

Fei Song

National Guidance for Plastic Pollution Hotspotting and Shaping Action: developing the pilot for Norway

Master's thesis in Industrial Ecology

Supervisor: Francesca Veronesi

Co-supervisor: Karl Klingsheim

July 2021



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Norwegian University of Science and Technology
Faculty of Engineering
Department of Energy and Process Engineering

Abbreviations

ALDFG	Abandoned, Lost, or otherwise Discarded Fishing Gear
ASC	Aquaculture Stewardship Council
BPA	Bisphenol A
EA	Environmental Action (Research & Consultancy for Impact)
EEA	European Environment Agency
EPR	Extended Producer Responsibility
EPS	Expanded Polystyrene, also written as 'PSE'
FFL	Fishing for Litter
FRs	Flame Retardants
GDP	Gross Domestic Product
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection
HDPE	High Density Polyethylene
HMF	Norwegian Retailers' Environment Fund, 'Handelens Miljøfond' in Norwegian
IOA	Input-Output Analysis
IUCN	International Union for Conservation of Nature
LCA	Life Cycle Assessment
LCIA	Life Cycle Impact Assessment
LDPE	Low-density polyethylene
MFA	Material Flow Analysis
NIVA	Norwegian Institute for Water Research, 'Norsk institutt for vannforskning' in Norwegian
NP	Nonylphenol
PA	Polyamide
PE	Polyethylene
PET	Polyethylene Terephthalate
PP	Polypropylene
PS	Polystyrene
PVC	Polyvinyl Chloride
SR	Synthetic Rubber
SSB	Statistics Norway, 'Statistisk sentralbyrå' in Norwegian
US EPA	United States Environmental Protection Agency

Key definition

Hotspots	Refer to the most relevant plastic polymers, applications, industrial sectors, regions or waste management stages causing the leakage of plastics into the environment (including land, air, water and marine environment), as well as associated impacts, through the life cycle of plastic products.
Interventions	Are tangible actions that can be taken to mitigate hotspots and are to be prioritized and designed to address the most influential hotspots in the plastic value chain.
Instruments	Are ways an intervention may be practically implemented through specific regulatory, financial or informative measures, considering context factors such as country dynamics and existing measures. As an illustrative example, a country may identify “mismanaged polyethylene bottles” as one of its hotspots. A relevant intervention may be an increase in bottle collection rate. A relevant instrument may be to instate a bottle return deposit scheme.
Properly Disposed	Waste fraction that is disposed in a waste management system where no leakage is expected to occur, such as an incineration facility or a sanitary landfill. We define a sanitary landfill as a particular area where large quantities of waste are deliberately disposed in a controlled manner (e.g., waste being covered on a daily basis, as well as the bottom of the landfill designed in a way to prevent waste from leaching out). Landfilling is mainly the result of a formal collection sector.
Improperly Disposed	Waste fraction that is disposed in a waste management system where leakage is expected to occur, such as a dumpsite or an unsanitary landfill. A dumpsite is a particular area where large quantities of waste are deliberately disposed in an uncontrolled manner, and can be the result of both the formal and informal sectors. A landfill is considered as unsanitary when waste management quality standards are not met, thus entailing a potential for leakage.

Littering	Incorrect disposal of small, one-off items, such as: throwing a cigarette, dropping a crisp packet, or a drink cup. Most of the time these items end-up on the road or side-ways. They may or may not be collected by municipal street cleaning.
Uncollected	Waste fraction (including littering) that is not collected by the formal sector.
Domestic Waste	Waste generated within the country.
Mismanaged Waste	The sum of uncollected and improperly disposed waste. It is plastic that is prone to be released to the environment. The mismanaged waste index is the ratio of the mismanaged waste and the total waste. It is abbreviated as MWI and its value given in percentage.
Leakage	The plastic released to rivers and oceans. The leakage rate is ratio between leakage and total waste generated, and its value is given in percentage.
Release Rate	The ratio between leakage and total mismanaged waste, and its value is given in percentage.
Macro-Plastic	Large plastic waste readily visible and with dimensions larger than 5 mm, typically plastic packaging, plastic infrastructure or fishing nets.
Micro-Plastic	Small plastic particulates below 5 mm in size and above 1 mm. Two types of micro-plastics are contaminating the world's oceans: primary and secondary micro-plastics. In this study, we focus on primary micro-plastics which are plastics directly released into the environment in the form of small particulates.
Mass Balance	Mass balancing is a mathematical process aiming at equalizing inputs and outputs of a given material flow across a system boundary. In our case, inputs consist of domestic production and imports while outputs consist of exports, waste generation and increase of stock. A mass balance allows to check data consistency and helps reconcile different datasets when needed.

Key definition

Formal Sector	Waste management activities planned, sponsored, financed, carried out or regulated and/or recognized by the local authorities or their agents, usually through contracts, licenses or concessions
Informal Sector	Individuals or a group of individuals who are involved in waste management activities, but are not formally registered or formally responsible for providing waste management services. Newly established formalized organizations of such individuals; for example, cooperatives, social enterprises and programs led by non-governmental organizations (NGOs), can also be considered as the informal sector for the purpose of this methodology.
Plastic Leakage	A quantity of plastic entering the oceans as well as other environmental compartments (e.g. rivers, soil, air).
Plastic Impact	A potential effect the leaked plastic may have on ecosystems and /or human health.

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I would first like to express my gratitude to my master thesis advisors Dr. Francesca Verones and Dr. Karl Klingsheim from Industrial Ecology Programme of the Department of Energy and Process Engineering in Faculty of Engineering at Norwegian University of Science and Technology, who gave me constructive suggestions and inspirations whenever I ran into a trouble spot or had a question about my research or writing. They consistently allowed this paper to be my own work, but steered me in the right the direction whenever they thought I needed it.

