DATA ESTIMATION OF THE ENVIRONMENTAL FOOTPRINT

GUIDE

El Puerto de Liverpool

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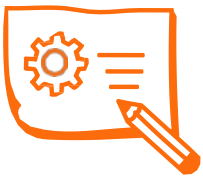
Estimation of Environmental Footprint data

A. OBJECTIVE

To establish the methodologies for estimating the environmental footprint data corresponding to the month of December for the waste footprint, for the particular case of the water footprint and carbon footprint, the guide contemplates the estimation methodology from January to December.

B. SCOPE

This guidance is applicable to all EPL units and EPL business formats as of 2024.



C. INTRODUCTION

The environmental footprint (EGAEPL-PR-1501) is composed of the environmental indicators generated by the El Puerto de Liverpool locations, which are collected and analyzed on a monthly basis; derived from the need to anticipate the delivery of data, this guide is generated as a guideline for the estimates according to each item:

- **Water Footprint: January-December**
- **Carbon Footprint: January - December**
- **Waste Footprint: December**

Estimation of Environmental Footprint data

A.HYDRO FOOTPRINT

For the estimation of the water footprint data, which integrates the consumption of treated and potable water as well as the amount of water sent for treatment, for months where there is no consumption data and it is applicable for calculation, the following priority in calculations will be considered: (Applies to Potable Water and Treated Water).

1.General: Locations with consumption in the reference month

For locations with no consumption in the reference month, the following methods will be used:

2.Locations without Reference Information (USIR)

3. Previous year+Var

4.Seasonal Consumption Factor (SCF)

5.Particular cases: fixed fee, Consumption by periods and Considerations in zero.

It is worth mentioning that the methodologies are not mutually exclusive, so some locations may present one or more methodologies confirmed with the aforementioned priority.

6.Locations sending water for treatment

Estimation of Environmental Footprint data

Each proposed methodology is described below:

1. General: Locations with consumption in the reference month

a). The average percentage of monthly consumption in 2022 and 2023 with respect to the average total annual consumption in 2022 and 2023 is obtained to select similar months.

$$\textit{Average Monthly Consumption Percentage 2022, 2023 (\%)} = \textit{AVERAGE (Monthly Consumption 2022, 2023) / AVERAGE (Total Consumption 2022, 2023)}$$

b). With the percentages obtained, all the months are listed and the one with the smallest absolute difference with respect to the month to be estimated is selected.

Note: This process must be repeated for each month.

c). The percentage of variation between the average of the monthly percentages obtained for 2022 and 2023 of the month to be estimated and the average of the monthly percentages obtained for 2022 and 2023 of the reference month is calculated in order to have an incremental value between both months.

$$\textit{Variation} = \textit{(AVERAGE (Consumption 2022, 2023 Month to Estimate) / AVERAGE (Consumption 2022, 2023 Reference Month)) } - 1$$

Note: This process must be repeated for each month.

d). The 2024 consumption data of the reference month is multiplied by one plus the variation to obtain the 2024 consumption of the estimated month; for this estimate, rounding with a precision of 2 decimal places is considered.

$$\textit{Consumption Month to Estimate } (m^3) = \textit{ROUND((Consumption 2024 Reference Month) * (1 + Variation), 2)}$$

e). This process will be repeated for each month that does not have consumption information.

SPECIAL CASES:

a)In cases where it is identified that the estimate difier from the store trend, and the estimate for the month is greater by 5% than the actual consumption in the same month of the previous year, some other method will be selected from those described in this same document.

b) For a location that does not have a one-year history, the USIR estimation method will be used, omitting atypical data, until a minimum of one year's information is obtained to determine the behavior of the location.

Locations with no water consumption or estimated water consumption for the reference month

The following estimation variables are considered for this section:

2.Locations without Reference Information (USIR)

3.Previous year+Var

4.Seasonal Consumption Factor (SCF)

5.Special cases:

a)Quota fixed

b) Considerations at zero

2. Locations without Reference Information (USIR)

a). If consumption data for more than two months is available in the current year, the calculation for the months without information will be based on an average of the available months for each location, excluding the

months with consumption at zero, for this estimate rounding is considered with a precision of 2 decimal places:

$$Monthly\ Average = ROUND((\ AVERAGE(\ Month1, Month2, Month3 \ldots\ Month\ n\ )), 2)$$

b). This process will be repeated for each month that does not have consumption information.

c). For the "Warehouses" business format, this estimation method will be used, since its consumption does not depend directly on the number of customers.

d). The estimate of the consumption of pipes will be made considering this method, omitting from the formula those months where there was no consumption or purchase of pipes. If there was no consumption in the previous month, the consumption for the month will be zero.

