National Plastic Waste Inventory Report

Testing of Guidance on Development of Plastic Waste Inventories in Suriname

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Date:	April 8th, 2025
Version:	04

Acknowledgements

We would like to extend our sincere gratitude to everyone who contributed to the success of developing this inventory report on plastic waste in Suriname.

Firstly, we wish to thank our partners and collaborators, including the team at BCRC – Caribbean and the Ministry of Spatial Planning and Environment (ROM), Directorate for the Environment, for their valuable support, insights, and assistance with data collection.

Our heartfelt thanks go to Dr. Zhijie Li from the United Nations Institute for Training and Research (UNITAR), Sustainable Cycles (SCYCLE) Programme, for her guidance in using the inventory toolkit and continuous support in the development of the plastic inventory.

We would also like to express our gratitude to the National Working Group (NWG) for their invaluable assistance. Additionally, we extend our sincere appreciation to all participants and stakeholders who generously contributed their time and expertise. This research would not have been possible without the support of these individuals and organizations.

Lastly, we would like to express our deep gratitude to our dedicated SUWAMA research team, whose hard work and commitment were crucial in bringing this project to fruition.

Thank you all for your dedication and assistance.

Team SUWAMA

Executive Summary

Plastics are widely used across nearly all economic sectors in Suriname due to their versatility, affordability, and convenience. However, despite their benefits, plastic waste poses a significant problem when mismanaged. In Suriname, only 3% of plastic waste is recycled, while the remaining 97% is mismanaged through dumping or burning.

To address the plastic waste problem in Suriname, the project titled **"Testing of Guidance on the Development of Plastic Waste Inventories and the Technical Guidelines on the Environmentally Sound Management (ESM) of Plastic Waste"** was initiated by the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean (BCRC – Caribbean) in January 2024. It was implemented by the Suriname Waste Management Foundation (SUWAMA), under the supervision of the Ministry of Spatial Planning and Environment (ROM), Directorate for the Environment (DM), and ran from January to XX 2024.

This report addresses the '**Testing of Guidance on the Development of Plastic Waste Inventories'**. The purpose was to develop a national plastic waste inventory (NPWI) for Suriname and thus gain insight into the quantities and types of plastic waste generated in, so that appropriate management measures can be developed.

To create the inventory, a toolkit, based on the 'Production Lifetime Method (PLM)', developed by UNITAR-SCYCLE was used. To develop the NPWI, data on plastic import, export and domestic (local) production were required as input for the toolkit. Import and export data were obtained from the Tax Authority, however, obtaining domestic production data from the General Statistics Bureau of Suriname, different local plastic producers and other sources was a challenge and ultimately unsuccessful.

To have an indication of the domestic production of plastics in Suriname, primary polymer data was collected and summarized, noting that these polymers were not produced in Suriname. Based on this data, it was estimated that for the period 2013 to 2023, an average of 7,388 tons of plastic products were produced locally per year in Suriname and thus put on the market (POM). While this data provided an estimate of domestic plastic production, its contribution to plastic waste could not be calculated because of data gaps. However, it is assumed that the majority of primary plastics are used to produce plastics for the packaging sector. In this case, the plastic products produced from this data would become plastic waste within half a year, making a significant contribution to the amount of plastic waste produced.

As a result, plastic waste generated could only be calculated for net import (import – export) data and thus provides a partial overview of the quantity of plastic waste generated.

Based on the results of the inventory, we can state that for the period 2013-2023, an average of 23,483 tons of plastics were POM per year in Suriname via net import only. The plastic waste generated based on plastics that were POM was 15,046 in 2023. Between 2017 and 2023, plastic waste generation was fairly stable and averaged 16.000 tons per year.

It can be said that the most significant contributors to plastic POM are the sectors packaging, consumer and institutional products and building and construction from the plastic polymers PE, PP, PET and PVC.

The largest contributors to plastic waste in Suriname are consequently the packaging and consumer and institutional products sectors, primarily from the polymers PE, PP, and PET. The contributions of PVC from the building and construction sector to plastic waste were underestimated in this study due to the limited 11-year time series used for the analysis.

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Abbreviations

ABS	Algemeen Bureau voor de Statistiek in Suriname (General Statistics Bureau of Suriname)
BCRC-Caribbean	Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean
BRS Secretariat	Basel, Rotterdam, and Stockholm Secretariat
CPC codes	Central Product Classification
HS Codes	Harmonized System Codes
Kg	Kilograms
NPWI	National Plastic Waste Inventory
NTT	National Technical Team
PE	Polyethylene
PEM	Embedded Plastic
PET	Polyethylene Terephthalate
PLM	Product Lifetime Methodology
POM	Put On Market
PP	Polypropylene
PS	Polystyrene
PUR	Polyurethanes
PVC	Polyvinyl chloride
ROM, DM	Ministerie van Ruimtelijke Ordening en Milieu, Directorate for Environment (Ministry of Spatial Planning and Environment, Directoraat Milieu)
SUWAMA	Suriname Waste Management Foundation
The Secretariat	Secretariat of the Basel Convention
UN Comtrade	United Nations Commodity Trade Statistics Database
UNITAR SCYCLE	United Nations Institute for Training and Research, Sustainable Cycles Programme

1 Introduction

Plastic, derived from fossil fuels, has had a profound impact on the environment since its widespread adoption in the 1950s. By 2018, global plastic production had soared to 359 million metric tons annually. Despite its widespread use in various industries, many plastic products have short lifetimes yet can take up to 400 years to decompose fully. This has resulted in an annual accumulation of over 400,000 metric tons of plastic waste worldwide, with at least 8 million metric tons ending up in the ocean from land-based sources each year, posing a significant threat to marine life and coastal communities like Suriname (Diez, et al., 2019).

Currently, Suriname faces challenges in managing plastic waste due to poor waste management practices. Municipal waste, including plastics, is not sorted systematically; instead, it is commingled and dumped at open dumps throughout the country. Reports from 2018 revealed that in 2017, plastic constituted 16.7% of waste in Paramaribo Suriname, with less than 3% being recycled (ILACO NV & Royal Haskoning DHV, 2018). This means that most of the plastic waste (97%) is either dumped at open dumps if waste collection is available or illegally disposed of or burned. Once in the environment, plastic waste often accumulates in unused public lands, waterways, and rivers, contributing to marine pollution amongst others (Heidbreder, Bablok, Drews, & Menzel, 2019; Clayton, Walker, Bezerra, & Adam, 2021).

In response to these challenges, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal has implemented various instruments, including the "Plastic Waste Partnership (PWP)" and the "Technical Guidelines on the Environmentally Sound Management (ESM) of Plastic Waste (the Technical Guidelines[1])." These guidelines, initially published in 2002 and updated in 2023, consist of ten (10) modules aimed at assisting countries in controlling the generation of plastic waste and effectively managing it.

As part of the Basel Convention's Work Program, the Secretariat of the Basel, Rotterdam, and Stockholm Conventions (BRS Secretariat) collaborates with Regional Centers of the Basel Convention (BCRCs) in the Caribbean, China, and Slovakia to demonstrate the applicability of the Technical Guidelines in various regions. Specifically, the BCRC-Caribbean, with support from the Secretariat of the Basel Convention, conducted the project named 'Testing of Guidance on Development of Plastic Waste Inventories and Testing the Technical Guidelines on the Environmentally Sound Management of Plastic Waste' in three Caribbean countries: Antigua and Barbuda, Saint Lucia, and Suriname.

As part of this initiative, the BCRC-Caribbean launched the project in Suriname to specifically test the development of plastic waste inventories and assess the Technical Guidelines for the Environmentally Sound Management (ESM) of plastic waste. The project was successfully executed from January to November 2024 by the Suriname Waste Management Foundation (SUWAMA), acting as the National Technical Team (NTT) since January 2024. This endeavour

[1] The Technical Guidelines on the ESM of plastic waste can be accessed via the following link https://www.basel.int/Implementation/Plasticwaste/Technicalguidelines/Overview/tabid/7992/Default.aspx.

was conducted under the supervision of the Ministry of Spatial Planning and Environment (ROM), Directorate for the Environment (DM) in Suriname and guidance from the BCRC-Caribbean.

The project encompassed two main activities:

1. Assessment of the status and applicability of the technical guidelines as developed for the ESM of plastic waste: This involved assessing the status and applicability as well as pilot testing of the technical guidelines developed for the ESM of plastic waste, as adopted at the Conference of the Parties to the Basel Convention, in Suriname. The Surinamese government selected modules of the Technical Guidelines based on national context and priorities for improving plastic waste management. Modules B, C, D, F, G, and J were chosen, focusing on (b) legal and regulatory frameworks, (c) waste prevention, (d) identification and inventory, (f) processing, collection, transportation, (g) environmentally sound disposal and (j) public awareness and participation. The objective was to prepare an assessment and recommendations report based on the findings, including barriers to implementing the guidelines and recommendations on measures to address these barriers.
2. Development of National Plastic Waste Inventory (NPWI): Utilizing the "Product Lifetime Methodology (PLM)" toolkit as outlined in the “Practical Guidance on the Development of Inventories of Plastic Waste[2]” developed by the Basel, Rotterdam, and Stockholm (BRS) Secretariat, the project aimed to develop a national inventory of plastic waste for Suriname. This involved utilizing statistics on the import and export of plastic, as well as local production data. The objective was to gain insight into the quantities and types of plastic waste generated in Suriname, so that appropriate management measures can be development as the NPWI provides the following advantages:
    a. Quantifies the magnitude of plastic waste at a national level in a reliable and comparable manner
    b. Provides information to policy makers and/or decision makers
    c. Promotes environmentally sound management of plastic at a national level
    d. Sets realistic and appropriate collection and recycling targets at a national level and
    e. Reduces plastic waste generation at a national level.

The subsequent chapters delve into a description of plastic and its wastes, the scope of the inventory, the methods used to obtain information and data to develop the inventory, the results of the NPWI, and recommendations for improvement.

[2] The Practical Guidance on the Development of Inventories of Plastic Waste can be accessed via the follow link: http://www.basel.int/Portals/4/download.aspx?d=UNEP-CHW-NREP-INVENT-GUID-PlasticWaste-2022.English.pdf

This report is structured as follows:

Chapter 1 Introduction: Introduces the project, its purpose and partners and an overview of the report's structure.

Chapter 2 Description of plastics and their wastes: Provides a description of the classification of plastic waste used for the development of this NPWI and the application of plastics.

Chapter 3 Scope of the inventory: Defines the scope of the inventory for Suriname.

Chapter 4 Methodology: Describes the methodology used to collect data, data processing and analysis, and limitations and assumptions regarding the inventory.

Chapter 5 Results and analysis of the baseline inventory: Presents the findings of the baseline inventory and an analysis.

Chapter 6 Conclusion and recommendations: Provides recommendations for plastic waste of priority and for improving the toolkit.

2 Description of plastics and their waste

2.1 Plastics and their applications

In Suriname, plastics are widely used across nearly all economic sectors due to their versatility, cost effectiveness and ease of use. Comprising various polymers such as polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PET), polystyrene (PS), polyvinyl chloride (PVC), and polyurethane (PUR), plastics are often combined with additives (fillers, plasticizers, stabilizers, flame retardants and colourants) to enhance their performance. This makes them suitable for a broad range of applications across multiple industries, including but not limited to:

1. Packaging: Used in food containers, bottles, bags, and wraps.
2. Construction: Found in pipes, insulation, flooring, windows, and roofing materials.
3. Transport (automotive): Used for car parts such as dashboards, bumpers, and interiors.
4. Healthcare: Utilized in medical devices, syringes, intravenous bags, prosthetics, and packaging for medical supplies.
5. Electronics: Used in components such as casings for computers, phones, and televisions.
6. Textiles: Found in synthetic fabrics like polyester, nylon, and spandex.
7. Aerospace: Used for lightweight, durable parts in aircraft and spacecraft.
8. Agriculture: Utilized in irrigation systems, greenhouses, and packaging for agricultural products.
9. Consumer goods: Used in everyday items like toys, furniture, kitchenware, and household products.