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Lastly, I must express my very profound gratitude to my parents and friends, providing me with unfailing support and continuous encouragement throughout my study and through the process of researching and writing this report. This accomplishment would never have been possible without them. Special thanks to Patrick Christian Bösch, who has always been my closest friend and gave me unconditional support and compassion during my most difficult moments.

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Abstract

Plastic has been widely used in vast volume all over the world for decades, and the plastic waste has caused many environment problems globally, among which the leakage of plastic into the ocean has been particularly worrisome in recent years for its lasting impacts on ecosystems and humans. Although the attention on ocean plastics has been intensified, there has been a lack of a comprehensive, feasible, fixable and unified quantitative estimation and evaluation method.

In 2019, the National Guidance for Plastic Pollution Hotspotting and Shaping Action (hereinafter referred to as ‘the Guidance’) was co-developed by the International Union for Conservation of Nature (IUCN), The United Nations Environment Programme (UNEP) with technical support of Environmental Action (EA) and Quantis, which has been implemented in 7 pilots from 3 continents (status 2021 February), proving to be viable, adaptable and versatile.

In this thesis, based on the published pilot reports and the method designed by the Guidance, a cross-comparison of completed pilot country studies and a case study of Norway are conducted. The results show that a great number of leakage hotspots like packaging, tires and textiles occur universally in various pilot countries as well as in Norway, and management and control of these hotspots still needs to be strengthened purposefully in order to alleviate the ocean plastic crisis.

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1. Introduction

1.1 Use and littering of plastics

The first synthetic plastic was produced by Alexander Parkes in 1862, when he invented celluloid, a material that could be shaped when heated and kept its shape when cooled (PlasticsEurope, 2021). Other innovations quickly followed, with heat resistance and flexibility, attracting a variety of industries such like packaging, textiles, construction and so on get into the plastics business (Science History Institute, 2016).

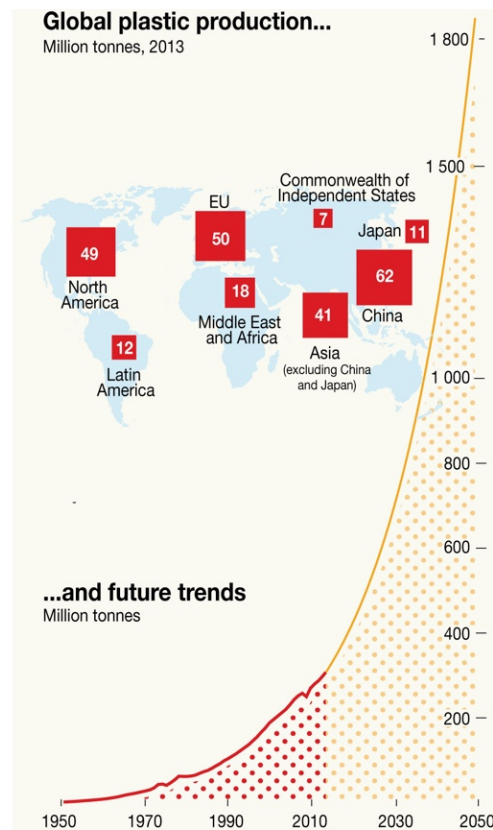


Figure 1. Global plastic production in 2013 and future trends (GRID-Arendal, 2018a)

Believed to be one of the most important industrial innovations in the modern world (Ombis, 2012), plastics can be deployed to many thanks to their nature of being cheap, easy-to-obtain, durable, shapeable, and low-density, which consequently turns themselves a material with incomparable advantages. Coupled with the modern prevailing model of economic development that relies heavily on uninterrupted flow of materials (EEA, 2019), the level of plastic production and consumption has risen continually because of the market demand (Figure 1). In 2015, the cumulative global plastics production of polymer resin and fiber

counting from 1950 reached 7.82 billion tones (Geyer et al., 2017), and the increasing trend is projected to continue its expansion in the future.