3. Previous year+Var

The following process is mainly used when a location has consumption in the previous year and there is at least one similar location with which it can be compared, the comparison serves to estimate the variability that this location may have with respect to the previous year.

The priority criteria for considering a location as comparable are as follows:

(File 01.1 Selection of locations_AGUA is taken as support material).

1. Business Format
2. Region: Central, North and South
3. Net Constructed Area (NCA) (m^2): Locations with +/- 30% variation with respect to the NCA of each location are selected.
4. Subbrand (If applicable)
5. Similar operation with respect to the previous year
6. Average annual consumption 2023 (m^3/m^2)

Note: If there is no similar location that meets any of the above criteria, the location that is most similar in terms of NCA (m2) per sub-brand or region will be used.

a). Once the location(s) of similar locations have been selected according to the above criteria, the monthly water consumption of the previous year is extracted from the historical database and the monthly consumption 2024 and the variation per month of 2024 with respect to 2023 is obtained, according to the following formula:

$$\text{Monthly Variation} = (\text{Current Year Consumption} / \text{Previous Year Consumption}) - 1$$

If there are several similar locations, the process is repeated for each one and an average of the variations is obtained.

b). Once the monthly variation is obtained, it will be multiplied by the monthly consumption for 2023, for this estimate rounding is considered with a precision of 2 decimal places:

$$\text{Monthly Consumption} = \text{ROUND}((\text{Consumption 2023} * (1 + \text{Monthly Variation})), 2)$$

c). This process will be repeated for each month that does not have consumption information.

Note: If any month of the selected locations does not have data, it will not be considered for the monthly variation with respect to the previous year.

4. Seasonal Consumption Factor (SCF)

The following process is mainly used when a location did not present consumption during the previous year, so for the estimation the general consumption of the Business Form by type of water (Potable Water and Treated Water) of the previous 2 years will be considered.

For this estimation, the Net Constructed Area (NCA) of each business format is used to obtain an average Consumption Factor (m^3/m^2), which will be multiplied by the seasonal variation of each month.

a). Once the monthly consumption data by type of water has been collected, the average historical consumption per month is calculated, for this estimation rounding is considered with a precision of 2 decimal places:

Monthly Average = ROUND(AVERAGE(Consumption Month 2022, Consumption Month 2023), 2)

b). The historical annual average is estimated; for this estimate, rounding considered with a precision is of 2 decimal places:

Historical Annual Average = Historical ROUND(AVERAGE(Historical Monthly Average), 2)

c). Once the above data is obtained, the variation of the monthly historical average with respect to the annual average is obtained, for this estimate rounding is considered with a precision of 2 decimal places:

Monthly Variation vs. Annual Average = ROUND((Historical Monthly Average / Historical Annual Average) - 1, 2)

d). The average consumption data for the previous year (m^3/m^2) is obtained by dividing the historical annual average by the sum of the m2 of the business format to be calculated:

Average consumption 2023 = Historical annual consumption / Total Contructed Area (BF, business format).

e). Once the above data is obtained for each location to estimate consumption under this methodology, the NCA of each location will be multiplied by the average consumption times one plus v. For this estimate, rounding is considered with a precision of 2 decimal places:

Monthly consumption = ROUND(((NCA location * Average Consumption 2023) * (1 + Avg. Annual Variation),2))

f). This process will be repeated for each month that does not have consumption information and for treated water.

5. Special Cases

a) Fixed Fee

In the case of locations with a fixed fee, the value or values reported in the immediately preceding consumption shall be considered.

b) Considerations in 0

1. In the case where consumption is zero and does not correspond to the main source of supply, the data for months without information will be considered zero since it is part of an intermittent consumption and it is not possible to determine with certainty its use for the month of estimation.
2. In the case of locations that have not presented any consumption during the year, the data for the months without information from this source of supply will be considered as zero.
3. For bimonthly consumption starting in January, the December is 0.

4. In case the water consumption of any location is already accounted for in any other location, the consumption will be zero.

6. Locations sending water for treatment

For this calculation, locations with wastewater treatment are considered, whose estimation methodology is as follows:

1. Water treatment is considered to be totally related to water consumption; therefore, from the locations that treat wastewater, the percentage of treatment for the January-November period was obtained through the following formula:

Water Treatment Percentage =
*(Amount of water sent for treatment (JAN – NOV 2024) / Water consumption JAN – NOV 2024) * 100*

The estimated water consumption data for the month of December 2024 (obtained in the previous section) is multiplied by the % treatment value, considering a rounding of 2 decimal places.

Amount of Water Sent for Treatment =
*ROUND(Estimated Water Consumption DEC 2024 * Water Treatment Percentage, 2)*

Notes:

-In the December 2024 estimate, the formula where the values of the treated water consumption meter are added and multiplied by 1.3 is no longer considered, since the average for the year itself is used, which already contains this effect.

