flakes in year y, (MWh)

$EF_{gasoline\ for\ flakes,y}$ = Emission Factor for gasoline for flakes in year y, (tCO₂/MWh)

$FF_{natural\ gas\ for\ flakes,y}$ = Fossil fuel natural gas-consumption for flakes in year y, (MWh)

$EF_{natural\ gas\ for\ flakes,y}$ = Emission Factor for natural gas for flakes in year y, (tCO₂/MWh)

1MWh = 3,6 GJ

For SDG 7 Affordable and Clean Energy, the approach of estimating the net benefit is the following.

Target 7.3: By 2030, double the global rate of improvement in energy efficiency.

Project Indicators for SDG 7:

1. Energy Savings
2. Fuel Savings

Estimating net benefit for SDG 7.1 (Energy Savings) :

Net benefit SDG7 (1) = Baseline outcome SDG7 (1) - Project outcome SDG7 (1)

The Baseline is calculated using the following equation:

$BE_{El,y} = Q_{PET\ FLAKES} * SEC_{BL,PET}$

Where:

$BE_{EI,y}$: Baseline of the electricity in year y (MWh)

$Q_{PET\ FLAKES}$: Quantity of PET FLAKES recycled in year y, (t)

$SEC_{BL,PET}$: Specific electricity consumption at virgin PET production facility (MWh/t)

Project outcome SDG7 (1) = $EC_{PET\ flakes,y}$ (MWh)

Where:

$EC_{PET\ flakes,y}$ = Electricity consumption (production +administration) for flakes in year y, (MWh)

The electricity consumption is measured yearly with calibrated equipment.

The Net benefit of SDG7 (1) is calculated using the following formula:

Net benefit of SDG7 (1) = Baseline outcome of SDG7 (1) - Project outcome of SDG7 (1)

Net benefit SDG7 (1) = $Q_{PET\ FLAKES} * SEC_{BL,PET} - EC_{PET\ flakes,y}$

Estimating net benefit for SDG 7.2 (Fuel Savings) :

Net benefit SDG7 (2) = Baseline outcome SDG7 (2) - Project outcome SDG7 (2)

The Baseline is calculated using the following equation:

$BE_{Fuel,y} = Q_{PET\ FLAKES} * SFC_{BL,PET}$

Where:

$B_{Fuel,y}$: Baseline of fuel in year y (MWh)

$Q_{PET\ FLAKES}$: Quantity of PET FLAKES recycled in year y, (t)

$SFC_{BL,PET}$: Specific fuel consumption at virgin PET production facility (GJ/t)

1MWh = 3,6 GJ

**Project outcome SDG7 (2) = $FF_{LFO\ flakes,y} + FF_{diesel\ for\ flakes,y} + FF_{gasoline\ for\ flakes,y}$
 $+ FF_{natural\ gas\ for\ flakes,y}$**

Where:

$FF_{LFO\ flakes,y}$ = Fossil fuel LFO consumption (light liquid fuel) for flakes in year y, (MWh)

$FF_{diesel\ for\ flakes,y}$ = Fossil fuel Diesel consumption for flakes in year y, (MWh)

$FF_{gasoline\ for\ flakes,y}$ = Fossil fuel gasoline consumption for flakes in year y, (MWh)

$FF_{natural\ gas\ for\ flakes,y}$ = Fossil fuel natural gas-consumption for flakes in year y, (MWh)

All fuel consumptions are measured yearly at the recycling plant with calibrated equipment.

The Net benefit of SDG7 (2) is calculated using the following formula:

Net benefit SDG7 (2) = Baseline outcome of SDG7 (2) - Project outcome of SDG7 (2)

$$\text{Net benefit of SDG7 (1)} = Q_{\text{PET FLAKES}} * SFC_{\text{BL,PET}} - FF_{\text{LFO flakes,y}} - FF_{\text{diesel for flakes,y}} \\ - FF_{\text{gasoline for flakes,y}} - FF_{\text{natural gas for flakes,y}}$$

For all other SDGs mentioned at A1 (with the exception of SDG 7 and SDG 13), the Baseline is zero since in the absence of the project, none of those indicators have been existed.

Therefore, the following equations shall apply for SDG 3, 4, 5, 8, 9, 10, 11 and 12:

Net benefit of SDG = Project outcome of SDG – Baseline outcome of SDG

Net benefit of SDG = Project outcome of SDG – 0

Net benefit of SDG = Project outcome of SDG

More specifically, the proposed approach is the following:

SDG 3 Good Health and Well Being

The project creates new jobs and consequently health financing, and many training are offered to the health workforce, contributing thus to the Target 3.c:

Target 3.c: „Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.”

Project Indicators for SDG 3:

1. Number of new health workforce recruited each year
2. Number of training sessions on safety and health at working environment
3. Number of trainings on fire and safe protection (PSI trainings)

Baseline situation:

In the baseline situation, no new job created, no training sessions on safety and health at working environment, nor on fire and safe protection are provided to the employees.

Therefore, the baseline outcome benefit is zero.

Project situation:

In the project situation, the number of new jobs created, the number of training sessions on safety and health at working environment and on fire and safe protection are recorded by the PP.

1. SDG3 contribution = Number of new health workforce recruited each year

2. SDG3 contribution = Number of training sessions on safety and health at working environment
3. SDG3 contribution = Number of trainings on fire and safe protection (PSI trainings)

SDG 4 Quality Education

Trough its educational programs and trainings on recycling, sustainable development, climate change and circular economy, the project actively contributes to the Target 4.7:

Target 4.7: „By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development.”