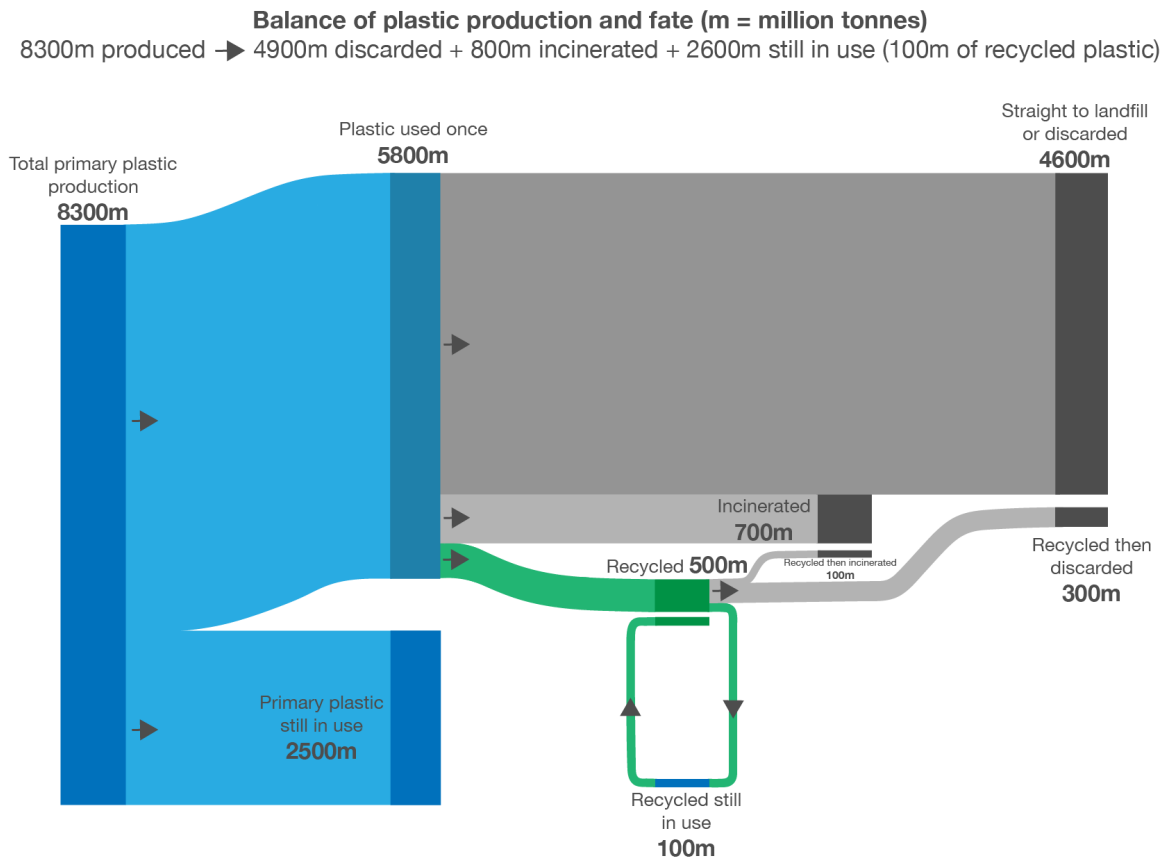


Figure 2 Fate of plastics production of polymers, fibers and additives from 1950 to 2015(Scarr & Hernandez, 2019)

Just like the life-cycle of many other materials, plastics also follow the pattern of extraction, production, consumption and waste generation (EEA, 2020). The vast majority of plastics having shown in human society turns into waste after being used/consumed, around 60% of total plastics produced during the period from 1950 to 2015 went to landfill or were discarded (Figure 2). Although in the past decades, with the increasingly urgent calling for solution to environmental problems and people's awareness of environmental protection, the recovery rate of plastics is rising, landfill and discarded are still seen as the predominant fate for plastic waste despite of the incineration and recycling rate have been increasing (Figure 3).

The inappropriate disposal of plastic waste has a long history and has become a problem that is both ubiquitous and worrying. In many developing countries, improper plastic waste treatment is particularly prevalent, as a result, the volume of plastic emission to ocean is worryingly high (Figure 5), while in most developed countries it is less troublesome (Lebreton & Andrady, 2019). Improper and unregulated disposal practices, inadequate waste

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management infrastructure, and the use of insufficient recycling technology, combined with a lack of public awareness and government incentives, have made plastic waste pervasive in environment of many developing countries (Hahladakis, 2020), littering both the aquatic and terrestrial ecosystem with a variety of impacts (Figure 4).

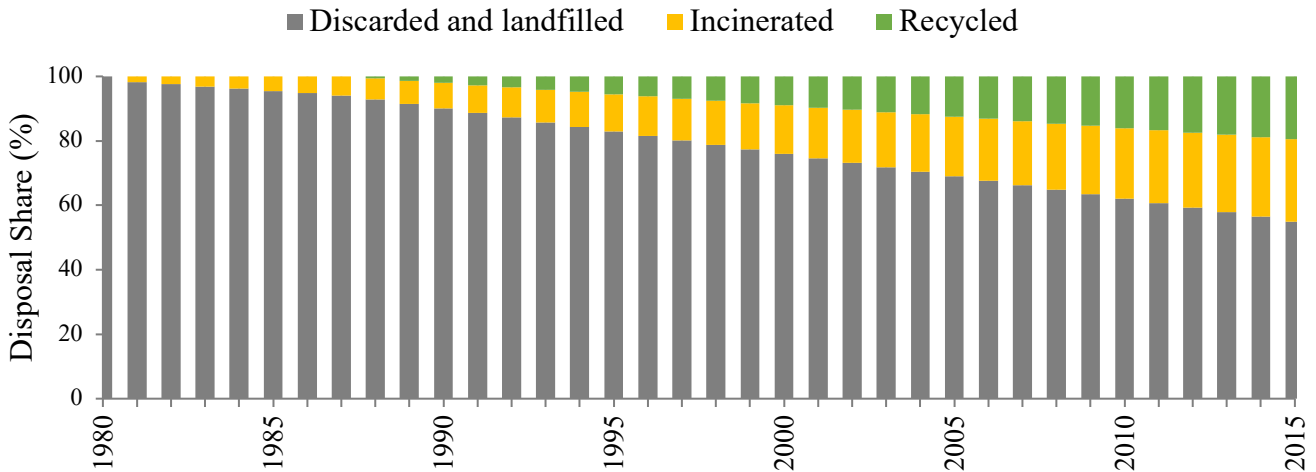


Figure 3 Estimated annual global plastic waste disposal share(Geyer et al., 2017)