-For stores with no treatment values during the year, consumption is zero for December 2024.

Estimation of Environmental Footprint data

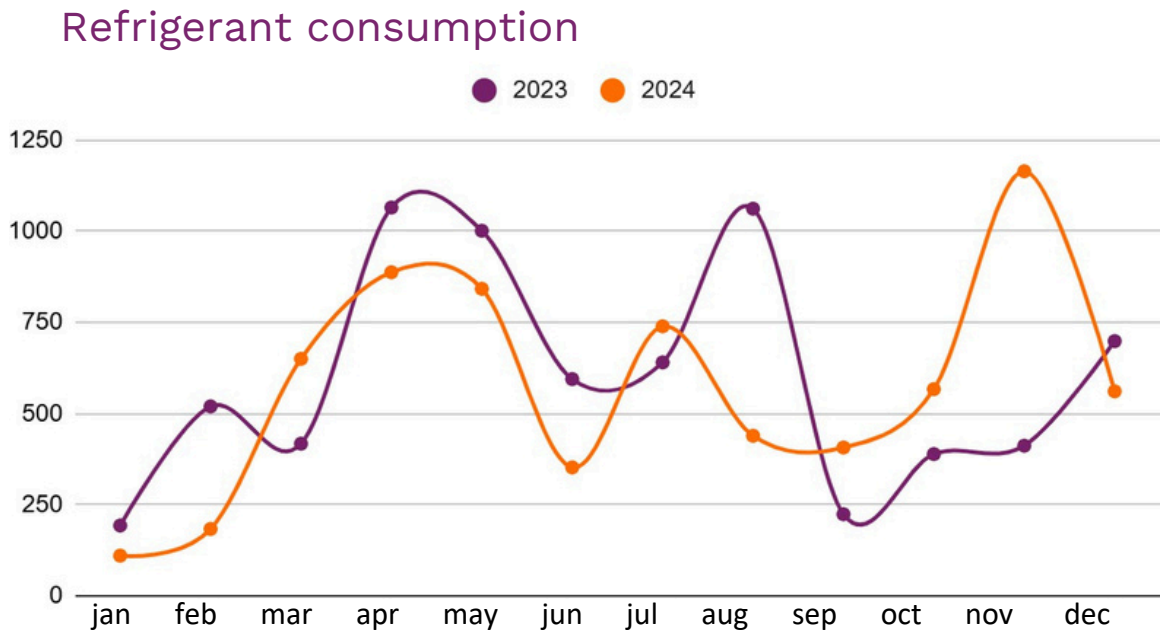
B.Carbon Footprint

The estimation of the carbon footprint data was calculated according to the nature of the data, divided as follows:

1) a) Refrigerants
2) b) Fuels (diesel, LP Gas, gasoline and natural gas)
3) c) Electric power (dirty and clean)

1. Refrigerants

1. The refrigerant recharge perfil is compared, observing little similarity between the two years.



refrigerant

Estimation of Environmental Footprint data

2.Based on the above, the average of ENE-NOV 2024 will be taken as the basis for calculation.

3.The variation between the sum of the ENE-NOV 2024 vs 2023 recharges of the same period is calculated.

$$Variation = (Sum\ of\ Recharges\ JAN - NOV\ 2024\ /\ Sum\ of\ Recharges\ JAN - NOV\ 2023) - 1$$

4.The average data for JAN-NOV 2024 is multiplied by one plus the variation to obtain the estimated recharges in DEC 2024, for this estimate rounding with a precision of 2 decimal places is considered.