The addition of hazardous additives or processing aids can potentially render plastic waste hazardous. The Technical Guidelines on the Environmentally Sound Management of plastic waste offers comprehensive guidance on the distinguishment between hazardous and non-hazardous plastic waste.

According to the practical guidance the flow of plastic materials through the economy can be divided into four key phases: production, consumption, waste generation (including both pre- and post-consumer waste), and waste management (which includes both managed and mismanaged waste). While most of the plastics in Suriname are imported, there is also local production, particularly for plastic products in the packaging sector. As mentioned previously, about 3% if Suriname's plastic waste is recycled, leaving the remaining 97% mismanaged.

When developing a plastic waste inventory, it is essential to identify reliable data sources for collecting statistics on each phase mentioned above. It is therefore important to establishment a clear classification system for plastic waste. The next chapter outlines the classification system used in developing the NPWI for Suriname.

2.2 Classification of plastic waste

To support the development and regular updating of the NPWI, it is recommended to adopt a consistent plastic waste classification system that ensures data comparability across various sectors and time periods. Since Suriname currently lacks a national classification system, it is recommended to adopt one that allows the country to:

1. Compile statistics on key parameters of the inventory and establish the methodology for the estimation of plastic waste generated (in this case the Product Lifetime Methodology (PLM)), which can be applied nationally. This will facilitate the regular updating of the inventory.
2. Meet the objectives of the inventory, including quantifying the amount of plastic waste at a national level in a reliable and comparable way, setting realistic targets for plastic and plastic waste reduction, as well as collection and recycling targets, and providing valuable information to policy and decision-makers for the ESM of plastic waste.
3. Ensure Suriname's compliance with the Basel Convention reporting requirements, which mandate certain data to be categorized according to the codes in Annexes I, II, VIII, and IX (refer to the Technical Guidelines for an overview of the Annexes).

For the development of this NPWI, the classification system used was based on the statistical requirements of the PLM inventory toolkit and the objectives of the NPWI. Since the PLM toolkit currently does not differentiate between hazardous and non-hazardous plastic types, this distinction was excluded. However, it is strongly recommended that the PLM toolkit be updated to include a distinction between hazardous and non-hazardous plastic types.

The classification used for the development of this NPWI is therefore sector and plastic polymer based as presented in the tables below.

Table 1 Classification by key sectors putting plastic on the market and producing plastic waste

Sectors	Examples
Transportation	Plastic vehicle components, dashboards, coating, bumpers
Packaging	Plastic bottles, plastic wraps, plastic food containers
Building and construction	Plastic pipes, window frames, ceiling, floors
Electrical/electronic	Plastic components in computers, keyboards, refrigerators, washing machines
Consumer and institutional products	Toys, kitchen ware, bins made from (or partially) of plastic components
Industrial machinery	Plastic seals, conveyors, insulation
Textiles	Synthetic fibers and fabrics made from plastic materials such as polyester and nylon
Other	Baby bottles, CDs

Table 2 Classification of plastic put on the market and plastic waste by polymer type

Polymer Code	Polymer type
PE	Polyethylene
PP	Polypropylene
PET	Polyethylene Terephthalate
PS	Polystyrene
PVC	Polyvinyl Chloride
PUR	Polyurethane
Other	

3 Scope of the inventory

The scope of NPWI for Suriname was determined based on:

1. Input received from the stakeholders during the online inception workshop held on February 7th, 2024. Stakeholders emphasized the need to address all sectors involved in putting plastic on the market and producing plastic waste, as listed in the previous section. Therefore, the inventory was designed to reflect this comprehensive scope.
2. Input requirements of the PLM toolkit: Developing the NPWI required the collection of plastic import and export data categorized by Harmonized System (HS) Codes, as well as domestic plastic production data classified by Central Product Classification (CPC) Codes, by weight for a period of at least ten (10) years. Consequently, it was determined to collect data from 2013 to 2023 for plastic products imported, exported, and produced locally, measured in kilograms.

4 Methodology

The methodology for the NPWI is subdivided into:

1. Description of the Product Lifetime Methodology (PLM) toolkit.
2. Data resources, collection and processing.
3. Limitations of and assumptions regarding the inventory.

4.1 Description of the Product Lifetime Methodology (PLM) toolkit

The Product Lifetime Methodology (PLM) toolkit was developed by The United Nations Institute for Training and Research (UNITAR) under the Sustainable Cycles Programme (SCYCLE). UNITAR is an autonomous organ of the United Nations (UN) General Assembly dedicated to generating and transferring knowledge and strengthening capacities relevant to global issues such as human security, development, and welfare.

The PLM toolkit utilized for the development of the NPWI consists of 2 calculation tools:

1. The **"Plastic Put on the Market (POM) Calculation Tool"** is used to determine the weight of plastic POM in each country by sector *(packaging, transport, building and construction, electrical and electronic equipment, consumer and institutional products, industrial machinery, textiles, other)* and by type of plastic *(i.e. PE, PP, PS, PVC, PET, PUR)*. It is important to note that the toolkit only includes finished products to avoid double-counting, excluding plastic in primary forms or semi-finished plastic products. The total plastic POM in a given year for a specific country is calculated using this methodology:
    a. the amount of plastic imported (using Harmonized System (HS) codes)
    b. the amount of plastic exported (using Harmonized System (HS) codes)
    c. the amount of plastic domestically produced (using Central Product Classification Codes (CPC codes)).
2. The **"The Plastic Waste Generation Calculation Tool"** utilizes the calculations from the POM calculation tool, as input, for the calculation of the weight of plastic waste generated by sector and by type of plastic in each country. Calculation of plastic waste is generated based on the age of products and the probability of such products becoming waste. To this end, the Gaussian Distribution function is used to estimate the probable rate of becoming waste in a certain year (see figure 1 and 2).

The PLM toolkit comes with embedded formulas, requiring only input of import and export data (HS codes) and domestic production data (CPC codes) of at least ten (10) years by weight (kg) or other units[3] into the calculation tools. The key elements of the PLM toolkit are presented in the figure below.

[3] For some codes, there are also alternative/possible Units listed in the toolkit, which can be chosen from other than Kg. However, weight is usually a better option as input data, since the toolkit needs to do the conversion with assumed parameters if the input is in other units than Kg.

1. POM
- How much plastic is put on the market?
- Formula: POM= Domestic Production (CPC) + Imports (HS) – Exports (HS)

2. Fraction
- What is the plastic fraction of the different plastic products?
- Formula: $fHS*Import-fHS*Export + fCPC*Domestic\ Production$ (fHS = plastic fraction in imported/exported plastic products and $fCPC$ = plastic fraction in domestically produced plastic products)

3. Lifetime& probability
- Product lifetime and probability of becoming waste, in other words, how long does it take for the plastic to become waste?
- Formula (Gaussian Distribution Function):

$$\textbf{Plastic Waste Generated}\ (n) = \sum_{t=t_0}^{n} f * \textbf{POM}(t) * L^p\ (n-t)$$

Legend

Plastic Waste Generated (n):	Total plastic waste generated in year n.
Σ:	Summation, summing values over the defined time period.
f:	Fraction of plastic.
POM(t):	Plastics put on the market (POM) in year t.
L^p *(n-t):*	The lifetime $L^p\ n-t$ is the lifetime distribution of a plastic product P sold in year t, which reflects the probable rate of becoming waste in evaluation year n of the inventory.
t_0:	Starting year of the calculation.
t:	Specific year within the range of calculation.
n:	Final year of calculation.

Figure 1 Key Elements of the PLM toolkit

The product lifetime is based on estimations as presented in the table below:

Table 3 Lifetime of plastic products per sector

Sectors	Lifetime (mean, in years)	σ (standard deviation in years)
Packaging	0.5	0.1
Transportation	13	3
Building and Construction	35	7
Electrical/Electronic	8	2
Consumer and Institutional Products	3	1
Industrial Machinery	20	3
Other	5	1.5
Textiles	5	1.5

The Gaussian Distribution function used for the calculation for plastic waste generation per sector is presented in figure below.

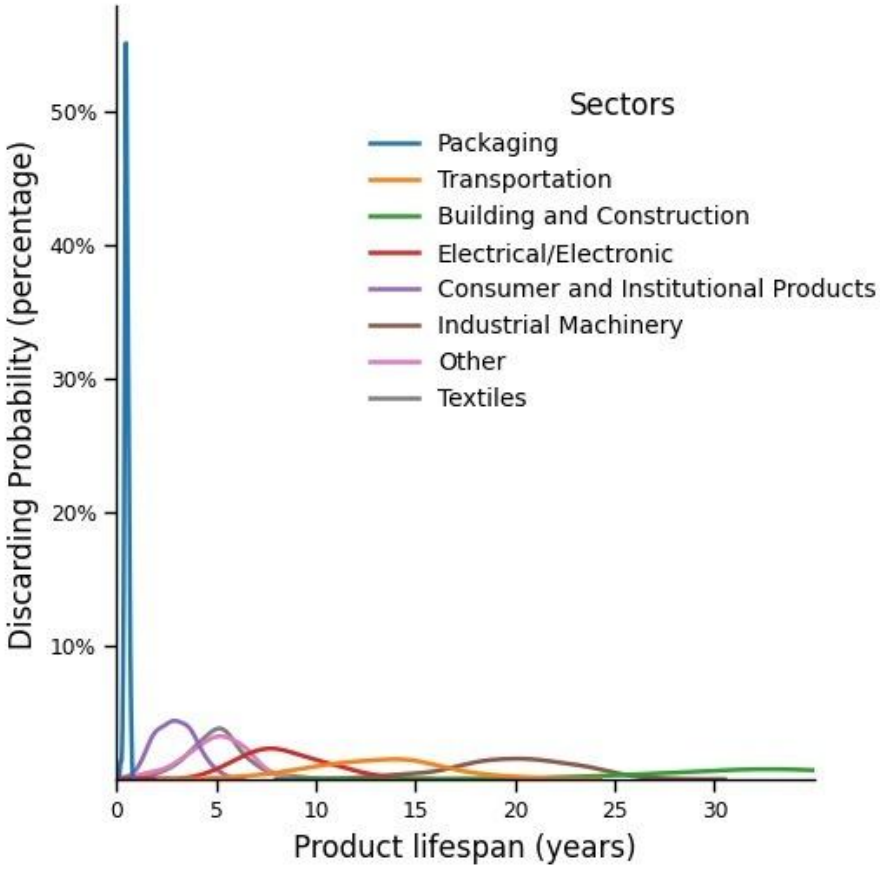


Figure 2 Overview of the Gaussian Distribution function for waste generation per sector

4.2 Data resources and collection

The methodology applied for the development of the NPWI was quantitative and data was requested in the format in table 4.

Data was requested for all HS codes and CPC codes provided in the toolkit to ensure complete sector coverage. The HS codes and CPC codes are presented in Appendix 1 and Appendix 2, respectively.

Table 4 Format for data collection

Data	Requested format
For import and export data	The number of kilograms for a specific HS code that were imported or exported each year from 2013 to 2023.
For domestic production data	The number of kilograms of a specific CPC code produced locally each year from 2013 to 2023.

Based on the data requirements presented above, the following data sources were identified.