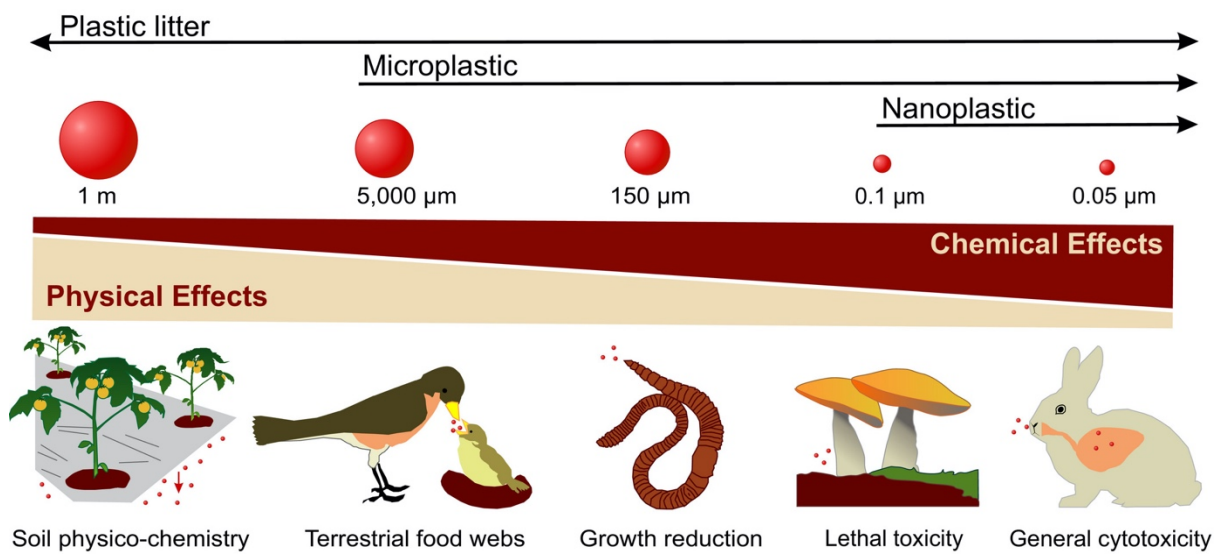
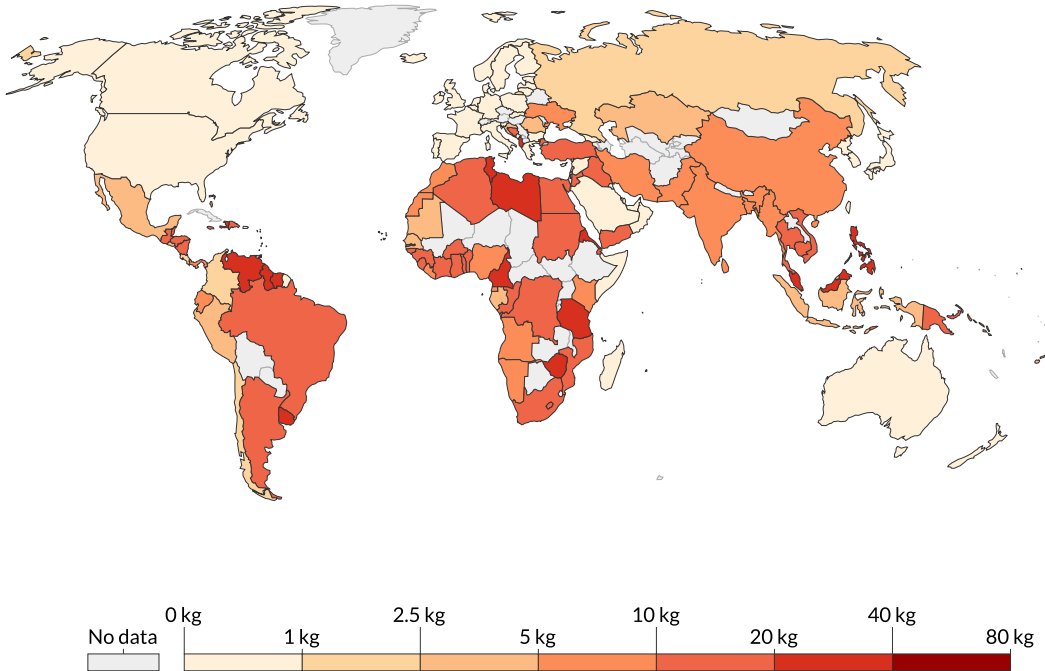


Figure 4 Plastic pollution's effects on ecosystem(Machado et al., 2018)

Mismanmanaged plastic waste per capita, 2019

Our World in Data

World



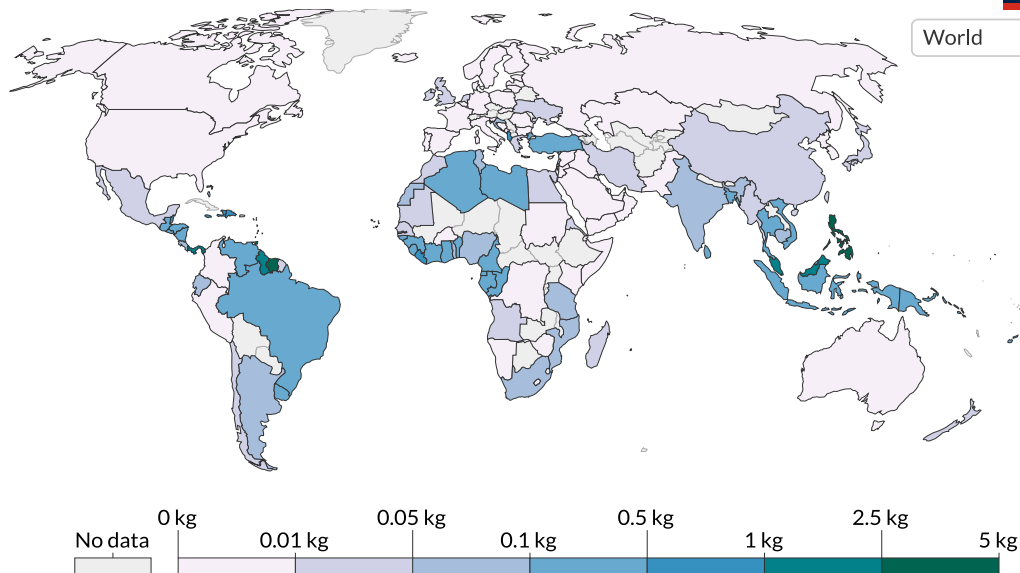
Source: Meijer et al. (2021). More than 1000 rivers account for 80% of global riverine plastic emissions into the ocean. Science Advances.

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Plastic waste emitted to the ocean per capita, 2019

Our World in Data

World



Source: Meijer et al. (2021). More than 1000 rivers account for 80% of global riverine plastic emissions into the ocean. Science Advances.
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Figure 5 Improperly disposed rate and emission to ocean (Ritchie & Roser, 2018)

1.2 Ocean plastic debris

As discarded plastic can be transported by wind, tide and inland waterways (Figure 6), around 3% of global annual plastics waste eventually enters the oceans (Jambeck et al., 2015), making ocean plastic debris an emerging concern worldwide, which accounts for 80% of all marine debris ranging from surface waters to deep-sea sediments (IUCN, 2018). In 2010, it is estimated that 4.8 million to 12.7 million tons of plastics have been discarded into the Oceans (Lusher et al., 2017).