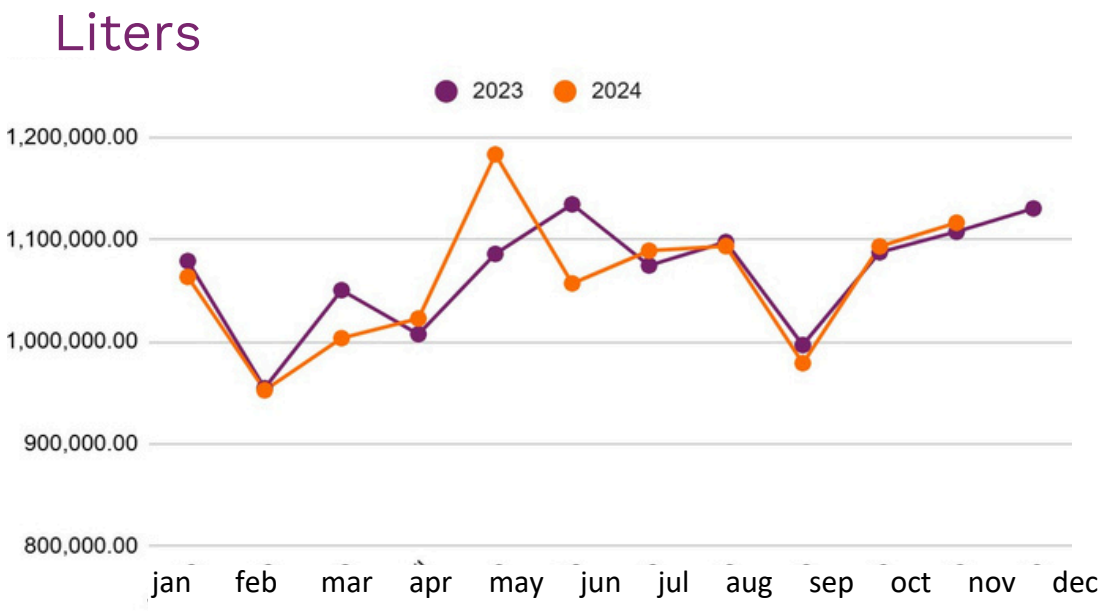
$$\text{Recharges DEC 2024} = \text{ROUND}((\text{Average Recharges JAN - NOV 2024}) * (1 + \text{Variation}), 2)$$

Estimation of Environmental Footprint data

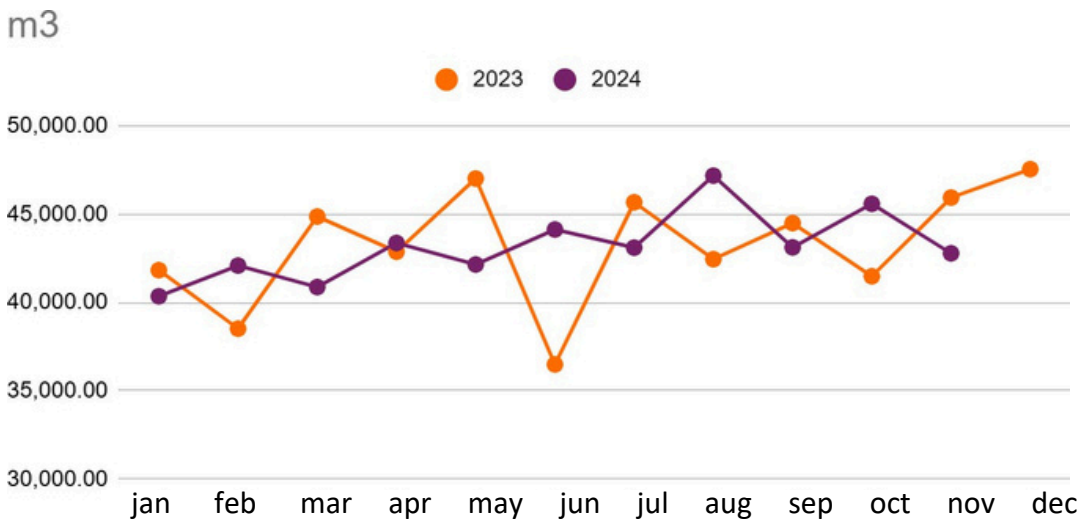
2. Fuels (Diesel, LP Gas, Gasoline and natural gas)

For this exercise, 2023 and 2024 (JAN-NOV) consumptions are taken as a reference since they are considered similar years in the operation (normal operation post pandemic).

1. The perfil of fuel consumption per unit of measurement (Liters and m3) is compared separately, observing that, for both years, the behavior is similar.



Estimation of Environmental Footprint data



Consumption m3

2. In accordance with the consumption trend, the average consumption for the period of JAN-Nov 2024 is taken as a reference.

3. The percentage variation of average fuel consumption from JAN-NOV 2023 to DECEMBER 2023 is calculated in order to have a differential value between both values.

Variation = (Consumption DEC 2023 / Average Consumption JAN – NOV 2022) − 1

4. The average fuel consumption data for JAN NOV 2024 is multiplied by one plus the variation by type to obtain the estimated consumption for DEC 2023, for this estimate rounding is considered with a precision of 2 decimal places.

Consumption DEC 2024 = ROUND((Average Consumption JAN – NOV 2024) * (1 + Variation), 2)

3.Electric power.

For the estimation of energy consumption data for the month of December, which integrates the consumption of dirty energy and clean energy, the following is considered:

I. Methodology for locations with November consumption
II. Methodology for locations that do not present consumption in the month of November and October is considered as a reference.
III. Methodology for locations with no electricity data records during 2024, but which had electricity consumption.