Project Indicators for SDG 4:

1. Number of visits of school children to the plant to enhance environment education and climate change awareness
2. Number of children and students trained on recycling, sustainable development and circular economy.
3. Number of trainings organised with the occasion of different events and fairs to promote recycling and sustainable development

Baseline situation:

In the baseline situation, no visits of school children to the plant to enhance environment education and climate change awareness, no children and students trained on recycling, sustainable development and circular economy, and no trainings to promote recycling and sustainable development. Thus, the baseline outcome benefit is zero.

Project situation:

In the project situation, the number of visits of school children to the plant to enhance environment education and climate change awareness, the number of children and students trained on recycling, sustainable development and circular economy and the number of trainings organised with the occasion of different events and fairs to promote recycling and sustainable development are recorded by the PP in order to indicate the contribution to SDG 4.

1. SDG4 contribution = Number of visits of school children to the plant to enhance environment education and climate change awareness
2. SDG4 contribution = Number of children and students trained on recycling, sustainable development and circular economy.
3. SDG4 contribution = Number of trainings organised with the occasion of different events and fairs to promote recycling and sustainable development

SDG 5 Gender Equality

One of the main benefits of the project is its approach toward gender equality, women being promoted in management position, including the high level management, contributing to the Target 5.5:

Target 5.5: „Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.”

Project Indicators for SDG 5:

1. Number of women employed by project activity
2. Proportion of women in total employment
3. Number of women in managerial positions
4. Proportion of women in managerial positions in total management positions

Baseline situation:

In the baseline situation, there were no women employed, nor held any management positions. Therefore, the baseline outcome benefit is zero.

Project situation:

In the project situation, the number of women employed by the project activity and their proportion in total employment are recorded by the PP in order to indicate the contribution to SDG 5. Moreover, the number of women in managerial positions and the proportion of women in managerial positions in total management positions are monitored.

1. SDG5 contribution = Number of women employed by project activity
2. SDG5 contribution = Proportion of women in total employment
3. SDG5 contribution = Number of women in managerial positions
4. SDG5 contribution = Proportion of women in managerial positions in total management positions

SDG 8 Decent work and economic growth contribution

Through the project activities, it will create jobs which contribute to the target 8.5:

Target 8.5: „By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.”

The number of jobs created by the project with safe and healthy work environment together with number of trainings regarding the technical services required to operate the recycling plant, the number of suggestions and recommendations made by the employees are recorded by the PP. At

the same time, wage bonuses offered by the employer to the employees are quantified and contribute at the development of SDG 8.

Project indicators for SDG 8:

1. Number of staff employed in the project activity
2. Number of trainings regarding the technical services required to operate the recycling plant
3. Number of suggestions and recommendations made by the employees
4. Wage bonuses offered by the employer to the employees

Baseline situation:

In baseline situation, no jobs created, no training sessions regarding the operational side of the plant equipment is done, nor any suggestions or recommendations registered or any wage bonuses offered. Therefore, baseline outcome benefit is zero.

Project situation:

In project situation, the number of total people employed, the training sessions regarding the operational side of the plant equipment, the number of suggestions and recommendations and wage bonuses offered by the employer to the employees are monitored by the PP

1. SDG8 contribution = Number of staff employed in the project activity
2. SDG8 contribution = Number of trainings regarding the technical services required to operate the recycling plant
3. SDG8 contribution = Number of suggestions, recommendations made by the employees
4. SDG8 contribution = Wage bonuses offered by the employer to the employees

2. SDG 9 Industry Innovation and Infrastructure

The project largely contributes to the employment of local people and, thus, making its contribution to Target 9.2.

Target 9.2: “Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry’s share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.”

Project Indicators for SDG 9:

1. Number of local people employed in the project activity
2. Proportion of local people employed in total number of employees

Baseline situation:

In the baseline situation, there are not any local people employed. Thus, baseline outcome benefit is zero.

Project situation:

In the project situation, the number of local people employed and their proportion in total staff employed are recorded by the PP

1. SDG9 contribution = Number of local people employed
2. SDG9 contribution = Proportion of local people employed in total number of employees

SDG 10 Reduce inequalities within and among countries

Through its plastic recycling activities, the project save foreign exchange, which contributes to the reducing inequalities among countries and ensure the achievement of Target 10.3.

Targets 10.3: „Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this.”

Project Indicator for SDG 10:

1. Foreign exchange saved by the project (plastic saved/recycled x imported price/tonne)

Baseline situation:

In the baseline situation, there is no foreign exchange saved. Therefore, baseline outcome benefit is zero.

Project situation:

In the project situation, the foreign exchange saved is recorded by the PP.

1. SDG10 contribution = Foreign exchange saved

SDG 11 Sustainable Cities and Communities

The project positively contributes to the reduction of the municipal plastic waste through its collection and recycling activities, having a significant impact on Target 11.6.

Targets 11.6: “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.”

Project Indicators for SDG 11:

- 8.1 Quantity of the municipal plastic waste collected by the project activity

8.2. Project plastic waste collected quantities

Baseline situation:

In the baseline situation, there is no municipal plastic waste collected or any project plastic collected. Thus, the baseline outcome benefit is zero.

Project situation:

In the project situation, the quantity of the municipal plastic waste collected and the project plastic waste collected quantities are recorded by the PP.