Table 5 Data sources (preferred, alternate and used)

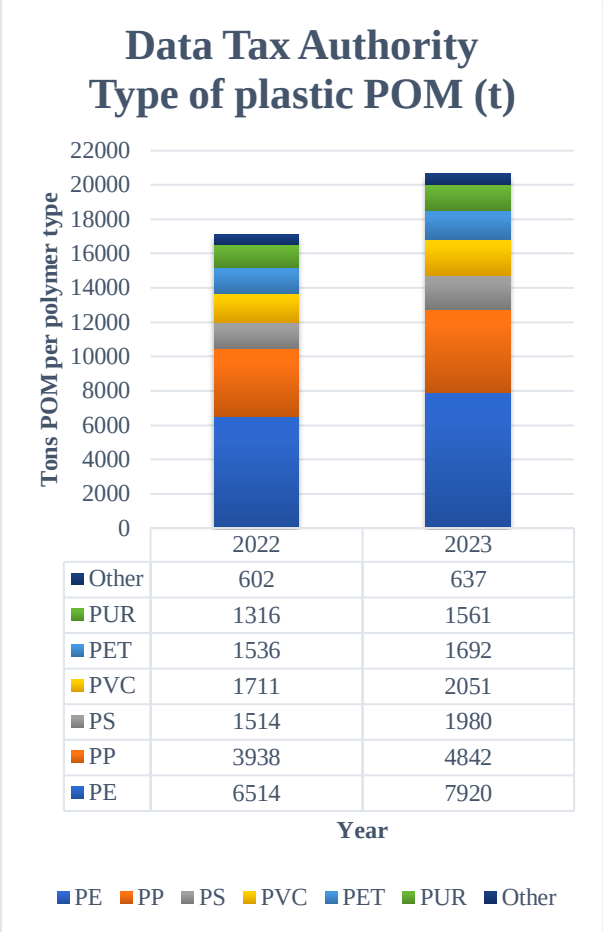
Data	Preferred sources	Alternate Sources	Used Source
Import and Export data (HS Codes)	1. Customs Office Suriname 2. General Statistics Bureau (ABS)	United Nations Commodity Trade Statistics Database (UN Comtrade)	TAX Authority (Dienst der Belastingen)
Domestic production (CPC Codes)	1. General Statistics Bureau (ABS) 2. Local plastic producers	UN Comtrade	UN Comtrade data on polymers in primary forms

Data was requested from preferred sources, however due to reasons explained in the next sections, data was received from the used sources as presented in table 5.

Import and Export data (HS Codes)

Import and export data was eventually received from the Tax Authority (see Appendix 3), which also reflects data from the Customs Office. A comparison was made between this data and the data from UN Comtrade for the years 2022 and 2023. The figures from the Tax Authority differed from those of UN Comtrade, with the Tax Authority reporting higher amounts of plastic POM in Suriname for both years. The differences for each type of plastic polymer POM in 2022 and 2023 are shown in Figure 2 below.

According to the Tax Authority, 17,131 tons of plastic were POM in 2022, increasing to 20,683 tons in 2023. In contrast, UN Comtrade reported 12,675 tons of POM for 2022 and 14,053 tons for 2023.



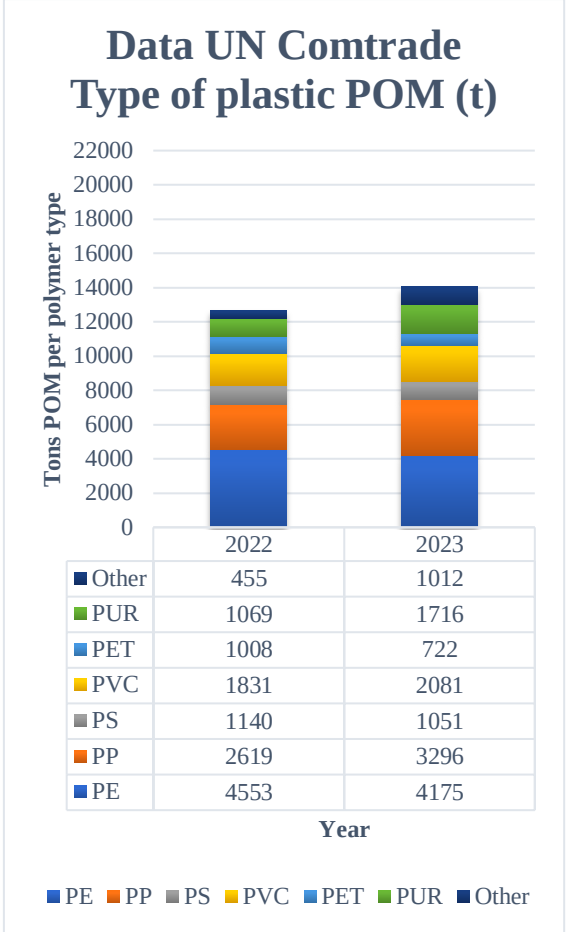


Figure 3 Comparison of plastic POM data from UN Comtrade and Tax Authority for 2022 and 2023

For this reason, it was decided to use import and export data received from the Tax Authority for the development of the NPWI. This data was organized according to the sequence outlined in the POM calculation tool and then processed accordingly. The resulting Plastic POM Calculation Tool and The Plastic Waste Generation Calculation Tool are included in respectively Appendix 4 and 5.

Domestic production (CPC Codes)

Domestic production data posed a challenge and could not be obtained from ABS, as they confirmed that they did not have this information. Additionally, local producers were reluctant to share their production data. To address this gap, two alternative approaches for utilizing primary polymer data and data one semi-finished products were discussed with Dr. Li from UNITAR SCYCLE. It is important to note that primary polymer data can only be used to estimate domestic plastic production under the condition that Suriname does not produce primary polymers domestically, a necessary criterion to avoid double counting. Since Suriname meets this condition, net import data on primary polymers could serve as a reliable proxy. Data one semi-finished products were however excluded from this research, because of uncertainties regarding the types imported and which are actually considered semi-finished products.

Accordingly, data was extracted from the UN Comtrade database for the most commonly imported primary polymers only, which represent the majority of raw materials used in Suriname's plastic production.

- PE: Polyethylene
- PET: Polyethylene Terephthalate
- PP: Polypropylene
- PVC: Polyvinyl Chloride
- PS: Polystyrene
- PUR: Polyurethane

The alternative approaches using this primary polymer data, along with their challenges and outcomes, are outlined below:

1. **First Approach**: The idea was to use net import data of primary polymers (resin), assuming that these polymers were primarily used to produce plastic products for the packaging sector. This assumption was based on indications from stakeholders interviewed during the assessment of the Technical Guidelines and considering the plastic production industry in Suriname that mostly produces items for the packaging sector, such as plastic bags, cups, plates, utensils amongst others. The products would then be assigned to corresponding CPC codes under packaging material in the toolkit. However, these specific corresponding CPC codes were not included in the toolkit because these CPC codes do not represent the finished goods. Additionally, it was not possible to filter the primary polymers specifically used for packaging production, and the assumption that most primary polymers were used for packaging could not be supported by local data. As a result, this approach was dismissed.
2. **Second Approach**: This method proposed addressing it separately from the toolkit since only the finished goods are included in the toolkit to avoid double-counting. The polymers would be attributed to various sectors, and the waste generated would be calculated manually. However, due to insufficient data to accurately attribute the polymers to specific sectors, it was impossible to calculate the waste, as the lifetime of plastic products depends on their sector of use.

Ultimately primary polymer data was only used to estimate the amount of plastic put on the market (per polymer type) through domestic production.

In summary, the toolkit was used solely to calculate plastic POM from import and export data, as well as the resulting plastic waste generated from this plastic. Domestic production data was handled separately, using primary polymer data to estimate plastic POM from domestic production, however its waste could not be calculated.

4.3 Limitations and assumptions regarding the inventory

Limitations:

The scope and completeness of NPWI were affected by the following limitations:

1. *Limited access to data:* Domestic plastic production data could not be obtained from the ABS or the local plastic producers, leading to usage of primary polymer data from UN Comtrade database, which contains detailed goods imports and exports statistics reported by statistical authorities from different countries. As a result, data on domestic production had to be addressed separately and could not be included in the toolkit. This data only allowed for an estimate of the amount of plastic put on the market through domestic production. Accurately calculating the amount of plastic waste generated was not possible, as the data could not be attributed to specific sectors.
   It is also important to note that data on semi-finished products was excluded from the above estimate, because of uncertainties regarding the types imported.
2. *Lack of previous research studies on the topic:* There is a lack of research involving primary data gathering on the amount of plastic waste generated in Suriname, creating a barrier for comparison.
3. *Challenges with data collection:* Suriname's vast size and geographic diversity spanning urban coastal districts, rural areas, and the hinterland adds challenges to data collection related to plastic production, as this required sufficient time and budget.
4. *Confidentiality concerns:* The producers of plastics who were approached were reluctant to share their production (confidential) data, because they feared that this data would be shared with others.
5. *Limitations of the toolkit:*
   a. Given that the plastic waste recorded in 2013 by the toolkit does not account for waste generated from plastic put on the market in earlier years, such as 2012 and before, patterns can only be identified for plastics from the sectors packaging and consumer and institutional products and not for the other sectors in the beginning years of the discussed time series.
   b. Plastics used in the building and construction sector have a longer lifetime, average of 35 years. To get an indication of the amount of plastic waste generated by this sector, data of more than 35 years will have to be collected, which is not always available.
   c. While the sectors electrical and electronic and industrial machinery are included in the practical guidance, their actual contributions to plastic in the toolkit are limited. For plastics from the sector electrical and electronic, there is a separate toolkit.
   d. The toolkit does not account for plastic packaging materials used to ensure the safe and hygienic import of products. Given that a significant portion of items such as clothing, medicines, household appliances, and electronics amongst others are packaged in plastic for secure shipping, its contribution to plastic waste can be substantial.

Assumptions

The following assumptions were made during the research and development of the NPWI:

1. The import and export data provided by the Tax Authority represents the actual amounts imported and exported.
2. The primary polymer data from the UN Comtrade database represents the actual amounts imported and is assumed to be used for domestic plastic production.
3. For the purpose of developing this inventory, it is also assumed that the lifetimes of the different plastic products as presented in table 3, provide a reliable indication for plastic consumption under the Surinamese community as well.
4. The quantity of products imported or smuggled across borders to neighbouring countries or through other means is negligible.

5 Results and analysis of the baseline inventory

The results of the PLM toolkit calculations and the domestic production calculations are presented in this section of the report.

5.1 Results of the POM calculations and domestic production estimates

5.1.1 POM per polymer type from 2013 – 2023

The amount of plastic put on the market via net import in tons per polymer per year from 2013 to 2023 is presented in the table below.

Table 6 Plastic POM via net import per polymer type per year from 2013 - 2023

Polymer type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
PE	**17995**	**7099**	**9434**	**4602**	**7831**	**8701**	**9805**	**7480**	**6111**	**6514**	**7920**	**93492**
PP	**11498**	**4068**	**5555**	**2668**	**4361**	**5126**	**6280**	**4317**	**3637**	**3938**	**4842**	**56290**
PET	**2492**	**2066**	**2442**	**407**	**2157**	**2173**	**2160**	**1891**	**1524**	**1536**	**1692**	**20540**
PS	**5609**	**1359**	**2036**	**1695**	**1624**	**1943**	**2348**	**1667**	**1360**	**1514**	**1980**	**23135**
PVC	**10720**	**1912**	**2207**	**5394**	**1623**	**1932**	**2586**	**1714**	**1481**	**1711**	**2051**	**33331**
PUR	**5977**	**1439**	**1766**	**2372**	**1245**	**1556**	**2182**	**1305**	**1171**	**1316**	**1561**	**21890**
Other	**2374**	**790**	**850**	**952**	**567**	**704**	**1036**	**572**	**550**	**602**	**637**	**9634**
Total (tons)	**56665**	**18733**	**24290**	**18090**	**19408**	**22135**	**26397**	**18946**	**15834**	**17131**	**20683**	**258312**

The highest recorded amount of plastic POM from net import only was in 2013, for a total of 56,665 tons and the lowest recorded POM in 2021, for a total of 15,834 tons. The peak in 2013 and low after 2016 can be explained as follows: The inflation in 2013 was 0.6%, which increased to 3.9% in 2014 and spiked to 61% in 2016 when Suriname experienced an economic recession, after which it slowly declined.

According to table 6, polymer types PE, followed by PP, PVC and PS are consistently the largest contributors to the POM (via net import), with significant peaks in 2013. PET and PUR also contribute significant amounts to the POM, however to a lesser extent. There is a notable decline in the net import of all polymers after 2019 (coinciding with the onset of the COVID-19 pandemic), followed by a spike in net imports in 2023.

While PS imports also decline slightly following the 2019 ban on Styrofoam in the warm food chain (which can also be attributed to the COVID-19 pandemic), it increases in 2023 to normal rates as before the ban.