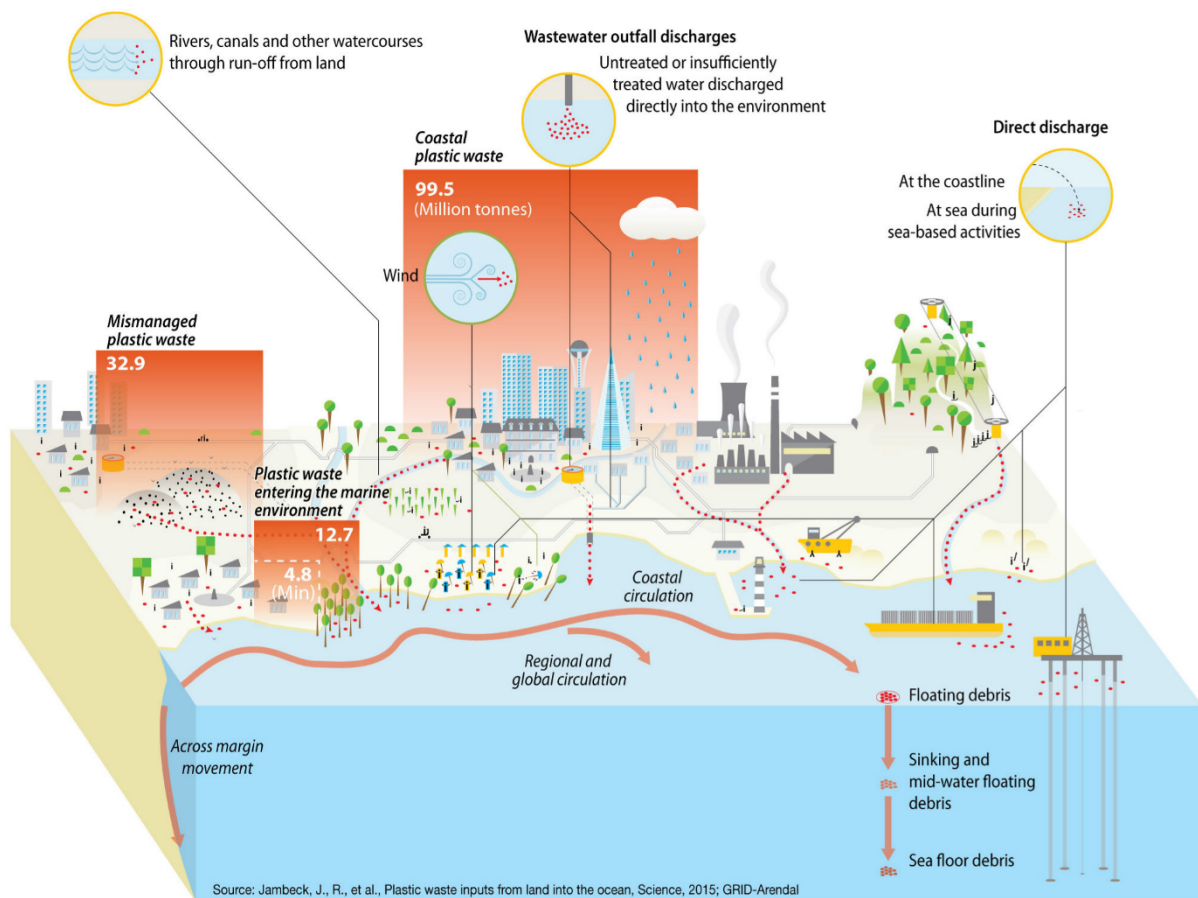


Figure 6 Pathway of plastics entering the oceans (Jambeck et al., 2015)

Plastic debris has been found in all ocean regions (Emmerik & Schwarz, 2020) and at every depth ranging from 5 to 1000 m (Choy et al., 2019). Besides, the fraction of plastic particles floating on the ocean surface could be in trillions (Lebreton et al., 2018), weighting approximately 270 kt (Figure 7), which only accounts 0.5% of all plastics in the oceans in mass (Figure 8). The overall amount of plastic that will ultimately reach the ocean is expected to increase by an order of magnitude by 2025. (Rochman, 2016)

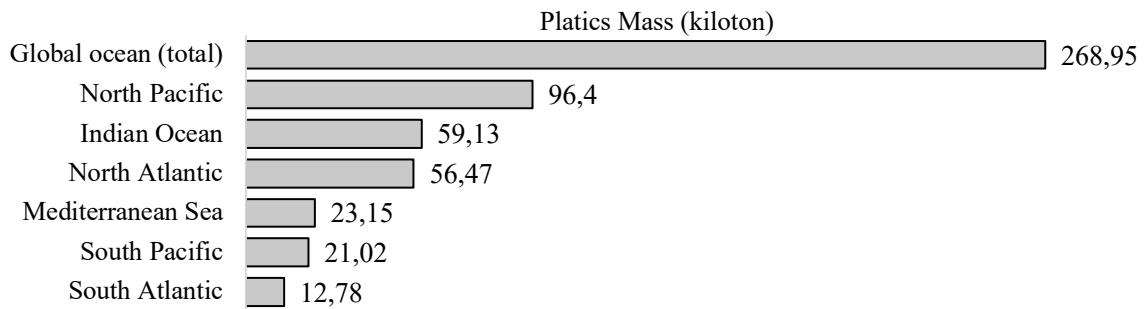


Figure 7 Surface floating plastic by ocean basin in 2013 (Eriksen et al., 2014)

We cannot neglect the effects of ocean plastic debris on marine ecosystem. Sea life that ingests or becomes entangled in plastic waste suffers serious injuries and even death, putting marine animals at risk and thereby reducing biodiversity (Derraik, 2002; Gall & Thompson, 2015; Gregory, 2009; McKinney, 1998). The interactions of plastic debris with marine systems include obstructions, abrasions, collisions, or use as substrate (Ritchie & Roser, 2018), which can alter coastal ecosystems (for example, when plastic of fishing gear collides with coral reef, it causes abrasion and damage), impacting light penetration, organic matter access, and oxygen exchange ability, resulting in low habitability (Beaumont et al., 2019; Goldberg, 1997; Mendenhall, 2018; Ritchie & Roser, 2018), accelerating the degradation of ecosystems (Alagarsamy et al., 2014).