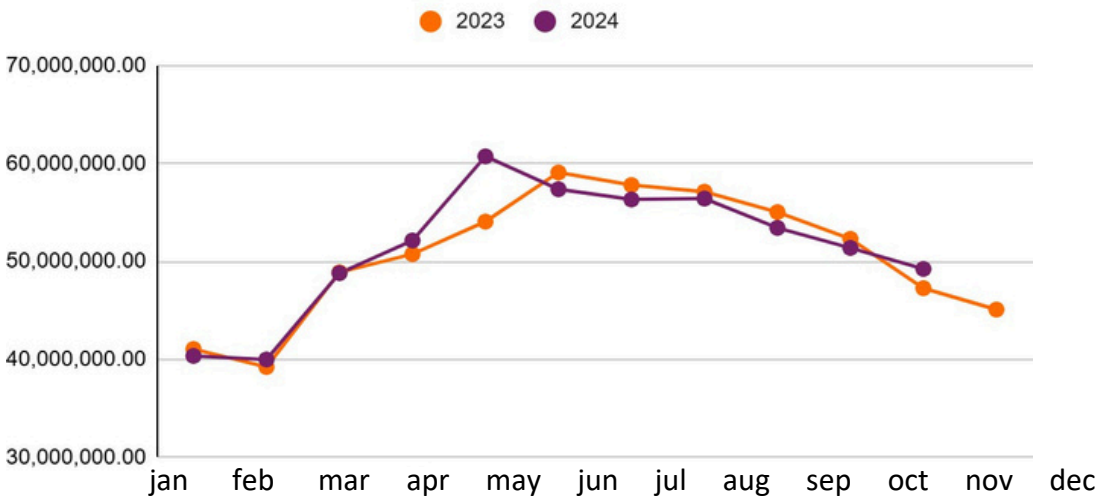
I.Methodology for locations with November consumption

For this exercise, the 2023 and 2024 (Jan-Nov) consumptions are taken as a reference since they are considered similar years in the operation (normal operation post pandemic).

1. The profile of energy consumption throughout the year is compared, observing that, for both years, the behavior is similar:

Estimation of Environmental Footprint data

Energy Consumption



2. According to the consumption trend, November 2024 is taken as the reference month.
3. The percentage variation of dirty energy consumption for the months of December 2023 and November 2023 is calculated in order to have a differential value between both months.

Variation in Dirty Energy Consumption = (Consumption DEC 2023 / Consumption NOV 2023) - 1

4. The percentage variation of clean energy consumption for the months of December 2023 and November 2023 is calculated in order to have a differential value between both months.

Variation in Clean Energy Consumption = (Consumption DEC 2023 / Consumption NOV 2023) - 1

5. The November 2024 energy consumption data by type is multiplied by one plus the variation by type to obtain the estimated consumption of

December 2024, for this estimate rounding to 2 decimal places is considered.

- Polluted energy consumption DEC 2024 = ROUND((Consumption NOV 2024) * (1 + Variation), 2)
- Clean energy consumption DEC 2024 = ROUND((Consumption NOV 2024) * (1 + Variation), 2)

II. Methodology for locations that do not present consumption in the month of November and October is considered as a reference.

1. The percentage variation of dirty energy consumption for the months of December 2023 and October 2023 is calculated in order to have a differential value between both months.

Variation in Polluted Energy = (Consumption DEC 2023 / Consumption OCT 2023) - 1

2. The percentage variation of clean energy consumption for the months of December 2023 and October 2023 is calculated in order to have a differential value between both months.

Variation in Clean Energy = (Consumption DEC 2023 / Consumption OCT 2023) - 1

3. The energy consumption data by type for October 2023 is multiplied by one plus the variation by type to obtain the estimated consumption for December 2023, for this estimate rounding is considered with a precision of 2 decimal places.

4. Polluted Energy Consumption DEC 2024 = ROUND((Consumption OCT 2024) * (1 + Variation), 2)
   Clean Energy Consumption DEC 2024 = ROUND((Consumption OCT 2024) * (1 + Variation), 2)

Note: For locations with no consumption in the 2 reference months mentioned above, the consumption is considered to be zero another reference month cannot be taken due to the differences in consumption between the other months.

III. Methodology for locations with no electricity data records during 2024, but which had electricity consumption.

This estimate is used in cases where it is known that the branch had electricity consumption in 2024; however, the monthly electricity consumption is not available and there is no historical consumption for previous years.

1. The 2023 Net Constructed Area (NCA) and the 2022 and 2023 monthly electricity consumptions of the same business format are used to obtain an average Consumption Factor (kWh/m2), which will be multiplied by the seasonal variation of each month.

Once the monthly energy consumption data has been collected, the average historical consumption per month is calculated, for this estimation rounding is considered with a precision of 2 decimal places.