1. SDG11 contribution = Quantity of the municipal plastic waste collected by the project activity
2. SDG11 contribution = Project plastic waste collected quantity

SDG 12 Responsible consumption and production

Through the project activities, there is recycled plastic material (intermediate output product) used in the production of recycled end products and also programs. At the same time, the project developer supports communication campaigns to encourage the responsible consumption and reuse of products, all contributing to the target 12.5.

Target 12.5: “By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.”

Project Indicators for SDG 12:

1. Quantity of plastic material recycled per year
2. Number of programs (communication campaigns) to encourage more environmentally-friendly and responsible products and services

Baseline situation:

In baseline situation, there is no recycled plastic material as output, nor any communication campaigns to encourage the responsible consumption and reuse of products. Therefore, baseline outcome benefit is zero.

Project situation:

In project situation, the quantity of recycled plastic is measured yearly by the PP. The number of programs (communication campaigns) to encourage more environmentally-friendly and responsible products and services is also recorded by the PP.

1. SDG12 contribution = Quantity of plastic material recycled per year
2. SDG12 contribution = Number of programs (communication campaigns) to encourage more environmentally-friendly and responsible products and services

A.3 Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

(Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the design certification and remain fixed throughout the crediting period like IPCC defaults and other methodology defaults. Copy this table for each piece of data and parameter.)

As per the validated PDD, we are writing below the parameters fixed ex ante of the SDG 13 – Climate Action and SDG 7 – Affordable and Clean Energy. For the other SDGs, all parameters are variable and shall be monitored according to section C1.

Relevant SDG Indicator	13 Climate Action
Data/parameter	EF _{el, CO2} ; EF _{FFCO2}
Unit	EF _{el CO2} - tCO ₂ /MWh for electricity generation; EF _{FFCO2} - tCO ₂ /GJ for fossil fuel, natural gas.
Description	CO ₂ emission factor for energy consumption in the production of plastic PET pellets from virgin plastic material; CO ₂ emission factor for natural gas consumption in the production of plastic PET pellets from virgin plastic material;
Source of data	Calculated from the source: Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope: 13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials.
Value(s) applied	EF _{el CO2} = 0.701 tCO ₂ /MWh for electricity EF _{FFCO2} = 0.202 tCO ₂ /MWh for natural gas EF _{FFCO2} = 73.56 kgCO ₂ /GJ for Diesel EF _{FFCO2} = 71.62 kgCO ₂ /GJ for Gasoline EF _{FFCO2} = 74.08 kgCO ₂ /GJ for LFO
Choice of data or Measurement methods and procedures	Emission factors for electricity consumed national and European - technical annex to the SEAP template instructions; The list of the national values of the emission factors and net calorific values, specific to each type of fuel and type of activity - EU-ETS 2012 (; www.mmediu.ro).
Purpose of data	To calculate the baseline emissions.

Additional comment	N/A
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Relevant SDG Indicator	13 Climate Action
Data/parameter	L_i
Unit	-
Description	Net to gross adjustment factor to cover degradation in material quality and material loss in the production process of the final product using the recycled material
Source of data	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope:13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials. (http://pswm.uvic.ca/wp-content/uploads/2012/05/Read-the-Publication.pdf)
Value(s) applied	0.75
Choice of data or Measurement methods and procedures	From baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials; chapter 5.2 - see attached excel file
Purpose of data	To calculate the baseline emissions
Additional comment	i-Plastic includes R-PET, Strap and Fibre

Relevant SDG Indicator	13 Climate Action & 7 Affordable and Clean Energy
Data/parameter	SEC_{BL}
Unit	MWh/t
Description	Specific electricity consumption at virgin PET production facility
Source of data	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope:13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials.
Value(s) applied	1.110
Choice of data or Measurement methods and procedures	It is assumed that process energy for polymerization is supplied with electricity; Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope:13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials.

Purpose of data	To calculate the baseline emissions
Additional comment	N/A

Relevant SDG Indicator	13 Climate Action & 7 Affordable and Clean Energy
Data/parameter	SFC_{BL}
Unit	GJ/t
Description	Specific fuel consumption at virgin PET production facility
Source of data	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope:13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials
Value(s) applied	15
Choice of data or Measurement methods and procedures	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope: 13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials. Baseline emissions
Purpose of data	To calculate the baseline emissions
Additional comment	N/A

Relevant SDG Indicator	13 Climate Action
Data/parameter	B_i
Unit	-
Description	Correction factor based on share of production in non-Annex I countries
Source of data	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope: 13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials. Baseline emissions
Value(s) applied	1.0
Choice of data or Measurement methods and procedures	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology
Purpose of data	To calculate the baseline emissions
Additional comment	-

Relevant SDG Indicator	13 Climate Action
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Data/parameter	SEC_{P,i}
Unit	-
Description	Energy consumption factor for processing of recycled material i in the processing/manufacturing facility
Source of data	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology Recovery and recycling of materials from solid wastes, Version 6.0, Sectoral scope: 13; Baseline methodology for emissions associated with energy consumption for the production of plastic pellets from virgin plastic materials. Baseline emissions
Value(s) applied	0
Choice of data or Measurement methods and procedures	Clean Development Mechanism AMS-III.AJ, Small-scale Methodology
Purpose of data	To calculate the baseline emissions
Additional comment	-

SECTION B Safeguarding Principles Assessment

B.1 Analysis of social, economic and environmental impacts

>> (Refer the GS4GG Safeguarding Principles and Requirements document for detailed guidance on carrying out this assessment. The assessment of following Safeguarding Principles Assessment is required to be carried out by GS Version 2.0, 2.1 and 2.2 projects. GS v1.0 projects will carry out assessment of all the safeguarding principles discussed in the GS4GG Safeguarding Principles and Requirements document.)