Not only marine ecosystems can be affected, plastic debris can also impact humans (Keswani et al., 2016). Plastic waste consumed by marine animals may ultimately make its way to our dinner tables, posing a health risk to humans (Derraik, 2002). In addition to the potential direct harm of plastic debris such like wound cuts by the sharp edges and infection by bacteria attached (Beaumont et al., 2019), the released chemicals derived from plastics and their additives such as persistent organic pollutants (POPs), and other Substance of Concern (SoC) have the potential to adversely affect human health.

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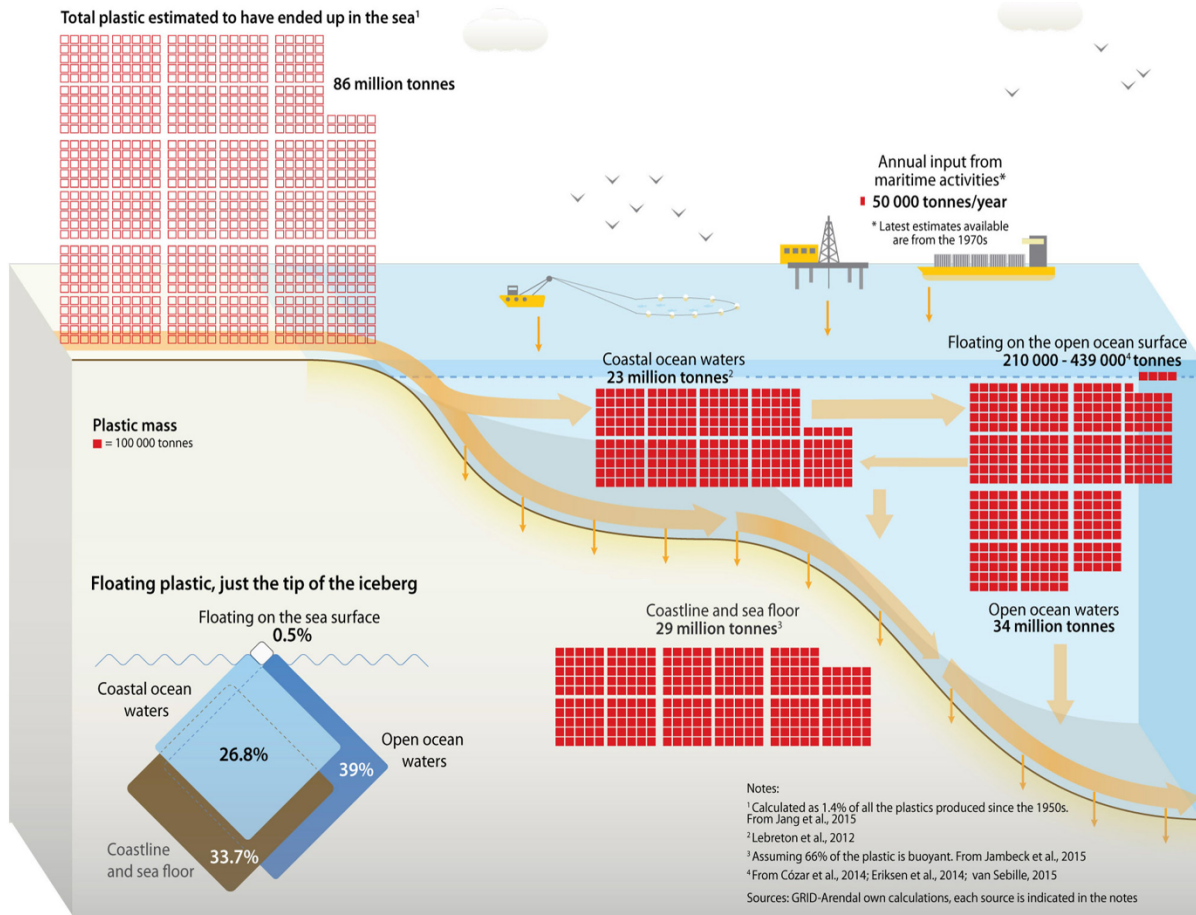


Figure 8 Ocean plastic debris and its distribution (GRID-Arendal, 2018b)

1.3 Previous studies

The condition of marine plastics has been significantly exposed in recent years, with the awakening and increase of public environmental consciousness. In this field, more and more institutions and scholars participate, and the breadth and depth of the researches are keeping improving (Figure 9). Jambeck et al have the most up-to-date figures of global plastic waste inputs into the oceans from land-based sources (Jambeck et al., 2015). However, some assumptions were made in this research, and it is thought that the calculations given therein may be an underestimation of truth (Horton et al., 2017). Schwarz et al. identified the key sources, transport, and accumulation of different forms of plastics in various aquatic environments in a comprehensive analysis (Schwarz et al., 2019).