The amount of primary plastic polymers put on the market in tons per polymer type per year from 2013 to 2023 is presented in the table 7 below. These primary polymers are assumed to be used for domestic plastic production.

Table 7 Estimated domestic plastic production per polymer type from 2013-2023 (assumed to be the primary polymer import)

Polymer type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
PE	**3291**	**3465**	**3307**	**2822**	**3025**	**3583**	**3437**	**3133**	**2922**	**3007**	**2567**	**34559**
PP	**119**	**201**	**273**	**95**	**162**	**251**	**580**	**293**	**775**	**759**	**1018**	**4526**
PET	**1604**	**1671**	**2293**	**995**	**1222**	**1317**	**1096**	**1236**	**1508**	**1866**	**1367**	**16175**
PS	**1439**	**1289**	**1960**	**1464**	**984**	**1012**	**901**	**356**	**391**	**522**	**270**	**10588**
PVC	**3525**	**1979**	**2457**	**1924**	**780**	**944**	**1080**	**717**	**371**	**304**	**140**	**14221**
PUR	**29**	**59**	**99**	**130**	**106**	**109**	**132**	**167**	**177**	**91**	**102**	**1201**
Total (tons)	**10007**	**8666**	**10388**	**7430**	**6279**	**7216**	**7225**	**5900**	**6144**	**6550**	**5464**	**81270**

According to table 7, polymer types of PE, PET and PVC are the largest contributors to the POM, followed by PS and PP. PVC and PS show a declining trend throughout the period, with a low of respectively 140 and 270 tons in 2023. The decreasing trend of polymer type PS may be attributed to the ban on Styrofoam for the warm food chain in 2019. However, this decrease is only notable for the polymer PS (as presented in the table above), and not for PS polymer POM via import as presented in table 6.

While contributions from other polymer types fluctuate throughout the period, PP has an increasing trend, with a peak in 2023 of 1018 tons.

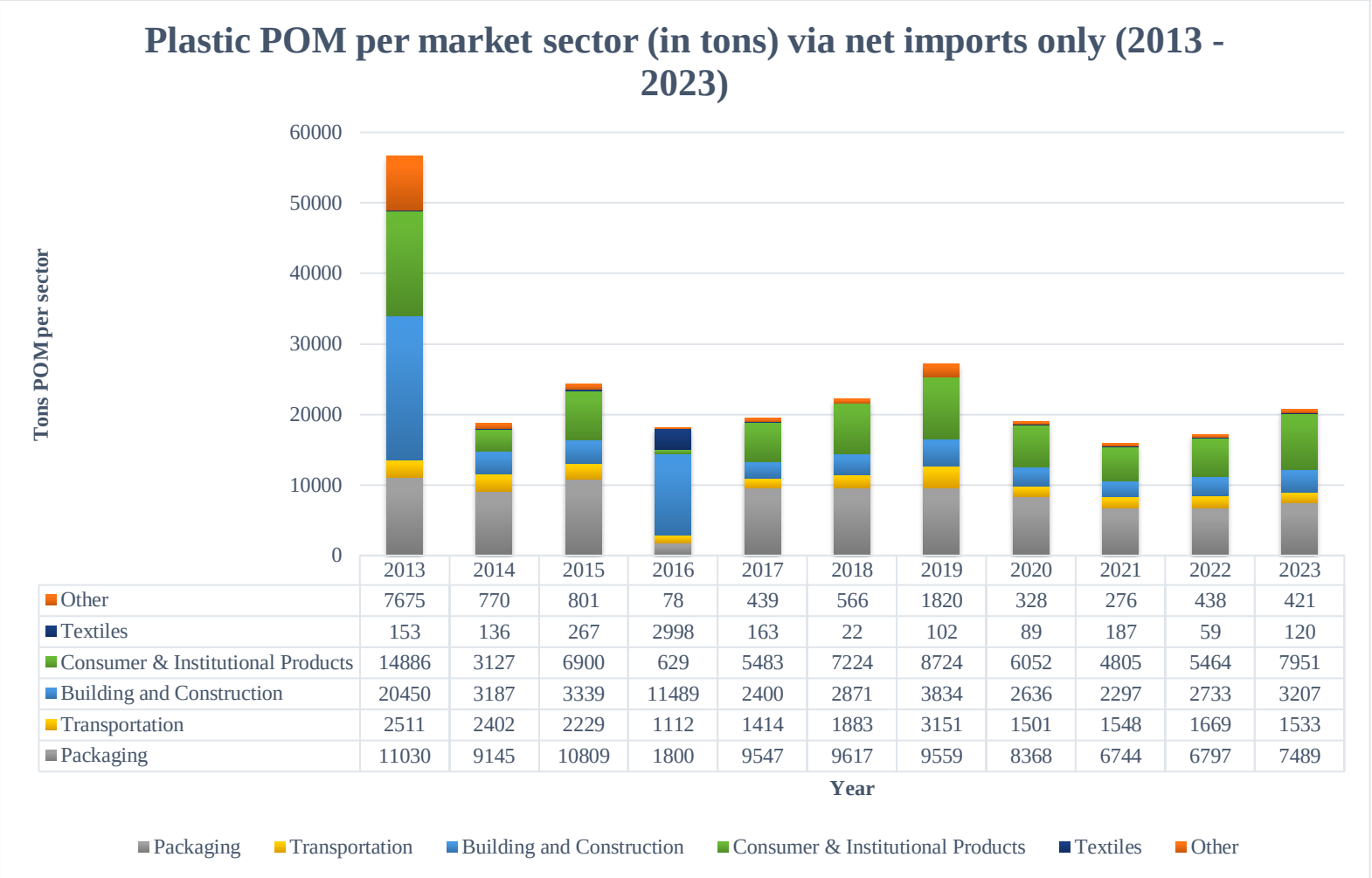
The total estimated amount of plastic put on the market in tons from 2013 to 2023 is presented in the table below (table 6 + table 7). This table includes both net import data and primary polymer data assumed to be used for domestic production.

Table 8 Total amount of plastic POM per polymer type between 2013 and 2023

Polymer type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total overall per polymer
PE	**21286**	**10564**	**12741**	**7424**	**10856**	**12284**	**13242**	**10613**	**9033**	**9521**	**10487**	**128051**
PP	**11617**	**4269**	**5828**	**2763**	**4523**	**5377**	**6860**	**4610**	**4412**	**4697**	**5860**	**60816**
PET	**4096**	**3737**	**4735**	**1402**	**3379**	**3490**	**3256**	**3127**	**3032**	**3402**	**3059**	**36715**
PS	**7048**	**2648**	**3996**	**3159**	**2608**	**2955**	**3249**	**2023**	**1751**	**2036**	**2250**	**33723**
PVC	**14245**	**3891**	**4664**	**7318**	**2403**	**2876**	**3666**	**2431**	**1852**	**2015**	**2191**	**47552**
PUR	**6006**	**1498**	**1865**	**2502**	**1351**	**1665**	**2314**	**1472**	**1348**	**1407**	**1663**	**23091**
Other	**2374**	**790**	**850**	**952**	**567**	**704**	**1036**	**572**	**550**	**602**	**637**	**9634**
Total (tons) per year	**66672**	**27399**	**34678**	**25520**	**25687**	**29351**	**33622**	**24846**	**21978**	**23681**	**26147**	**339581**

5.1.2 POM per sector from 2013 – 2023

The amount of plastic put on the market via net import in tons per sector per year from 2013 to 2023 is presented in the figure 4 and table 9 below.



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other	7675	770	801	78	439	566	1820	328	276	438	421
Textiles	153	136	267	2998	163	22	102	89	187	59	120
Consumer & Institutional Products	14886	3127	6900	629	5483	7224	8724	6052	4805	5464	7951
Building and Construction	20450	3187	3339	11489	2400	2871	3834	2636	2297	2733	3207
Transportation	2511	2402	2229	1112	1414	1883	3151	1501	1548	1669	1533
Packaging	11030	9145	10809	1800	9547	9617	9559	8368	6744	6797	7489

Figure 4 Plastic POM via net imports only per sector per year from 2013 - 2023

Table 9 Plastic POM via net imports only per sector per year from 2013 - 2023

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Other	**7675**	**770**	**801**	**78**	**439**	**566**	**1820**	**328**	**276**	**438**	**421**	**13612**
Textiles	**153**	**136**	**267**	**2998**	**163**	**22**	**102**	**89**	**187**	**59**	**120**	**4296**
Consumer and Institutional Products	**14886**	**3127**	**6900**	**629**	**5483**	**7224**	**8724**	**6052**	**4805**	**5464**	**7951**	**71245**
Building and Construction	**20450**	**3187**	**3339**	**11489**	**2400**	**2871**	**3834**	**2636**	**2297**	**2733**	**3207**	**58443**
Transportation	**2511**	**2402**	**2229**	**1112**	**1414**	**1883**	**2413**	**1501**	**1548**	**1669**	**1533**	**20215**
Packaging	**11030**	**9145**	**10809**	**1800**	**9547**	**9647**	**9559**	**8368**	**6744**	**6797**	**7489**	**90935**
Total (in tons)	**56705**	**18767**	**24345**	**18106**	**19446**	**22213**	**26452**	**18974**	**15857**	**17160**	**20721**	**258746**

Figure 3 and Table 9 show that the packaging, consumer and institutional products, and building and construction sectors consistently contributed the highest amounts of plastic put on the market through net imports over the period. The highest total POM was recorded in 2013 with 56,705 tons, followed by a sharp decline in 2014 and continued fluctuations thereafter. The packaging sector consistently stands out as the largest contributor to plastic POM throughout the years, though it exhibits a declining trend from 2021 onwards. The consumer and institutional products sector ranks second, peaking at 14,886 tons in 2013, with a low of 629 tons in 2016, and experiencing significant variability in between. The building and construction sector saw major peaks in 2013 (20,450 tons) and 2016 (11,489 tons), maintaining relative stability in the following years.

Regretabbly the data on primary polymer could not be attributed to sectors as mentioned previously, and therefore domestic production could not be estimated per sector.

Observations:

- 2013 Peak: The highest total POM due to significant contributions from especially Consumer & Institutional Products and Building and Construction and Packaging sectors.
- 2016 Anomaly: Noteworthy spikes in Building and Construction and Textiles sectors, making it an outlier year.
- Recent Decline: From 2016 onwards, a general decline in total plastic POM is observed across most sectors, with Packaging and Consumer & Institutional Products still being major contributors.