Safeguarding principles	Assessment questions	Assessment of relevance to the project (Yes/potentially/no)	Justification	Mitigation measure (if required)
3.2 Gender Equality and Women's Rights	a. Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits?	a. No	a. No. It does not put any risk to women's access or control of resources, entitlements and benefits. Women and men have equal access to resources, entitlements and benefits.	a. Not Applicable
	b. Is there a possibility that the Project can	b. No	b. No. The project happens in the city of Buzau and	b. Not Applicable

	adversely affect men and women in marginalized or vulnerable communities (e.g., potential increased burden on women or social isolation of men)? c. Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)? d. Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., does the project criteria ensure that it includes minority groups or landless peoples)?	c. No d. No	Frasinu village. Local people are employed by the project activity in a high proportion of 95%. Thus, the project does not affect any marginalized or vulnerable communities. c. No. The project has women in management positions more than men managers (71% women managers compared to 29% men managers). Thus there is no possibility not to take into account gender roles to participate in the decisions of the project activities. d. Yes. The project takes care gender roles and the abilities of women and men in Project activities. The project employs 36% women from total employees, which is a high number considering the specificities of the recycling activity. e. No. The project takes care of the role of women in project activities	c. Not Applicable d. Not Applicable
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	e. Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities? f. Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits? g. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services? h. Is there a likelihood that the proposed Project would expose	e. No f. No g. No	and do not increase their workload. f. No. The project does not have any scope which may result to discrimination against women. The project contributes positively to uplift women in its work environment. g. No. The project helps in protecting natural resources. The project does not limit women's ability to use, develop or protecting natural resources. h. No, there is no likelihood that the proposed Project would expose women and girls to further risks or hazards since all activities are carried out	e. Not Applicable f. Not Applicable g. Not Applicable h. Not Applicable
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	women and girls to further risks or hazards?	h. No	according to ISO procedures. The project does not lead to more hazardous conditions.	
3.4.3 Land Tenure and Other Rights	a. Does the Project require any change to land tenure arrangements and/or other rights? b. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	a. No b. No	a. No. The project does not involve any land use which will have issues related to land tenure or access rights. b. No. The project does not involve any land use which will have issues related to land tenure or access rights.	a. Not applicable b. Not Applicable
3.6.2 Negative Economic Consequences	The Project Developer shall ensure that there is no forced labour or child labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and	No	The project does not require forced labour for implementation of the project. Trained technicians are involved in construction, operation and maintenance of plants. Therefore, no forced labour is involved in the project. No child labour is involved. The project is in compliance with national labour	Not Applicable

	standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard		and occupational health and safety laws, which are also in line with ILO fundamental conventions.	
4.1.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	No. The project will reduce greenhouse gas emissions over the Baseline Scenario.	Not Applicable
4.1.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	No. The project uses energy from the national grid. The access to fuel resources is open on the market for everybody.	Not Applicable
4.2.1 Impact on natural water patterns and flow	Will the Project affect the natural or preexisting pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	No. Water in huge quantity is not required for the project which can impact the ground water level or any seasonal flow.	Not Applicable
4.2.2 Erosion and/or water body stability	Could the Project directly or indirectly cause additional erosion and/or water body	No	No. Water in huge quantity is not required for the project which can	Not Applicable

	instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2.		impact the ground water level or any seasonal flow.	
4.2.3 Landscape modification and soil	Does the Project involve the use of land and soil for production of crops or other products?	No	No. The project does not involve any crop production.	Not Applicable
4.3.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	No. The project happens at specific area plant. There is no activity which can affect adversely the natural system to cause earthquake, landslides, erosion, flooding, draught or other extreme climatic conditions.	Not Applicable
4.3.3 Genetic Resources	Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?	No	Not applicable. The project does not involve any crop production or cultivation.	Not Applicable
4.3.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	No	No. The project cannot potentially release any pollutants to the environment above the maximum limit permitted by the legislation since all production stages are strictly monitored.	Not Applicable
4.3.5 Hazardous and	Will the Project involve the	No	No. The project does not involve	Not applicable

Non-hazardous Waste	manufacture, trade, release, and/ or use of hazardous and nonhazardous chemicals and/or materials?		any production processes that use or realease hazardous chemical and nonhazardous chemicals and/or materials above the maximum limit permitted by the legislation since all production stages are strictly monitored.	
4.3.6 Pesticides and fertilizers	Will the Project involve the application of pesticides and/or fertilizers?	No	Not applicable. The project does not involve any crop production or cultivation.	Not Applicable
4.3.7 Harvesting of forests	Will the Project involve the harvesting of forests?	No	Not applicable. The project happens at specific area plant.	Not Applicable
4.3.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	Not applicable. The project does not involve any crop production or cultivation.	Not Applicable
4.3.9 Animal Husbandry	Will the Project involve animal husbandry?	No	No, it is a recycling production project.	Not Applicable

SECTION C Monitoring plan

C.1 Data and parameters to be monitored

(Include specific information on how the data and parameters that need to be monitored in the selected methodology(ies) or proposed approaches or as per mitigation measures from safeguarding principles assessment or as per feedback from stakeholder consultations would actually be collected during monitoring. Copy this table for each piece of data and parameter.)