Average Monthly Consumption =
ROUND(AVERAGE(Monthly Consumption 2022, Monthly Consumption 2023), 2)

2. The historical annual average is estimated; for this estimate, rounding is considered with a precision of 2 decimal places.

Annual Average Consumption =
HISTORICAL ROUND(AVERAGE(Consumption 2023), 2)

3. Once the above data have been obtained, the variation of the monthly historical average with respect to the annual average is obtained; for this estimate, rounding with a precision of 2 decimal places of the m2 is considered.

Average Consumption =
ROUND(Historical Monthly Average / Historical Annual Average - 1, 2)

4. The average consumption data for the year 2023 (kWh/m2) is obtained by dividing the annual average 2023 by the NCA m2 for the same period of the business format to be calculated.

Average Consumption = Average Annual 2023 / Total Net Contructed Area (NCA) 2023

5. Once the above data is obtained for each location to estimate consumption under this methodology, the NCA 2024 of each location will be multiplied by the average consumption times one plus the monthly vs. annual average variation, for this estimate rounding with a precision of 2 decimal places is considered.

Estimated Consumption =
*ROUND(((Average Consumption 2023 * NCA) * (Monthly Average Variation + 1)), 2)*

Estimation of Environmental Footprint data

WASTE FOOTPRINT

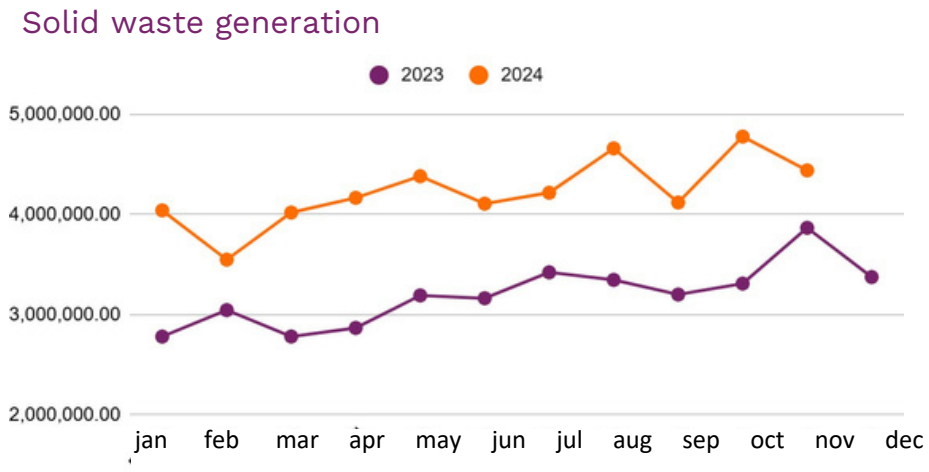
a)Waste footprint

b)Quarting method (Suburbia)

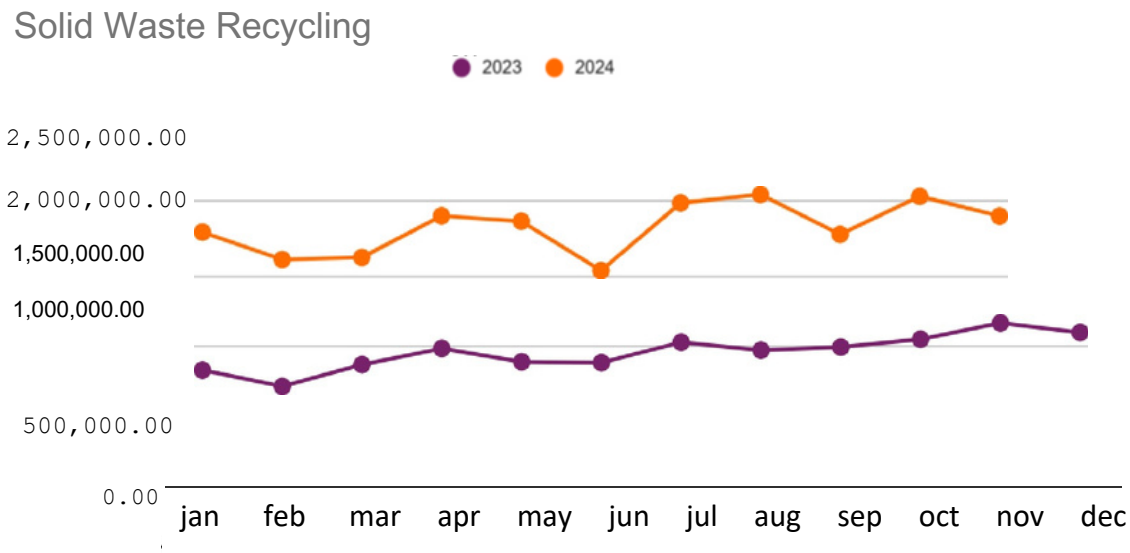
a)For the estimation of the waste footprint data, corresponding to the month of December, which integrates the generation of waste (Municipal Solid Waste, Special Handling Waste and Hazardous Waste) and the amount of recycled waste[1], the following is considered:

For this exercise, the generation and recycling data for 2023 and 2024 (JAN-OCT) are taken as a reference since they are considered similar years in the operation (normal post-pandemic operation).