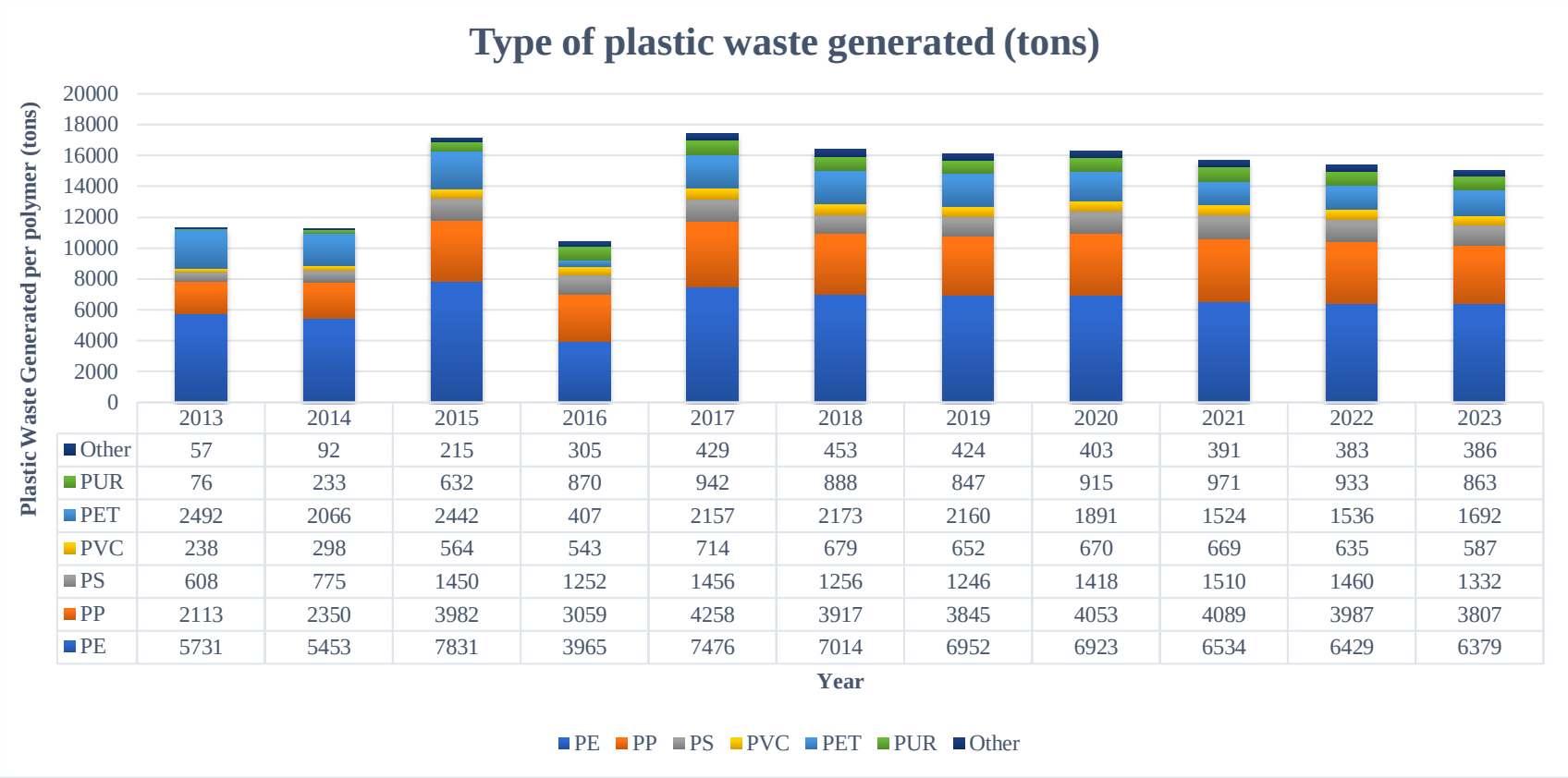
  The peak in plastic POM in 2013 and low after 2016 can be attributed to the inflation after 2013 and the economic recession of 2016 (61% inflation).

5.2 Results of the plastic waste calculation tool

This section only covers plastic waste generated from plastic put on the market via net imports.

Plastic waste generated by polymer type from 2013 to 2023

The figure below shows the amount of plastic waste generated from plastic put on the market via only net import per polymer type.



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other	57	92	215	305	429	453	424	403	391	383	386
PUR	76	233	632	870	942	888	847	915	971	933	863
PET	2492	2066	2442	407	2157	2173	2160	1891	1524	1536	1692
PVC	238	298	564	543	714	679	652	670	669	635	587
PS	608	775	1450	1252	1456	1256	1246	1418	1510	1460	1332
PP	2113	2350	3982	3059	4258	3917	3845	4053	4089	3987	3807
PE	5731	5453	7831	3965	7476	7014	6952	6923	6534	6429	6379

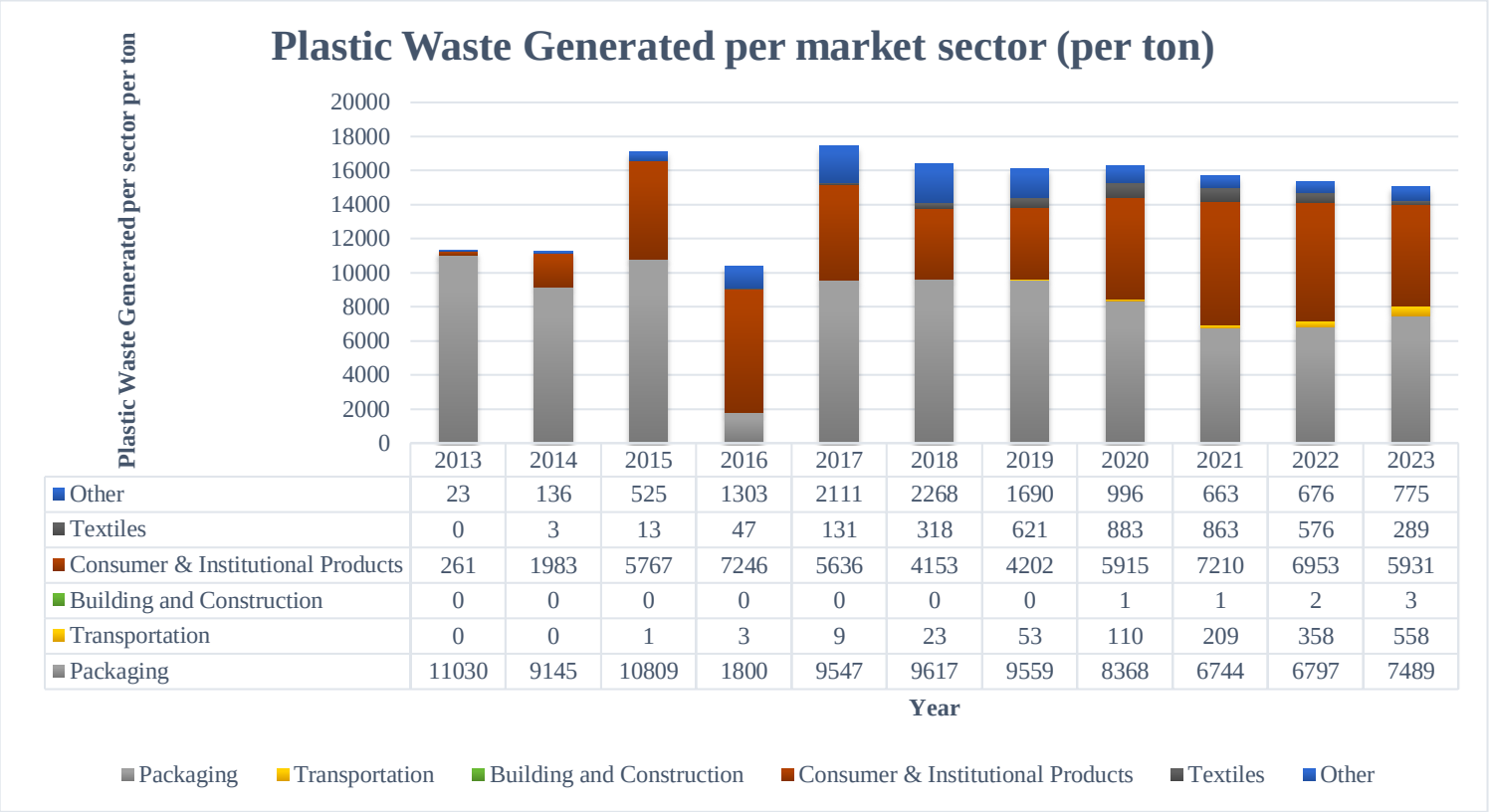
Figure 5 Plastic waste generated from POM via only net import per polymer type (2013 – 2023)

According to figure 5, 2017 saw the highest total plastic waste generation from plastic POM from net import, exceeding 17,000 tons, while 2016 recorded the lowest total plastic waste generation of 10,400 tons. PE is consistently the largest contributor to plastic waste, followed by PP, with peaks in 2015 and a low in 2016. PET is the third largest contributor to waste generated followed by PS. This is consistent with the amount of PE, PP and PET plastic put on the market. PUR is a minor contributor, and PVC the smallest contributor within the 11-year time series of this study due to its use in the building and construction sector especially and thus longer lifetime (see table 3). A stable trend is observed for most polymers

between 2017 and 2023, generating an average of 16,000 tons of plastic waste per year. PS however remains stable from 2015, even after the ban on Styrofoam for the warm food chain in 2019.

Plastic waste generated by sector type from 2013 to 2023

The figure below shows the amount of plastic waste generated from plastic put on the market via only net import per sector.



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other	23	136	525	1303	2111	2268	1690	996	663	676	775
Textiles	0	3	13	47	131	318	621	883	863	576	289
Consumer & Institutional Products	261	1983	5767	7246	5636	4153	4202	5915	7210	6953	5931
Building and Construction	0	0	0	0	0	0	0	1	1	2	3
Transportation	0	0	1	3	9	23	53	110	209	358	558
Packaging	11030	9145	10809	1800	9547	9617	9559	8368	6744	6797	7489

Figure 6 Plastic waste generated from POM via only net import per sector (2013 – 2023)

Plastic from the packaging sector is consistently the largest contributor to plastic waste, followed by consumer & institutional products. This was expected, as these sectors are also consistently the largest contributors to plastic POM. Plastics from these sectors also have shorter lifetimes compared to other sectors, meaning that they become waste faster, 0.5 years to 3 years respectively. The packaging sector does show a slight decreasing trend in its contribution to plastic waste, while consumer & institutional products contribution fluctuates throughout the period.

Textiles and Transportation sector have minimal contributions to waste generated, and the building and construction sector has no contributions in any year, as expected, because its lifetime as shown in table 3 is 35 years and data is presented for 13 years.

Observations:

- 2017 spike: The highest plastic waste generation due to significant contributions from packaging and consumer & institutional products sectors.
- 2016 drop: Noticeable reduction in total plastic waste, particularly in the packaging sector, marking the lowest year in the dataset. Which can be attributed as stated previously by the economic recession of 2016 (61% inflation).
- 2016 spike: Noticeable spike in total plastic waste for the consumer & institutional products sector.
- Trends in lesser contributors**:** Textile and transportation sectors contribute the least to plastic waste generated.

5.3 General observations

In 2022, SUWAMA and the BCRC – Caribbean conducted a study (*Project for Replacing Single-Use Plastic Commodities in the Economy of Suriname*) using an older version of the same toolkit. This earlier study focused exclusively on Single-Use Plastics (SUPs)**,** including an average of 74 HS Codes**.** The findings revealed that 19,821 tons of SUPs were POM. annually in Suriname between 2015 and 2020, based solely on net import data**.**

In contrast, this study which expands the scope to more than 200 HS Codes estimates an average of 21,589 tons of plastic POM during the same period. While this figure is slightly higher due to the broader range of polymers and sectors included, the data still appears lower than expected**.**

This discrepancy may stem from differences in data sources**:**

- The 2022 SUP study relied on customs office records**,** while
- The current study obtained data from the Tax Authority.

Given these variations, it is critical to emphasize that both studies represent estimates of plastic POM and plastic waste generated rather than exact figures**.** This inconsistency in datasets

however underscores the urgent need for standardized, high-quality data collection and registration systems to improve accuracy in future plastic waste assessments.

During the ‘Validation Workshop’ however, for this study, which was held on October 24th in 2024, one stakeholder from the recycling sector did mention that while the toolkit needs improvement, it does give a good indication of the amount of plastic put on the market and the amount of plastic waste generated to his knowledge. Other stakeholders stated that the results were representable and sufficient to work with.

6 Conclusions and recommendations

Conclusions:

The following can be concluded from the inventory:

1. Plastics from the sectors packaging, consumer and institutional products and building and construction are the largest contributors to plastics put on the market in Suriname through net imports only over the period 2013 – 2023. Consequently, the sectors packaging and consumer and institutional products are the largest contributors to plastic waste generated. The reported plastic waste generation from the toolkit appears lower than the reality for the building and construction sector. This discrepancy arises because plastics in this sector have an average lifespan of 35 years, which is much longer than the 11-year time series used in the analysis. Consequently, the actual waste generated from plastics products with longer lifespans is likely higher than the toolkit's estimates. A similar issue applies to the transportation sector, where plastics have an average lifetime of 13 years. To better reflect plastic waste generation in these sectors, it is recommended to use a longer time series in future analyses.
   The peak in plastic POM in 2013 and low after 2016 can be attributed to the inflation after 2013 and the economic recession of 2016 (61% inflation).
2. Plastic polymers PE, PP, PET and PVC are the largest contributors to plastic polymers put on the market in Suriname, consequently PE, PP and PET polymers are also the largest contributors to plastic waste generated. Once again, as mentioned above, the estimated waste production for PVC by the toolkit is lower than the reality, because of the short time series used. For a more realistic reflection of PVC waste generated, a longer time series would have to be used.
3. The amount of plastic waste generated is as presented below according to the NPWI. The average amount of plastic waste generated per year (between 2017 – 2023) from plastic POM via only net imports shows some stability at 16,000 tons per year and a slight decreasing trend.