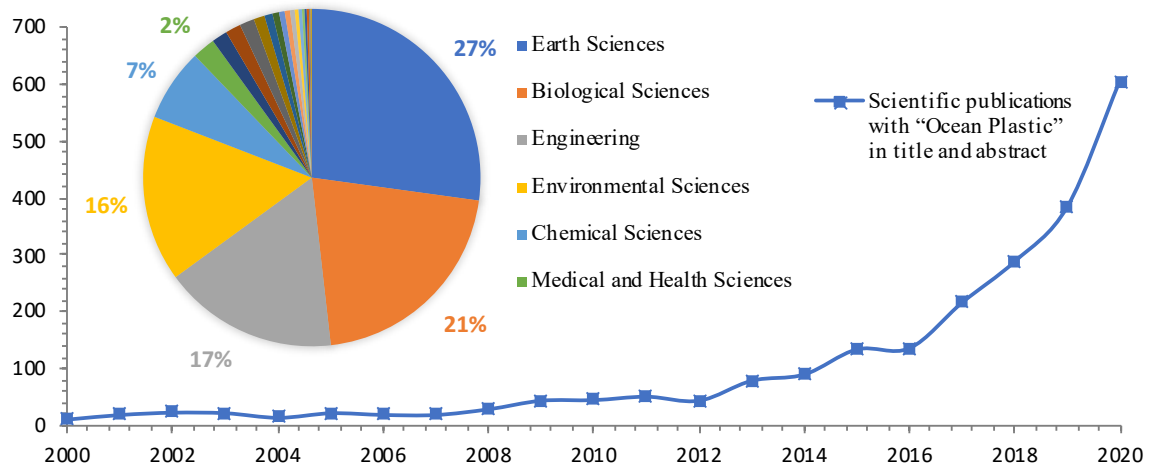


Figure 9 Research trend and fields of ocean plastic (Dimensions, 2021)

Although the issue of marine plastic debris has received more and more attention from society and academia, some factors, such as (1) the lack of reliable data, (2) the complexities of the plastics production-generation waste system, (3) global differences in societal attitudes and waste management infrastructure, (4) the uncertainty of marine and terrestrial ecosystem interactions and (5) numerous sources of plastics leakage (Dahlbo et al., 2018; Hahladakis, 2020; Hahladakis et al., 2018; Hahladakis & Aljabri, 2019; Horton et al., 2017; Mahon et al., 2017; Rillig, 2012; Scholz-Lechner & Ramler, 2015; Talvitie et al., 2017), have rendered the of the fluxes estimation and sources identification of plastic leakage extremely challenging tasks.

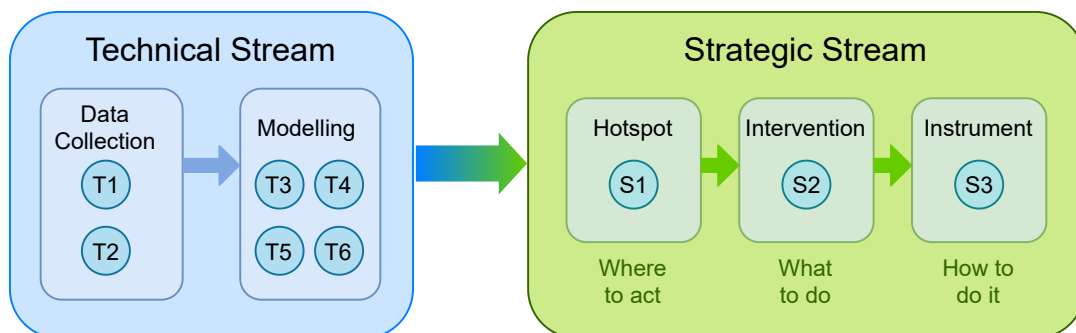


Figure 10 Workflow of the Guidance

To provide an actionable, systemic and holistic method of hotspotting plastics flows and origins, in 2019, the *National Guidance for Plastic Pollution Hotspotting and Shaping Action* (hereinafter referred to as ‘the Guidance’) was co-developed by the International Union for Conservation of Nature (IUCN), The United Nations Environment Programme (UNEP)

1. Introduction

with technical support of Shaping Environmental Action (EA) and Quantis, which offers a comprehensive perspective into the measurement of plastic leakage sources. The schemes of guidance can be divided into technical stream and strategic stream (Figure 10), which specialize in the research with analytical aspects and decision-making support to relevant stakeholders respectively.