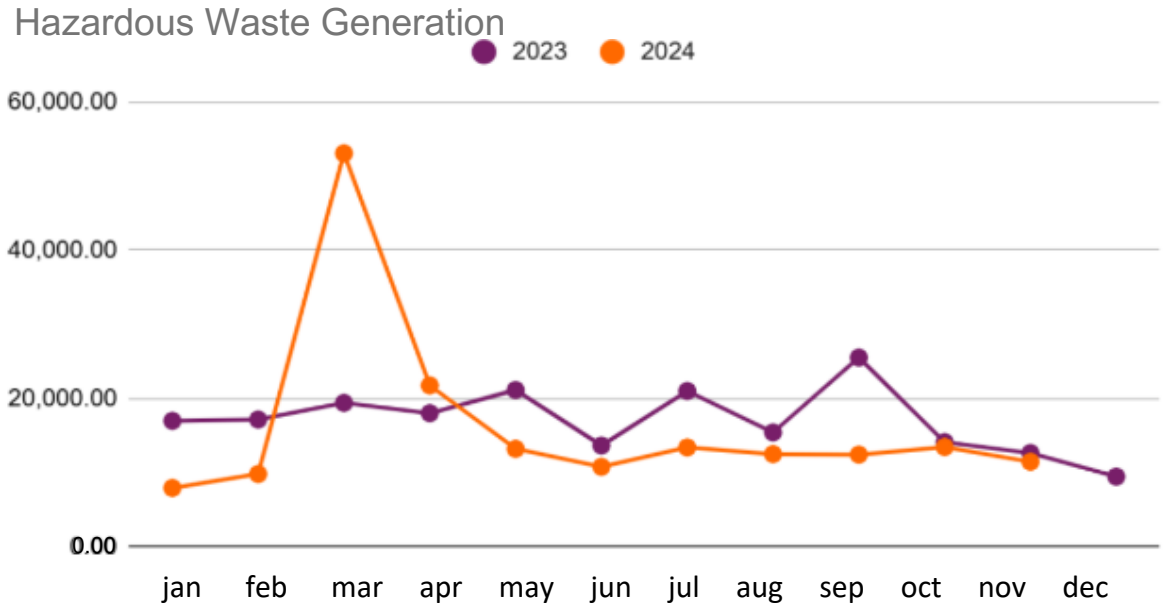
1. We compare the profile of waste generation and amount of waste recycled throughout the year, observing that:



[1] For this exercise, the waste categorized as "recyclable" is considered, which includes the classification of recyclable special management waste and recyclable municipal solid waste.



Recycled waste



Estimation of Environmental Footprint data

Based on the above information, the average ENE-OCT 2024 generation of waste generated, amount of recycled waste and hazardous waste will be taken as a reference.

2. The percentage of variation between the average waste generated, waste recycled and hazardous waste for the period JAN OCT 2023 vs DEC 2023 is calculated.

Variation in Generation = (Generation DEC 2023 / Average Generation JAN-OCT 2023) - 1

Recycling variation = (Generation DEC 2023 / Average Recycling JAN-OCT 2023) - 1

Hazardous Waste Variation = (Generation DEC 2023 / Average Hazardous Waste JAN-OCT 2023) - 1

3. The average obtained is multiplied by one plus the variation calculated above for each type by type to obtain the estimated amount of waste generated and recycled in DIC 2024, for this estimate rounding is considered with a precision of 2 decimal places.

Generation December 24 = ROUND(Average Generation JAN-OCT 2024 * (1 + Variation in Generation), 2)

Recycling DEC 2024 =

ROUND((Average Recycling JAN-OCT 2024) * (1 + Variation in Recycling), 2)

Hazardous Waste Generation DEC 2024 =

ROUND((Average Hazardous Waste JAN-OCT 2024) * (1 + Variation in Hazardous Waste), 2)

Estimation of Environmental Footprint data

- Considerations:
  - This estimate does not apply for centralized values of CEDIS Tultitlán and ORCA Waste generation and the actual values for the month of December will be taken.
  - For the December estimation of Suburbia's Urban Solid Waste, the same estimation procedure used from Jan - Nov (Quartet Method) will be used with the finality of maintaining the same trend.