Table 10 Overview of plastic POM and plastic waste generated

Year	Plastic POM (net import)	Plastic waste generated from plastic POM (net import)	Plastic POM primary polymer data (assumed domestic production)	Plastic waste generated from domestic production
2013	56665	11314	10007	?
2014	18733	11268	8666	?
2015	24290	17115	10388	?
2016	18090	10400	7430	?
2017	19408	17433	6279	?
2018	22135	16379	7216	?
2019	26397	16125	7225	?

2020	18946	16273	5900	?
2021	15834	15690	6144	?
2022	17131	15362	6550	?
2023	20683	15046	5464	?
Total (tons)	258,312	162,406	81,270	?

Regarding the data gap in domestic production:

The ongoing data gap in domestic production continues to pose a significant challenge in developing a comprehensive plastic waste inventory for Suriname. Without cooperation from local plastic producers to share production data, this gap will remain a barrier, leading to incomplete information that hinders efforts to effectively address the plastic waste issue in Suriname.

While the primary polymer data was used to estimate the amount of domestic plastic production, its waste could not be accurately calculated. However, if the majority of the primary polymers imported is used for the packaging sector, this would mean that the majority becomes waste within 0.5 year, having a significant contribution to plastic waste in Suriname. To this end, scenarios can be developed to provide an indication of the amount of plastic waste generated from these imports.

Recommendations:

1. Now that the polymers PP, PE, PET, and PVC from the sectors packaging, consumer and institutional products, and building and construction sectors, have been identified as major contributors to plastic POM and given that these sectors and polymers (except for building and construction, and PVC) are also the largest sources of plastic waste, authorities and policymakers can recommend appropriate measures to manage these plastics and their waste. These measures should align with circular economic practices, focusing on waste minimization, prevention, and recycling. Detailed recommendations are presented the "Assessment and recommendations report on Technical Guidelines January 2025", focusing on legislative reform, enhancing government support of the recycling sector, which is privately run and expanding recycling initiatives, strengthening data collection and monitoring capacities and systems and increasing effective public awareness.
2. Given the existing data gaps, authorities should establish a centralized system for data collection and registry, requiring local plastic producers and traders to report their data. To facilitate this, standardized formats using classification as outlined in chapter 2.1 and reporting requirements need to be developed, together with enforcement of these requirements. This is essential not only to close the data gap but also to provide more accurate and reliable information on plastic placed on the market (POM), plastic waste generated and enable Suriname to comply to the national reporting under the Basel Convention.
3. Improvement regarding the PLM toolkit:

a. Adding the distinguishment option for hazardous and non-hazardous plastic types, can provide better indications of hazardous plastic POM and hazardous plastic waste being generated. Consequently, providing policymakers with information to better manage this waste and comply with the requirements of the Basel Convention.
b. Further in-depth research is required on the lifetime of various plastic products to better reflect the reality in Suriname. This is necessary because consumption patterns in Suriname may differ from those in Europe or other countries. A survey under the Surinamese community is recommended for this purpose.
c. The toolkit does not distinguish between LDPE and HDPE (from polymer type PE). This distinguishment is important for recycling companies because these polymer types are handled and exported separately, and they also differ in amounts. This distinguishment is also done internationally.
d. Including polymer type Polycarbonate (7 PC) in the toolkit is advisable, as this polymer is used in products in Suriname such as water jugs etc…
e. Enabling a filter for certain plastic products in the toolkit, such as plastic bags for example, will enable policy makers to determine whether certain interventions such as bans (e.g. PS) are effective or not. This is particularly important considering the 2019 ban on PS, whose impact is not reflected in the current production data. Additionally, national adoption of 10-digit HS codes to replace the current 6-digit system is highly recommended. At 6-digit levels (e.g., UN Comtrade), only broad categories like "PE bags" vs. "non-PE bags" are distinguishable. 10-digit codes would enable detailed tracking (e.g., polymer types, product subtypes).

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Appendix 1 Overview of HS Codes

HS Code	HS description
3923.10	Boxes, cases, crates and similar articles for the conveyance or packaging of goods, of plastics
3923.30	Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods, of plastics
3923.21	Sacks and bags, incl. cones, of polymers of ethylene
3923.29	Sacks and bags, incl. cones, of plastics (excl. those of polymers of ethylene)
2009.11	Frozen orange juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.12	Orange juice, unfermented, Brix value <= 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit and frozen)
2009.19	Orange juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit, frozen, and of a Brix value <= 20 at 20¬∞C)
2009.21	Grapefruit juice, unfermented, Brix value <= 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.29	Grapefruit juice, unfermented, Brix value > 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.31	Single citrus fruit juice, unfermented, Brix value <= 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit, mixtures, orange juice and grapefruit juice)
2009.39	Single citrus fruit juice, unfermented, Brix value > 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit, mixtures, orange juice and grapefruit juice)
2009.41	Pineapple juice, unfermented, Brix value <= 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.49	Pineapple juice, unfermented, Brix value > 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.50	Tomato juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.61	Grape juice, incl. grape must, unfermented, Brix value <= 30 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.69	Grape juice, incl. grape must, unfermented, Brix value > 30 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.71	Apple juice, unfermented, Brix value <= 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.79	Apple juice, unfermented, Brix value > 20 at 20¬∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2009.81	Cranberry "Vaccinium macrocarpon, Vaccinium oxycoccos, Vaccinium Vitis-idea" juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)

2009.89	Juice of fruit or vegetables, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit, mixtures, and juice of citrus fruit, pineapples, tomatoes, grapes, incl. grape must, apples and cranberries)
2009.90	Mixtures of fruit juices, incl. grape must, and vegetable juices, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
2201.10	Mineral waters and aerated waters, not containing added sugar, other sweetening matter or flavoured
2201.90	Ordinary natural water, not containing added sugar, other sweetening matter or flavoured; ice and snow (excl. mineral waters and aerated waters, seawater, distilled water, conductivity water or water of similar purity)
2202.10	Waters, incl. mineral and aerated, with added sugar, sweetener or flavour, for direct consumption as a beverage
8601.10	Rail locomotives powered from an external source of electricity
8601.20	Rail locomotives powered by electric accumulators
8602.10	Diesel-electric locomotives
8602.90	Rail locomotives (excl. those powered from an external source of electricity or by accumulators and diesel-electric locomotives)
86.06	Railway or tramway goods vans and wagons (excl. self-propelled and luggage vans and post office coaches)
8603.10	Self-propelled railway or tramway coaches, vans and trucks, powered from an external source of electricity (excl. those of heading 8604)
8603.90	Self-propelled railway or tramway coaches, vans and trucks (excl. those powered from an external source of electricity and those of heading 8604)
8604.00	Railway or tramway maintenance or service vehicles, whether or not self-propelled, e.g., workshops, cranes, ballast tampers, trackliners, testing coaches and track inspection vehicles
8605.00	Railway or tramway passenger coaches, luggage vans, post office coaches and other special purpose railway or tramway coaches (excl. self-propelled railway or tramway coaches, vans and trucks, railway or tramway maintenance or service vehicles and goods vans and wagons)
8606.10	Railway or tramway tank wagons and the like (excl. self-propelled)
8606.30	Railway or tramway self-discharging goods vans and wagons (excl. tank wagons and the like and insulated or refrigerated goods vans and wagons)
8606.91	Railway or tramway goods vans and wagons, covered and closed (excl. self-discharging goods vans and wagons and tank wagons and the like)
8606.92	Railway or tramway goods vans and wagons, open, with non-removable sides of a height > 60 cm (excl. self-discharging wagons)
8606.99	Railway or tramway goods vans and wagons (excl. those specially designed for the transport of highly radioactive materials, tank wagons and the like, insulated, refrigerated or self-discharging goods vans and wagons and open goods vans and wagons with non-removable sides of a height > 60 cm)
8701.10	Pedestrian-controlled agricultural tractors and similar tractors for industry (excl. tractor units for articulated lorries)
8701.20	Road tractors for semi-trailers
8701.30	Track-laying tractors (excl. pedestrian-controlled)
8701.91	Tractors, of an engine power <= 18 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)

8701.92	Tractors, of an engine power > 18 kW but <= 37 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
8701.93	Tractors, of an engine power > 37 kW but <= 75 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
8701.94	Tractors, of an engine power > 75 kW but <= 130 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
8701.95	Tractors, of an engine power > 130 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
8702.10	Motor vehicles for the transport of >= 10 persons, incl. driver, with only diesel engine
8702.20	Motor vehicles for the transport of >= 10 persons, incl. driver, with both diesel engine and electric motor as motors for propulsion
8702.30	Motor vehicles for the transport of >= 10 persons, incl. driver, with both spark-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion
8702.40	Motor vehicles for the transport of >= 10 persons, incl. driver, with an only electric motor for propulsion
8702.90	Motor vehicles for the transport of >= 10 persons, incl. driver (excl. with diesel engine or electric motor for propulsion)
8703.10	Vehicles for the transport of <10 persons on snow; golf cars and similar vehicles
8703.21	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity <= 1.000 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.22	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 1.000 cm¬≥ but <= 1.500 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.23	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 1.500 cm¬≥ but <= 3.000 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.24	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 3.000 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.31	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with an only diesel engine of a cylinder capacity <= 1.500 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)

8703.32	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with an only diesel engine of a cylinder capacity,> 1.500 cm¬≥ but <= 2.500 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.33	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with an only diesel engine of a cylinder capacity > 2.500 cm¬≥ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.40	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both spark-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion (excl. vehicles for travelling on snow, other specially designed vehicles of subheading 8703.10 and plug-in hybrids)
8703.50	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both diesel engine and electric motor as motors for propulsion (excl. vehicles for travelling on snow, other specially designed vehicles of subheading 8703.10 and plug-in hybrids)
8703.60	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both spark-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion, capable of being charged by plugging to an external source of electric power (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.70	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both diesel engine and electric motor as motors for propulsion, capable of being charged by plugging to an external source of electric power (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.80	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with an only electric motor for propulsion (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
8703.90	Motor cars and other vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with engines other than internal combustion piston engine or electric motor (excl. vehicles for the transport of persons on snow and other specially designed vehicles of subheading 8703.10)
8704.10	Dumpers for off-highway use
8704.21	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight <= 5 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
8704.22	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight > 5 t but <= 20 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
8704.23	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight > 20 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)