Relevant SDG Indicator/Safeguarding Principle	3 Good Health and Well Being
Data / Parameter	Number of new health workforce recruited each year
Unit	No. of new health employees
Description	Number of new health employees recruited each year
Source of data	PET recycling plant
Value(s) applied	47
Measurement methods and procedures	Internal employment reports from the HR Department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To calculate the impact of SDG 3
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	3 Good Health and Well Being
Data / Parameter	Number of training sessions on safety and health at working environment
Unit	Number of trainings on safety and health
Description	Number of training sessions on safety and health at working environment
Source of data	PET recycling plant
Value(s) applied	7900
Measurement methods and procedures	Internal reports from the Health&Safety Department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 3
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	3 Good Health and Well Being
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Data / Parameter	Number of training sessions on safety and health at working environment
Unit	Number of trainings on fire and safe protection
Description	Number of training sessions on safety and health at working environment
Source of data	PET recycling plant
Value(s) applied	24
Measurement methods and procedures	Internal reports from the Health&Safety Department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 3
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	4 Quality Education
Data / Parameter	Number of visits of school children to the plant to enhance environment education and climate change awareness
Unit	Number of trainings on recycling
Description	Number of trainings on recycling and sustainable development
Source of data	PET recycling plant
Value(s) applied	12
Measurement methods and procedures	Internal reports on trainings from the PR Department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 4
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	4 Quality Education
Data / Parameter	Number of children and students trained on recycling, sustainable development and circular economy
Unit	Number of young people trained on recycling by the project
Description	Number of young people trained on recycling, sustainable development and circular economy
Source of data	PET recycling plant
Value(s) applied	747
Measurement methods and procedures	Internal reports on trainings from the PR Department

Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 4
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	4 Quality Education
Data / Parameter	Number of training sessions to promote recycling and sustainable development
Unit	Number of trainings on recycling
Description	Number of trainings on recycling and sustainable development
Source of data	PET recycling plant
Value(s) applied	10
Measurement methods and procedures	Internal reports on trainings from the PR Department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 4
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	5 Gender Equality
Data / Parameter	Number of women employed by project activity
Unit	No. of female employees
Description	Number of women employed by project activity
Source of data	Internal employment reports
Value(s) applied	377
Measurement methods and procedures	Measured and registered in Employment reports by the HR department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 5
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	5 Gender Equality
Data / Parameter	Proportion of women employed in total employment
Unit	Percentage of women employed per total employees

Description	Proportion of women in total employment of the project
Source of data	Internal employment reports
Value(s) applied	38%
Measurement methods and procedures	Measured and registered in Employment reports by the HR department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 5
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	5 Gender Equality
Data / Parameter	Number of women in managerial positions
Unit	No. of female employees in management
Description	Number of women in managerial positions of the project
Source of data	Internal employment reports
Value(s) applied	18
Measurement methods and procedures	Measured and registered in Employment reports by the HR department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 5
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	5 Gender Equality
Data / Parameter	Proportion of women in managerial positions in total management positions
Unit	Percentage of female managers in total managers of the project
Description	Proportion of women in managerial positions of the project
Source of data	Internal employment reports
Value(s) applied	72%
Measurement methods and procedures	Measured and registered in Employment reports by the HR department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 5
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	7 Affordable and Clean Energy
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Data / Parameter	Energy Savings
Unit	MWh
Description	The energy saved by the project due to its plastic recycling activities compared to the baseline situation of the production of plastic from virgin materials.
Source of data	Measured and registered by the Operational department
Value(s) applied	35,008 MWh
Measurement methods and procedures	The recycling plant annually measures this parameter according to the CDM methodology AMS-III.AJ. Recovery and recycling of materials from solid wastes - Version 6.0
Monitoring frequency	Annually
QA/QC procedures	Calculated according to the internal procedure of monitoring the SDG indicators.
Purpose of data	To quantify the impact of SDG 7
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	7 Affordable and Clean Energy
Data / Parameter	Fuel Savings
Unit	MWh
Description	The energy saved by the project due to its plastic recycling activities compared to the baseline situation of the production of plastic from virgin materials.
Source of data	Measured and registered by the Operational department
Value(s) applied	208,849 MWh
Measurement methods and procedures	The recycling plant annually measures this parameter according to the CDM methodology AMS-III.AJ. Recovery and recycling of materials from solid wastes - Version 6.0
Monitoring frequency	Annually
QA/QC procedures	Calculated according to the internal procedure of monitoring the SDG indicators.
Purpose of data	To quantify the impact of SDG 7
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	8. Decent work and economic growth
Data / Parameter	Number of staff employed by project activity
Unit	No. of employees
Description	Number of people employed by project activity
Source of data	Internal employment reports
Value(s) applied	994