- Estimate for months without data
  - For stores with 50% of annual responses, averaging is performed (Omit data far from the mean R=0.8).
  - For stores with 50% fewer annual responses, linear regression is performed (omit data far from the mean R=0.8).
  - In case of any location with traceability, the calculation is made by type of waste, otherwise it is estimated by non-recyclable MSW and Recyclable MSW, in the app it would be placed with Inorganic.

Estimation of Environmental Footprint data

b) Quarting method (Suburbia)

A) Objective.

Establish the steps to be followed to ensure the confidability of the MSW calculation and its validation at Suburbia locations.

B) Scope

This guide is applicable to all Suburbia locations that make up EPL, Environmental area and Maintenance Managers, responsible for the management and reporting of Municipal Solid Waste.

1. Quartet Method.

Using the methodology established in NMX-AA-15-1985, "Environmental protection - soil contamination - municipal solid waste - sampling - quarting method", the calculation of the average daily generation of municipal solid waste of participating facilities was carried out, according to the classification of (Table 1), as well as the mapping of the number of collaborators.

Table 1. Number of Collaborators and average daily MSW by location

Installation	1	2	3
Non-collaborators	72	64	67
Type of MSW	Kg prom/day		
Toilets	3.23	2.57	2.32
aluminum	0.03	0.095	0
PET	0.32	0.54	0.82
Inorganic Miscellaneous	10.155	12.194	7.3425
Organics	1.54	1.195	1.02
Total	15.275	16.594	11.5025

2. According to the data in Table 1, the per capita generation of each facility was calculated and their minimum and maximum confidence intervals were obtained (Table 2), according to the following formula:

Formula for the calculation of confidence intervals.

The formula for a confidence interval for the population mean μ when the population standard deviation is known is:

$$CI = \left(\bar{x} - z_{\alpha/2} \times \frac{\sigma}{\sqrt{n}}, \bar{x} + z_{\alpha/2} \times \frac{\sigma}{\sqrt{n}}\right)$$

where the value $z_{\alpha/2}$ is the critical z-value associated with the specified confidence level.

For example, for a 95% confidence level, we know that $\alpha = 1 - 0.95 = 0.05$, and using a standard normal probability table, we find that $z_{\alpha/2} = 1.96$.

Table 2. Per capita MSW generation and its confidence intervals.

Type	Generation prom/person			PROM	S	N	CI MIN	CI MAX
	N1	N2	N3					
Toilets	0.04486	0.04016	0.03463	0.03988	0.00512	3	0.034084579	0.045678239
Aluminum	0.00042	0.00148	0	0.00063	0.00077	3	-0.000232692	0.001500053
PET	0.00444	0.00844	0.01224	0.00837	0.0039	3	0.003963063	0.012784103

Inorganic Miscellaneous	0.14104	0.19053	0.10959	0.14705	0.0408	3	0.100879588	0.193228724
Organics	0.02139	0.01867	0.01522	0.01843	0.00309	3	0.014931869	0.02192456

II. Reporting and Validation

Maintenance Manager

1. Through the Waste form (Annex I), report the generation of urban solid waste, on a monthly basis, according to the type of container that corresponds.

Responsible for Environmental Footprint.

2. Concentrate the data in the file "MSW Calculation - Quartet Method" (Annex II).

3. If the waste report is not in Kilograms, perform the conversion by applying the corresponding conversion factor according to Table 3.

Table 3. Conversion factors by type of waste

Type	Quantity	Unit
SANITARY BAG	1,5	KG
CARDBOARD BUNDLE	20	KG
PLAYO BAG	5	KG
HOOK BOX	20	KG
PAPER BOX	20	KG
HOOK PIECE	0,2	KG
INORGANIC BAGS	7	KG

Responsible for Environmental Footprint.

4. Performs the calculation of theoretical waste generated1, by type of waste (Table 1), considering the number of days of the month corresponding to the report and the number of collaborators at 95%, as well as their confidence intervals (Table 2).

5. Performs data validation for each type of waste reported.

Note: The data to be reported is thedata, after validation, by waste type.

6. Concentrate the generation of each location in the Environmental Footprint Dashboard (EGAEPL-FO-0701).

7. Generate indicators and report to table 5.

III. Annexes.

No	Name	Key
I	Environmental protection - Soil contamination - Municipal solid waste - Sampling - Quarantine method	NMX-AA-15-1985
II	Waste Form.	EGAEPL-FO-3301
III	MSW Calculation - Quartet Method	EGAEPL-FO-4401

[1] Does not apply to Cardboard, Playo, Hooks and Paper.