8704.31	Motor vehicles for the transport of goods, with a spark-ignition internal combustion piston engine, of a gross vehicle weight <= 5 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
8704.32	Motor vehicles for the transport of goods, with a spark-ignition internal combustion piston engine, of a gross vehicle weight > 5 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
8704.90	Motor vehicles for the transport of goods, with engines other than internal combustion piston engine (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
8705.10	Crane lorries (excl. breakdown lorries)
8705.20	Mobile drilling derricks
8705.30	Fire fighting vehicles (excl. vehicles for transporting persons)
8705.40	Concrete-mixer lorries
8709.11	Electrical vehicles not fitted with lifting or handling equipment, of the type used in factories, warehouses, dock areas or airports for short-distance transport of goods; tractors of the type used on railway station platforms
8709.19	Works trucks, self-propelled, not fitted with lifting or handling equipment, of the type used in factories, warehouses, dock areas or airports for short-distance transport of goods; tractors of the type used on railway station platforms (excl. electrical trucks)
8710.00	Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles, n.e.s.
8711.10	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity <= 50 cm¬≥
8711.20	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity > 50 cm¬≥ but <= 250 cm¬≥
8711.30	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity > 250 cm¬≥ but <= 500 cm¬≥
8711.40	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity > 500 cm¬≥ but <= 800 cm¬≥
8711.50	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity > 800 cm¬≥
8711.60	Motorcycles, incl. mopeds, and cycles fitted with an auxiliary motor, with an electric motor for propulsion
8712.00	Bicycles and other cycles, incl. delivery tricycles, not motorised
8713.10	Carriages for disabled persons, not mechanically propelled
8713.90	Carriages for disabled persons motorised or otherwise mechanically propelled (excl. specially designed motor vehicles and bicycles)
8716.10	Trailers and semi-trailers of the caravan type, for housing or camping
8716.31	Tanker trailers and tanker semi-trailers, not designed for running on rails
8716.39	Trailers and semi-trailers for the transport of goods, not designed for running on rails (excl. self-loading or self-unloading trailers and semi-trailers for agricultural purposes and tanker trailers and tanker semi-trailers)
8801.00	Balloons and dirigibles; gliders, hang gliders and other non-powered aircraft
8802.11	Helicopters of an unladen weight <= 2.000 kg
8802.12	Helicopters of an unladen weight > 2.000 kg

8802.20	Aeroplanes and other powered aircraft of an unladen weight <= 2.000 kg (excl. helicopters and dirigibles)
8802.30	Aeroplanes and other powered aircraft of an unladen weight > 2.000 kg but <= 15.000 kg (excl. helicopters and dirigibles)
8802.40	Aeroplanes and other powered aircraft an unladen weight > 15.000 kg (excl. helicopters and dirigibles)
8802.60	Spacecraft, incl. satellites, and suborbital and spacecraft launch vehicles
8901.10	Cruise ships, excursion boats and similar vessels principally designed for the transport of persons; ferry-boats of all kinds
8901.20	Tankers
8901.30	Refrigerated vessels (excl. tankers)
8901.90	Vessels for the transport of goods and vessels for the transport of both persons and goods (excl. refrigerated vessels, tankers, ferry-boats and vessels principally designed for the transport of persons)
8902.00	Fishing vessels; factory ships and other vessels for processing or preserving fishery products (excl. fishing boats for sport)
8903.10	Inflatable vessels for pleasure or sports
8903.91	Sailboats and yachts, with or without auxiliary motor, for pleasure or sports
8903.92	Motorboats and motor yachts, for pleasure or sports (other than outboard motorboats)
8903.99	Vessels for pleasure or sports; rowing boats (excl. motorboats and motor yachts powered other than by outboard motors, sailboats and yachts with or without auxiliary motor and inflatable boats)
8904.00	Tugs and pusher craft
8905.10	Dredgers
8905.20	Floating or submersible drilling or production platforms
8905.90	Light-vessels, fire-floats, floating cranes and other vessels, the navigability of which is subsidiary to their main function (excl. dredgers, floating or submersible drilling or production platforms; fishing vessels and warships)
8906.10	Warships of all kinds
8906.90	Vessels, incl. lifeboats (excl. warships, rowing boats and other vessels heading 8901 to 8905 and vessels for breaking up)
8907.10	Inflatable rafts
8907.90	Rafts, tanks, coffer-dams, landing stages, buoys, beacons and other floating structures (excl. inflatable rafts, vessels of heading 8901 to 8906 and floating structures for breaking up)
5702.32	Carpets and other floor coverings, of man-made textile materials, woven, not tufted or flocked, of pile construction, not made up (excl. Kelem, Schumacks, Karamanie and similar hand-woven rugs)
5702.42	Carpets and other floor coverings, of man-made textile materials, woven, not tufted or flocked, of pile construction, made up (excl. Kelem, Schumacks, Karamanie and similar hand-woven rugs)
5702.92	Carpets and other floor coverings, of man-made textile materials, woven, not tufted or flocked, not of pile construction, made up (excl. Kelem, Schumacks, Karamanie and similar hand-woven rugs)
5703.20	Carpets and other floor coverings, of nylon or other polyamides, tufted "needle-punched", whether or not made up

5703.30	Carpets and other floor coverings, of man-made textile materials, tufted "needle-punched", whether or not made up (excl. those of nylon or other polyamides)
5705.00	Carpets and other textile floor coverings, whether or not made up (excl. knotted, woven or tufted "needle-punched", and of felt)
5804.21	Mechanically made lace of man-made fibres in the piece, in strips or motifs (excl. fabrics of headings 6002 to 6006)
5810.92	Embroidery of man-made fibres on a textile fabric base, in the piece, in strips or motifs (excl. embroidery without visible ground)
3917.21	Rigid tubes, pipes and hoses, of polymers of ethylene
3917.22	Rigid tubes, pipes and hoses of polymers of propylene
3917.23	Rigid tubes, pipes and hoses, of polymers of vinyl chloride
3917.29	Rigid tubes, pipes and hoses, of plastics (excl. those of polymers of ethylene, propylene and vinyl chloride)
3917.31	Flexible tubes, pipes and hoses, of plastics, burst pressure >= 27,6 MPa
3917.32	Flexible tubes, pipes and hoses of plastics, not reinforced or otherwise combined with other materials, without fittings
3917.33	Flexible tubes, pipes and hoses of plastics, not reinforced or otherwise combined with other materials, with fittings, seals or connectors
3917.39	Flexible tubes, pipes and hoses, of plastics, reinforced or otherwise combined with other materials (excl. those with a burst pressure of >= 27,6 MPa)
3917.40	Fittings, e.g. joints, elbows, flanges, of plastics, for tubes, pipes and hoses
3918.10	Floor coverings, whether or not self-adhesive, in rolls or the form of tiles, and wall or ceiling coverings "in rolls with a width of >= 45 cm, consisting of a layer of plastics fixed permanently on a backing of any material other than paper, the face side of which is grained, embossed, coloured, design-printed or otherwise decorated", of polymers of vinyl chloride
3918.90	Floor coverings of plastics, whether or not self-adhesive, in rolls or the form of tiles, and wall or ceiling coverings in rolls with a width of >= 45 cm, consisting of a layer of plastics fixed permanently on a backing of any material other than paper, the face side of which is grained, embossed, coloured, design-printed or otherwise decorated (excl. coverings of polymers of vinyl chloride)
3919.10	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics, in rolls <= 20 cm wide
3919.90	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics, whether or not in rolls > 20 cm wide (excl. floor, wall and ceiling coverings of heading 3918)
3920.10	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.20	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.30	Plates, sheets, foil, film and strip, of non-cellular polymers of styrene, not reinforced, laminated, supported or similarly combined with other materials,

	without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.43	Plates, sheets, film, foil and strip, of non-cellular polymers of vinyl chloride, containing by weight >= 6% of plasticisers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.49	Plates, sheets, film, foil and strip, of non-cellular polymers of vinyl chloride, containing by weight < 6% of plasticisers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.51	Plates, sheets, film, foil and strip, of non-cellular poly" methyl methacrylate", not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.59	Plates, sheets, film, foil and strip, of non-cellular acrylic polymers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.61	Plates, sheets, film, foil and strip, of non-cellular polycarbonates, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.62	Plates, sheets, film, foil and strip, of non-cellular poly" ethylene terephthalate", not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.63	Plates, sheets, film, foil and strip, of non-cellular unsaturated polyesters, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.69	Plates, sheets, film, foil and strip, of non-cellular polyesters, not reinforced, laminated, supported or similarly combined with other materials, not worked or only surface-worked, or only cut to rectangular, incl. square, shapes (excl. polycarbonates, polyethene terephthalate and other unsaturated polyesters, self-adhesive products, and floor, wall and ceiling coverings in heading 3918)
3920.71	Plates, sheets, film, foil and strip, of non-cellular regenerated cellulose, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)

3920.73	Plates, sheets, film, foil and strip, of non-cellular cellulose acetates, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
3920.79	Plates, sheets, film, foil and strip, of non-cellular cellulose derivatives, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. products of cellulose acetates, self-adhesive products, floor, wall and ceiling coverings of heading 3918)
3920.91	Plates, sheets, film, foil and strip, of non-cellular poly" vinyl butyral", not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
3920.92	Plates, sheets, film, foil and strip, of non-cellular polyamides, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
3920.93	Plates, sheets, film, foil and strip, of non-cellular amino-resins, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
3920.94	Plates, sheets, film, foil and strip, of non-cellular phenolic resins, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
3920.99	Plates, sheets, film, foil and strip, of non-cellular plastics, n.e.s., not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
3921.11	Plates, sheets, film, foil and strip, of cellular polymers of styrene, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
3921.12	Plates, sheets, film, foil and strip, of cellular polymers of vinyl chloride, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
3921.13	Plates, sheets, film, foil and strip, of cellular polyurethanes, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
3921.14	Plates, sheets, film, foil and strip, of regenerated cellular cellulose, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-

	adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
3921.19	Plates, sheets, film, foil and strips, of cellular plastic, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of polymers of styrene, vinyl chloride, polyurethanes and regenerated cellulose, self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
3921.90	Plates, sheets, film, foil and strip, of plastics, reinforced, laminated, supported or similarly combined with other materials, unworked or merely surface-worked or merely cut into squares or rectangles (excl. of cellular plastic; self-adhesive products, floor, wall and ceiling coverings of heading 3918)
3922.10	Baths, shower-baths, sinks and washbasins, of plastics
3922.20	Lavatory seats and covers, of plastics
3922.90	Bidets, lavatory pans, flushing cisterns and similar sanitary ware, of plastics (excl. baths, shower-baths, sinks, washbasins, lavatory seats and covers)
3925.10	Reservoirs, tanks, vats and similar containers, of plastics, with a capacity of > 300 l
3925.20	Doors, windows and their frames and thresholds for doors, of plastics
3925.30	Shutters, blinds, incl. Venetian blinds, and similar articles and parts thereof, of plastics (excl. fittings and similar articles)
3925.90	Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs, etc., of plastics; gutters and accessories of plastics; railings, fences and similar barriers, of plastics; large shelves, for assembly and permanent installation in shops, workshops, etc., of plastics; architectural ornaments, e.g. friezes, of plastics; fittings and similar products for permanent mounting on buildings, of plastics
3923.40	Spools, cops, bobbins and similar supports, of plastics
3923.50	Stoppers, lids, caps and other closures, of plastics
3923.90	Articles for the conveyance or packaging of goods, of plastics (excl. boxes, cases, crates and similar articles; sacks and bags, incl. cones; carboys, bottles, flasks and similar articles; spools, spindles, bobbins and similar supports; stoppers, lids, caps and other closures)
3924.10	Tableware and kitchenware, of plastics
3924.90	Household articles and toilet articles, of plastics (excl. tableware, kitchenware, baths, shower-baths, washbasins, bidets, lavatory pans, seats and covers, flushing cisterns and similar sanitary ware)
3926.10	Office or school supplies, of plastics, n.e.s.
3926.30	Fittings for furniture, coachwork and the like, of plastics (excl. building components for permanent mounting on parts of buildings)
3926.40	Statuettes and other ornamental articles, of plastics
3926.90	Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s (excl. goods of 9619)
8202.10	Handsaws, with working parts of base metal (excl. power-operated saws)
8205.40	Hand-operated screwdrivers
8205.51	Household hand tools, non-mechanical, with working parts of base metal, n.e.s.
9401.30	Swivel seats with variable height adjustments (excl. medical, surgical, dental or veterinary, and barbers' chairs)
9401.40	Seats, convertible into beds (excl. garden seats and camping equipment, and medical, dental or surgical furniture)