Measurement methods and procedures	Measured and registered on Employment reports by the HR department.
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 8
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	8. Decent work and economic growth
Data / Parameter	Number of trainings regarding technical services required to operate the recycling plant
Unit	No. of trainings on technical services per year
Description	Number of trainings regarding technical services required to operate the recycling plant
Source of data	PET Recycling plant – Internal Report on Training Contracts from the Operational department
Value(s) applied	1
Measurement methods and procedures	Measured
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to the ISO OHSAS procedure
Purpose of data	To quantify the impact of SDG 8
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	8. Decent work and economic growth
Data / Parameter	Number of suggestions, recommendations made by the employees
Unit	No. of suggested items
Description	Number of suggestions and recommendations made by the employees
Source of data	Internal HR reports
Value(s) applied	3
Measurement methods and procedures	Measured and registered on the Employees Feedback Book by the HR department
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To quantify the impact of SDG 8
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	8. Decent work and economic growth
Data / Parameter	Wage bonuses offered by the employer to the employees
Unit	Euro
Description	The value of wage bonuses offered by the employer to the employees
Source of data	Internal Employment report: Payroll
Value(s) applied	124,935 euro
Measurement methods and procedures	Measured
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to the internal procedure
Purpose of data	To quantify the impact of SDG 8
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	9 Industry, Innovation and Infrastructure
Data / Parameter	Number of local people employed in the project activity
Unit	Number of local people employed
Description	Number of local people employed in the project activity
Source of data	Internal employment reports
Value(s) applied	945
Measurement methods and procedures	Measured and registered according to the internal procedure by the HR department
Monitoring frequency	Annually
QA/QC procedures	The PET recycling plant annually measures and registers this parameter according to the internal procedure.
Purpose of data	To quantify the impact of SDG 9
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	9 Industry, Innovation and Infrastructure
Data / Parameter	Proportion of local people employed in total number of employees
Unit	Percentage of local employees in total employees of the project
Description	Proportion of local people employed by the project in total number of employees on the project
Source of data	Internal employment reports
Value(s) applied	95%
Measurement methods and procedures	Measured and registered according to the internal procedure by the HR department
Monitoring frequency	Annually
QA/QC procedures	The PET recycling plant annually measures and registers this parameter according to the internal procedure of monitoring the SDG parameters.

Purpose of data	To quantify the impact of SDG 9
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	10 Reduce inequalities within and among countries
Data / Parameter	Foreign exchange saved by the project
Unit	Euro
Description	The foreign exchange saved through plastic saved x import price of the plastic waste
Source of data	Foreign Exchange Statistics Report
Value(s) applied	2,797,657.6 euro
Measurement methods and procedures	Measured by the Financial department
Monitoring frequency	Annually
QA/QC procedures	Internal procedure of the Production department
Purpose of data	To quantify the impact of SDG 10
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	11 Sustainable cities and communities
Data / Parameter	Q_B PET, y
Unit	t/y
Description	Quantity of municipal plastic solid waste/PET bales for flakes collected at the recycling facility in year y
Source of data	PET recycling plant: centralised report on collection
Value(s) applied	72,885.945 tons
Measurement methods and procedures	Weigh balance calibrated every 5 years
Monitoring frequency	Monthly
QA/QC procedures	Quantity of PET bales – weight in a balance
Purpose of data	To quantify the impact of SDG 11 and calculate baseline emissions
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	11 Sustainable cities and communities
Data / Parameter	Project plastic waste collected quantity
Unit	t/y
Description	Quantity of the Project plastic waste collected by the PP

Source of data	PET recycling plant: centralised report on collection
Value(s) applied	19,413 tons
Measurement methods and procedures	Weigh balance calibrated every 5 years
Monitoring frequency	Monthly
QA/QC procedures	Quantity of PET bales – weight in a balance
Purpose of data	To quantify the impact of SDG 11
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	12 Responsible consumption and production
Data / Parameter	Q_{PET FLAKES, y}
Unit	t/y
Description	Quantity of plastic type i recycled in year y
Source of data	PET recycling plant: centralised report on production
Value(s) applied	52,081.155 tonnes
Measurement methods and procedures	Weight balance calibrated every 5years
Monitoring frequency	Monthly
QA/QC procedures	Direct weighing and recording of the weight Cross-check with the mass of product(s) used at the processing/ manufacturing facility using production records
Purpose of data	To quantify the impact of SDG 12 and calculate baseline emissions
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	12. Responsible consumption and production
Data / Parameter	Number of programs to encourage more environmentally-friendly and responsible products and services
Unit	No. of trainings on technical services per year
Description	Number of programs (communication campaigns) to encourage more environmentally-friendly and responsible products and services
Source of data	PET Recycling plant - Internal PR report o communication campaigns
Value(s) applied	9

Measurement methods and procedures	Measured
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to the internal procedure
Purpose of data	To quantify the impact of SDG 12
Additional comment	-

Relevant SDG Indicator	13 Climate Change
Data/parameter	Emission reduction per year
Unit	tCO ₂ e
Description	Number of emissions reductions per year achieved through the plastic recycling activity
Source of data	Recycling plant internal document: Excel sheet on ERs
Value(s) applied	45,380
Choice of data or Measurement methods and procedures	Measured according to the CDM methodology AMS-III.AJ. Recovery and recycling of materials from solid wastes - Version 6.0
Monitoring frequency	Annually
QA/QC procedures	The recycling plant annually monitors this parameter according to the CDM methodology AMS-III.AJ. Recovery and recycling of materials from solid wastes - Version 6.0
Purpose of data	To quantify the impact of SDG 13
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	13 Climate Change
Data / Parameter	EC_{PETflakes,y}
Unit	MWh/y
Description	Electricity consumption at recycling facility for total PET flakes in year y
Source of data	Measured at the recycling plant
Value(s) applied	22,801.565 MWh per year
Measurement methods and procedures	Metering with calibrated equipment
Monitoring frequency	Monthly

QA/QC procedures	Metering with calibrated equipment. The recycling plant checks completeness of invoices concerning electricity consumption. The recycling plant checks at least monthly, if consumption fit to the produced quantities. The electricity meter is calibrated every 5 years.
Purpose of data	To calculate the impact of SDG 13
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	13 Climate Action
Data / Parameter	FC_{i,y}
Unit	MWh/year
Description	Fuel consumption of the recycling facility apportioned to material type i
Source of data	Measured at the recycling plant
Value(s) applied	FC _{i,y} for Natural gas =3860 MWh per year FC _{i,y} for Diesel =1825.43 MWh per year FC _{i,y} for gasoline =3.76 MWh per year FC _{i,y} for LFO =2405.46 MWh per year
Measurement methods and procedures	Metering with calibrated equipment and transformed in MWh
Monitoring frequency	Monthly
QA/QC procedures	Metering with calibrated equipment and transformed in MWh. The recycling plant checks completeness of invoices concerning fuel consumption. The recycling plant checks at least monthly, if consumption fit to the produces quantities.
Purpose of data	To calculate the impact of SDG 13
Additional comment	-

As per the methodology AMS.III.AJ_version 06.0 applicable conditions and the validated GS Passport (SD Matrix), the following parameters shall be also monitored in order to ensure that all safeguarding principles are met by the project activity:

Relevant SDG Indicator/Safeguarding Principle	SDG 10 Reduce inequalities within and among countries
Data / Parameter	Romania plastic generated waste
Unit	tons
Description	Romania plastic generated waste

Source of data	Eurostat reports https://ec.europa.eu/eurostat/web/environment/waste
Value(s) applied	2016: 348,794 tons
Measurement methods and procedures	N/A
Monitoring frequency	Yearly
QA/QC procedures	The recycling plant annually monitors this parameter, according to the procedure regarding the monitoring of all parameters requested by the Project.
Purpose of data	To prove that there is no competing use of waste material in the region
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	SDG 10 Reduce inequalities within and among countries
Data / Parameter	Plastic imported in country (tons/year)
Unit	tons
Description	Plastic waste imported by the project activity
Source of data	Internal reports on imports
Value(s) applied	6108 tons
Measurement methods and procedures	N/A
Monitoring frequency	Yearly
QA/QC procedures	The recycling plant annually monitors this parameter, according to the procedure regarding the monitoring of all parameters requested by the Project.
Purpose of data	To prove that there is no competing use of waste material in the region
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	SDG 12 Responsible Consumption and Production
Data / Parameter	Intrinsic Viscosity
Unit	decilitres/gram (dL/g)
Description	Intrinsic Viscosity of the recycled plastic material
Source of data	The Davenport Petplu software / Internal quality reports

Value(s) applied	0.590 to 0.818 (according to each recycled material type)
Measurement methods and procedures	Test method for determining Intrinsic viscosity is as per ASTM D 4603 "Standard test method for determining Viscosity of Polyethylene Terephthalate" for PET
Monitoring frequency	Monthly - Every batch of Polymerisation
QA/QC procedures	The recycling plant regularly checks the intrinsic viscosity of the products through the internal procedure IL-GRT-11RPET
Purpose of data	To compare the chemical equivalence
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Air Quality
Data / Parameter	Inside emissions (Natrium Hidroxid - NaOH); Outside ambient emissions (CO, NOx, SO2, O2, dust at chimney) ¹
Unit	NaOH: mg/mc
Description	The inside and outside emissions measured in the recycling plant
Source of data	Analysis reports by authorised laboratory
Value(s) applied	NaOH: 0.06 & 0.11
Measurement methods and procedures	Measured and analysed by authorised laboratories
Monitoring frequency	Semestrial
QA/QC procedures	The recycling plant measures the inside and outside emissions according to ISO procedures.
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Air Quality
Data / Parameter	Inside air humidity (%)
Unit	%
Description	The air humidity measured in the interior of the recycling plant
Source of data	Analysis reports by authorised laboratory
Value(s) applied	37.2 - 52.7%

¹ The PP has no records for outside ambient emissions in 2016 since the legal obligation to monitor them started in 2017, but the parameter was included in the GS Passport SD matrix for further monitoring.

Measurement methods and procedures	Measured and analysed by authorised laboratories
Monitoring frequency	Monthly
QA/QC procedures	The recycling plant measures monthly the inside air humidity according to ISO procedures.
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Air Quality
Data / Parameter	Inside air temperature (Celsius)
Unit	Celsius
Description	The air temperature measured in the interior of the recycling plant
Source of data	Analysis reports by authorised laboratory
Value(s) applied	20.3C – 23.4C
Measurement methods and procedures	Measured and analysed by authorised laboratories
Monitoring frequency	Monthly
QA/QC procedures	The recycling plant measures monthly the inside air temperature according to ISO procedures.
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Water
Data / Parameter	Quality of the used water (pH, suspended dust, clorours, phosphphats, total azote)
Unit	Unit pH mg/l
Description	The quality of the output used water regarding the pH, suspended dust, clorours, phosphphats and total azote
Source of data	Analysis reports by authorised laboratory
Value(s) applied	pH: 7.1 – 7.5 Suspended dust: 8 - 36 Clorours: 139.1 - 192.8 Phosphphats: 0.12 – 0.93 Azote: 6.19 - 9.24

Measurement methods and procedures	Measured and analysed by authorised laboratories
Monitoring frequency	Every two months
QA/QC procedures	The recycling plant measures the quality of the used water according to ISO procedures.
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Water
Data / Parameter	Output used water (m3/year)
Unit	m3
Description	The used water evacuated by the project
Source of data	The output water report
Value(s) applied	174,952,000 m3
Measurement methods and procedures	Measured at the recycling plant according to internal procedures.
Monitoring frequency	Annually
QA/QC procedures	Measured with calibrated equipment according to internal procedure
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Other Pollutants
Data / Parameter	Noise Pollution
Unit	dB
Description	The noise pollution of equipments at the recycling plant
Source of data	Analysis reports by authorised laboratory
Value(s) applied	87 dB
Measurement methods and procedures	Measured and analysed by authorised laboratories