9405.50	Non-electrical lamps and lighting fittings, n.e.s.
9605.00	Travel sets for personal toilet, sewing or shoe or clothes cleaning (excl. manicure sets)
9608.10	Ball-point pens
9608.20	Felt-tipped and other porous-tipped pens and markers
9608.30	Fountain pens, stylograph pens and other pens
9608.40	Propelling or sliding pencils
9608.60	Refills for ball-point pens, comprising the ball-point and ink-reservoir
9608.91	Pen nibs and nib points
9613.10	Pocket lighters, gas-fuelled, non-refillable
9613.20	Pocket lighters, gas-fuelled, refillable
9613.80	Lighters (excl. gas-fuelled pocket lighters, and fuses and primers for propellent powders and explosives)
9615.11	Combs, hair-slides and the like of hard rubber or plastics
9603.21	Toothbrushes, incl. dental-plate brushes
9603.90	Mops and leather dusters; prepared knots and tufts for broom or brush making; squeegees of rubber or other flexible materials; brooms and brushes, n.e.s.
9604.00	Hand sieves and hand riddles (excl. colanders)
9618.00	Tailors' dummies and other lay figures, automata and other animated displays used for shop window dressing (excl. the articles actually on display, educational models and toy dolls)
5902.10	Tyre cord fabric of high-tenacity yarn of nylon or other polyamides, whether or not dipped or impregnated with rubber or plastic
5902.20	Tyre cord fabric of high-tenacity polyester yarn, whether or not dipped or impregnated with rubber or plastic
5902.90	Tyre cord fabric of high-tenacity viscose rayon yarn, whether or not dipped in rubber or plastic
5903.10	Textile fabrics impregnated, coated, covered or laminated with poly" vinyl chloride" (excl. wallcoverings of textile materials impregnated or covered with poly" vinyl chloride"; floor coverings consisting of a textile backing and a top layer or covering of poly" vinyl chloride")
5903.20	Textile fabrics impregnated, coated, covered or laminated with polyurethane (excl. wallcoverings of textile materials impregnated or covered with polyurethane; floor coverings consisting of a textile backing and a top layer or covering of polyurethane)
5903.90	Textile fabrics impregnated, coated, covered or laminated with plastics other than poly" vinyl chloride" or polyurethane (excl. tyre cord fabric of high-tenacity yarn of nylon or other polyamides, polyesters or viscose rayon; wallcoverings of textile materials impregnated or covered with plastic; floor coverings consisting of a textile backing and a top layer or covering of plastics)
3926.20	Articles of apparel and clothing accessories produced by the stitching or sticking together of plastic sheeting, incl. gloves, mittens and mitts (excl. goods of 9619)
6601.10	Garden or similar umbrellas (excl. beach tents)
6601.91	Umbrellas having a telescopic shaft (excl. toy umbrellas)
6601.99	Umbrellas and sun umbrellas, incl. walking-stick umbrellas (excl. umbrellas having a telescopic shaft, garden umbrellas and the like, and toy umbrellas)
9003.11	Frames and mountings for spectacles, goggles or the like, of plastics

9004.10	Sunglasses
9005.10	Binoculars
9018.31	Syringes, with or without needles, used in medical, surgical, dental or veterinary sciences
9401.80	Seats, n.e.s.
9403.70	Furniture of plastics (excl. medical, dental, surgical or veterinary, and seats)
9506.32	Golf balls
9506.69	Balls (excl. inflatable, tennis balls, golf balls, and table-tennis balls)
9506.91	Articles and equipment for general physical exercise, gymnastics or athletics
6701.00	Skins and other parts of birds with their feathers or down, feathers, parts of feathers, down and articles thereof (excl. goods of heading 0505, worked quills and scapes, footwear and headgear, articles of bedding and similar furnishing of heading 9404, toys, games and sports requisites, and collectors' pieces)
6702.10	Artificial flowers, foliage and fruit and parts thereof, and articles made of artificial flowers, foliage or fruit, by binding, glueing, fitting into one another or similar methods, of plastics
6702.90	Artificial flowers, foliage and fruit and parts thereof, and articles made of artificial flowers, foliage or fruit, by binding, glueing, fitting into one another or similar methods (excl. of plastics)
6704.11	Complete wigs of synthetic textile materials
6704.19	False beards, eyebrows and eyelashes, switches and the like, of synthetic textile materials (excl. complete wigs)
6704.20	Wigs, false beards, eyebrows and eyelashes, switches and the like, of human hair, and articles of human hair, n.e.s.
6704.90	Wigs, false beards, eyebrows and eyelashes, switches and the like, of animal hair or textile materials (excl. synthetic textile materials)
9505.10	Christmas articles (excl. candles and electric lighting sets, natural Christmas trees and Christmas tree stands)
9505.9	Festival, carnival or other entertainment articles, incl. conjuring tricks and novelty jokes, n.e.s.
9608.60	Refills for ball-point pens, comprising the ball-point and ink-reservoir
9608.91	Pen nibs and nib points

Appendix 2 Overview of CPC

CPC Code	CPC Description
36490	Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics
36410	Sacks and bags, of plastics
21321	Tomato juice
21329	Other vegetable juices
21431	Orange juice
21432	Grapefruit juice
21433	Pineapple juice
21434	Grape juice
21435	Apple juice
21439	Other fruit juices, n.e.c.
17300	Steam and hot water
24410	Bottled waters, not sweetened or flavoured
24490	Other non-alcoholic caloric beverages
49511	Rail locomotives powered from an external source of electricity
49512	Diesel-electric locomotives
49519	Other rail locomotives; locomotive tenders
49520	Self-propelled railway or tramway coaches, vans and trucks (except maintenance or service vehicles)
49531	Railway or tramway maintenance or service vehicles, whether or not self-propelled
49532	Railway or tramway passenger coaches, not self-propelled; luggage vans, post office coaches and other special-purpose railway or tramway coaches, not self-propelled (except maintenance or service vehicles)
49533	Railway or tramway goods vans and wagons, not self-propelled
44141	Pedestrian controlled tractors
44142	Track-laying tractors
44149	Other agricultural tractors
49111	Road tractors for semi-trailers
49112	Public-transport type passenger motor vehicles
49116	Motor vehicles, for the transport of persons, specially designed for travelling on snow; golf cars and similar vehicles
49113	Motor cars and other motor vehicles principally designed for the transport of persons (except public-transport type vehicles, vehicles specially designed for travelling on snow, and golf cars and similar vehicles)
44428	Dumpers designed for off-highway use
49114	Motor vehicles n.e.c. for the transport of goods
49115	Crane lorries
49119	Special-purpose motor vehicles n.e.c.
43530	Fork-lift trucks; other works trucks whether or not fitted with lifting or handling equipment; tractors of the type used on railway station platforms
43530	Fork-lift trucks; other works trucks whether or not fitted with lifting or handling equipment; tractors of the type used on railway station platforms
44710	Tanks and other armoured fighting vehicles, motorized, and parts thereof

49911	Motorcycles and cycles fitted with an auxiliary motor, with reciprocating internal combustion piston engine of a cylinder capacity not exceeding 50 cc
49912	Motorcycles and cycles fitted with an auxiliary motor, with reciprocating internal combustion piston engine of a cylinder capacity exceeding 50 cc
49913	Motorcycles and cycles fitted with an auxiliary motor, other than those with reciprocating internal combustion piston engines; side-cars
49921	Bicycles and other cycles, not motorized
49922	Invalid carriages
49222	Trailers and semi-trailers of the caravan type, for housing or camping
49229	Other trailers and semi-trailers (including trailers and semi-trailers for the transport of goods), except self-loading or self-unloading trailers or semi-trailers for agricultural purposes
49610	Balloons and dirigibles; gliders, hang gliders and other non-powered aircraft
49621	Helicopters
49622	Aeroplanes and other powered aircraft of an unladen weight not exceeding 2000 kg
49623	Aeroplanes and other powered aircraft of an unladen weight exceeding 2000 kg
49630	Spacecraft and spacecraft launch vehicles
49311	Cruise ships, excursion boats and similar vessels, principally designed for the transport of persons; ferry boats of all kinds
49312	Tankers (ships)
49313	Refrigerator vessels (ships), except tankers
49314	Other vessels for the transport of goods and other vessels for the transport of both persons and goods
49315	Fishing vessels; factory ships and other vessels for processing or preserving fishery products
49316	Tugs and pusher craft
49410	Sailboats (except inflatable), with or without auxiliary motor
49490	Other vessels for pleasure or sports; rowing boats and canoes
49319	Other vessels (including light-vessels, fire-floats, dredgers, floating cranes, floating docks, warships and lifeboats other than rowing boats), except floating or submersible drilling or production platforms
49320	Floating or submersible drilling or production platforms
49390	Other floating structures
27220	Carpets and other textile floor coverings, woven, not tufted or flocked
27230	Carpets and other textile floor coverings, tufted
27290	Other carpets and textile floor coverings (including those of felt)
27912	Tulles and other net fabrics, except woven, knitted or crocheted fabrics; lace in the piece, in strips or motifs
27913	Embroidery in the piece, in strips or motifs
36320	Tubes, pipes and hoses, and fittings, therefore, of plastics
36910	Floor coverings of plastics, in rolls or the form of tiles; wall or ceiling coverings of plastics
36920	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics

36330	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials
36390	Other plates, sheets, film, foil and strips, of plastics
36930	Baths, wash-basins, lavatory pans and covers, flushing cisterns and similar sanitary ware, of plastics
36950	Builders' ware of plastics n.e.c.
36940	Tableware, kitchenware, other household articles and toilet articles, of plastics
36990	Articles of plastics n.e.c.
42921	Hand tools (including hand tools of a kind used in agriculture, horticulture or forestry, hand saws, files, pliers and metal cutting shears, hand-operated spanners, blow-lamps and clamps)
38111	Seats, primarily with metal frames
38112	Seats, primarily with wooden frames
46531	Portable electric lamps designed to function by their source of energy (except those for cycles or motor vehicles); electric ceiling or wall lighting fittings (except those for lighting public open spaces or thorough-fares); electric table, desk, bedside or floor-standing lamps; non-electrical lamps and lighting fittings; illuminated signs, illuminated name-plates and the like
29220	Luggage, handbags and the like, of leather, composition leather, plastic sheeting, textile materials, vulcanized fibre or paperboard; travel sets for personal toilet, sewing or shoe or clothes cleaning
38911	Pens, duplicating stylos, pencils, pen-holders, pencil-holders and similar holders, and parts thereof; crayons, pencil leads, pastels, drawing charcoals and chalks
38994	Cigarette lighters and other lighters; smoking pipes and cigar or cigarette holders, and parts thereof; combs, hair-slides and the like; hairpins, curling pins, curling grips, hair curlers and the like (except electro-thermic apparatus), and parts thereof; scent sprays and similar toilet sprays, and mounts and heads therefor; powder-puffs and pads for the application of cosmetics or toilet preparations
38993	Brooms, brushes, hand-operated mechanical floor sweepers (not motorized), mops and feather dusters; prepared knots and tufts for broom or brush making; paint pads and rollers; squeegees (other than roller squeegees)
38999	Articles n.e.c. (including candles, tapers, skins of birds with their feathers, artificial flowers, entertainment articles, hand sieves, hand riddles, vacuum flasks, tailors dummies, animated displays used for shop window dressing, and parts n.e.c.)
27996	Tyre cord fabric of high tenacity yarn of nylon or other polyamides, polyesters or viscose rayon
27997	Textile fabrics, impregnated, coated or covered n.e.c.
28243	Apparel and clothing accessories of plastics (incl. gloves)
38921	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and the like
48312	Spectacles, goggles and the like, corrective, protective or other
48313	Frames and mountings for spectacles, goggles or the like
48314	Binoculars, monoculars and other optical telescopes; other astronomical instruments, except instruments for radio-astronomy; compound optical microscopes

48150	Other instruments and appliances used in medical, surgical or veterinary sciences (including syringes, needles, catheters, cannulae, ophthalmic instruments and appliances n.e.c. and electro-medical apparatus n.e.c.)
38119	Other seats
38140	Other furniture, e.c.
38430	Gymnasium or athletics articles and equipment
38440	Other articles and equipment for sports or outdoor games
38972	Human hair, dressed, thinned, bleached or otherwise worked; wool or other animal hair or other textile materials, prepared for use in making wigs or the like; wigs, false beards, eyebrows and eyelashes, switches and the like, of human or animal hair or textile materials; articles of human hair n.e.c.
38991	Festive, carnival or other entertainment articles, including conjuring tricks and novelty jokes