Monitoring frequency	Quarterly
QA/QC procedures	The recycling plant measures the noise pollution according to ISO procedures.
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Environmental Safeguard Principle – Other Pollutants
Data / Parameter	Waste measurements by type of waste (package, carton, waste wood, aluminum waste)
Unit	Kg.
Description	Output waste measurements by type of waste
Source of data	Internal waste reports
Value(s) applied	Package waste: 41,809 Cardboard waste: 52,564 Wood waste: 110,175 Aluminum waste: 150,600
Measurement methods and procedures	Measured by the production department according to internal procedures
Monitoring frequency	Annually
QA/QC procedures	Direct weighing and recording of the weight used at the processing/ manufacturing facility using production records
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Social safeguarding principle – Community Health, Safety and Working Conditions
Data / Parameter	Claims or concerns of the employees
Unit	The number of claims and concerns from employees
Description	The number of claims and concerns from the employees
Source of data	Internal HR and Legal Reports
Value(s) applied	0
Measurement methods and procedures	Recorded by the HR and legal departments
Monitoring frequency	Annually

QA/QC procedures	The recycling plant annually monitors this parameter according to internal procedure.
Purpose of data	To monitor the Safeguard Principle
Additional comment	-

C.1.1 Other elements of monitoring plan (if applicable)

The monitoring plan will be implemented by internal technical staff in charge of the each recycling plant. The plan is made to verify that the emission reductions are real and measurable. The data needed for the emissions reduction calculations will be monitored transparently during the crediting period. The data collection will be done by internal technical staff in the recycling plants, depending on the parameter, according to the followings:

1.0 Data collected

The data to be collected to quantify the impact of SDG 13 are the following:

- (a) Mass of PET bottle waste entering in the recycling facility (input), measured by direct weighing;
- (b) Mass of recycled PET flakes by the recycling facility, measured by direct weighing;
- (c) Mass of R-PET, strap, and fiber (output);
- (d) Amount of electricity consumed at the recycling facility for power equipment;
- (e) Emission factor for the electrical grid system;
- (f) Amount of fossil fuel consumed.

2.0 In addition, these documents collected by the internal technical staff will be made available to DOE at verification:

- Invoices documents regarding the fuel consumed at the recycling facility;
- Electricity invoices regarding the electricity consumptions of the recycling facility from the national Grid;
- Receipts and invoices regarding purchases of the PET waste and sales of recycled products (to be collected by the technical staff in charge of the recycling plants operation).

All reports will be centrally kept by the internal staff dedicated to this project and made available to the DOE.

The data to be collected to quantify the impact of the other SDGs will be gathered from several departments, including the Production department, HR department, the CSR department, the ISO department, the Accounting and the Legal department.

3.0 The data to be monitored

The set of data to be monitored during the project operation phase is provided in C1.

4.0 The equipment for monitoring

The weighting system is calibrated each year. The recycling plant checks completeness of invoices concerning electricity and fossil fuel consumptions. The recycling plant checks at least monthly, if consumption fit to the produced quantities. The project proponent also checks continuously the amount of incoming and produced PET.

The company is ISO 9001:2008 certified and all weighting systems are calibrated each year according to operational procedures PO-GRT-13 and respectively PO-GF-13.

5.0 Verification and calibration of the equipment

The verification and calibration of the weighting system/scales is done by Romanian Bureau of Legal Metrology according to its own procedure.

6.0 Data Management and treatment

All data collected by Production, Technical and Purchasing department from the recycling plant and manufacturers will be centralised by themselves according to the Procedure for the control of documents PS-GF-01 and PS-GRT-01 foreseen by ISO 9001:2008.

7.0 Monitoring Report

All the data from production are monitored in monthly reports issued by the production department.

This documents contains the data for input raw materials and additives, output, consumption of all utilities (electricity, gas, water, fuel etc.)

The data about energy and fuel for all production and departments as well as for other administration department are centralised by the technical manager.

The internal technical staff is responsible for preparing the monitoring report under the supervision of the DOE.

All the related records of verification, reading, cross-checking will be readily accessible for the verification of the DOE.

SECTION D Duration and crediting period

D.1 Duration of project

D.1.1 Start date of project

>> *(Specify start date of the project, in the format of DD/MM/YYYY)*

19/10/2012

D.1.2 Expected operational lifetime of project

>> *(Specify in years)*

D.1 GS Crediting period of the project/activity

D.2.1 Start date of the ongoing GS crediting period

>> *(Specify in dd/mm/yyyy)*

01/01/2017

D.2.3 End date of the ongoing GS crediting period

>> *(Specify in dd/mm/yyyy)*

31/12/2026

D.2.3 Total length of the GS crediting periods

>> *(Specify the total length of crediting period in years in line with GS4GG Principles & Requirements or relevant activity requirements)*

10 years

According to GS4GG Transition requirement 3.4:

„Transition projects renewing their crediting period under GS4GG shall maintain their existing crediting cycle and maximum crediting periods upon transition to GS4GG, specifically as follows:

- A 10 year fixed crediting period project shall retain the balance of its 10 year period post-transition.”

SECTION E Stacking of new assets

>> *(If project is looking to stack new assets over GSVERs the required information to demonstrate compliance to the relevant methodology, product specification and additionality shall be presented in the new PDD template launched with GS4GG)*

N/A

Appendix 1. Contact information of project participants

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Salutation	Mrs.
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