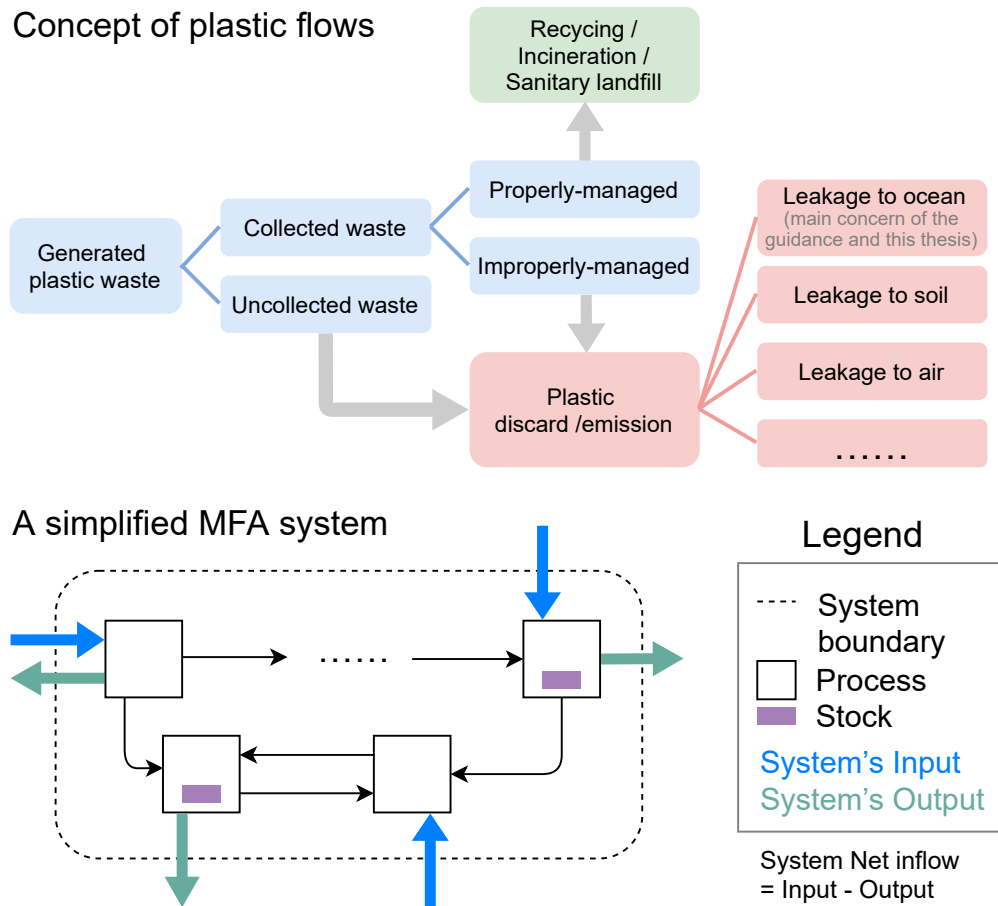


Figure 11 The concept shown in the Guidance and this thesis

By 2021 February, 7 countries/areas (Vietnam, Thailand, South Africa, Kenya, Mozambique, Menorca of Spain, and Cyprus) have implemented the Guidance with data of 2018 and published their reports as pilots (Table 1). African, Asian and European pilots are shadowed in blue, yellow and orange respectively in this table, the same hereinafter. More detailed information on the Guidance's method and reports' results is given in the second Chapter of this thesis.

Table 1 Hotspots presented in pilot reports subchapter 2.2

Pilot report	Performed year	Data	Completed date	Plastics Leakage Hotspot				
				Polymer	Application	Sector	Waste Management	Region
South africa	2020	2018	N.A	●	●	●	●	●
Kenya	2020	2018	N.A	●	●	●	●	●
Mozambique	2020	2018	N.A	●	●	●	●	●
Vietnam	2019	2018	2020.11.03	●	●	●	●	●
Thailand	2019	2018	2020.10.22	●	●	●	●	●
Menorca (Spain)	2020	2018	2020.12.18	●	●	●	●	●
Cyprus	2020	2018	2020.12.17	●	●	●	●	●

● Assessed ● Not assessed

1.4 Aim and scope

Despite the importance of monitoring ocean plastic leakage, there is a lack of tools for the volume estimation of plastic leakage on both a global and Norwegian basis; furthermore, the sources of plastic debris are not fully acknowledged and identified. In this thesis, the framework and method of the Guidance is being studied, where the technical stream is the center of attention (Figure 10). The strategic stream is outside of the range of this thesis. Hotspots results from pilot reports published before 2021 February under the Guidance are investigated and compared. Pilots reports released afterwards are not covered in this thesis.

Under the Norwegian context, the data discrepancy between the Guidance 's demand and information available in Norway are described. The possibility and feasibility of applying this guidance is assessed and ranked, highly-feasible models of technical streams are run with data collected from government, organization reports and academic studies. The plastic leakage fluxes are estimated and their sources are hotspotted to assistant potential action shaping in the future. In the end, the limitations and outlooks of the Guidance and work in this thesis are discussed.

This thesis is aimed towards scientific audiences with basic university level knowledge of environment, ecology and waste treatment.

2. The Guidance and hotspotting approach

To assist countries and cities that are struggling with a critical information gap regarding the plastics leakage issue, in 2019, IUCN, EA, and Quantis collaborated on the development of *the National Guidance for Plastic Pollution Hotspotting and Shaping Action*, which offers an analytical structure as well as realistic methods that can be used at various geographical scales.

Aiming to help users find the most important hotspots in different situations with updated data and analysis, the Guidance can identify solutions to address a country's or city's current and/or urgent needs. The method presented in the Guidance allows for the monitoring of plastic use in a variety of fields, including healthcare, agriculture and food, logistics and transportation, and households, in order to establish strategies to mitigate the negative effects. Other than that, with the method of material flow analysis (MFA) and principle of mass balance, some flows that are difficult to measure or estimate directly in previous surveys also become possible to quantify.

The Guidance also serves as a useful link between scientifically-based evaluations and policymaking. The Guidance's foundation is built on collecting and analyzing relevant data on plastic production, consumption, waste management, and disposal, as well as prioritizing hotspots, to map plastic leakage and its impacts across the value chain. The Guidance empowers governments to recognize and enforce appropriate strategies and instruments in cooperation with key stakeholders to resolve the identified hotspots. Decision-makers at national, sub-national or local levels can set goals, negotiate on and implement action plans, and track progress once they have credible information about their current situation using the Guidance.

2.1 Framework of the national Guidance

The Guidance consists of a set of nine modules that are divided in a technical stream (modules T1 to T6) and a strategic stream (modules S1 to S3), which specialize in the research with analytical aspects and decision-making support to relevant stakeholders respectively (Figure 10).

The conduction of technical stream starts with data-collection and completion of Module T1 (Plastic Inputs and Outputs) and T2 (Waste management), then other technical modules related to leakage and impacts T3 (polymer/application/sector hotspots), T4 (waste management hotspots), T5 (Regional hotspots) and T6 (Impacts) are performed.

Once the technical stream is completed, the strategic stream comes into the picture. After prioritizing hotspots and the key areas of intervention employing S1 and S2, the instrument alignment (S3) is deployed to support the planning and proposed implementation of the selected interventions through a guided process intended to help the relevant actors to converge on appropriate instruments and eventually take actions.

2.2 Models and tools

Different stream is equipped with different modules, each module is either a single tool or multiple tools combined as a kit. Technical modules concentrate on the generation of hot-spot knowledge (Figure 12, Table 2), while Strategic modules concentrate on creating interventions and instruments by engaging a larger community of stakeholders.

As the building blocks of the Guidance, all tools fall in 3 categories:

- Input tools (for data collection)
- Assessment tools (to generate hotspots, measures, and instruments)
- Output tools (to have summarized and shareable)

2. The Guidance and hotspotting approach

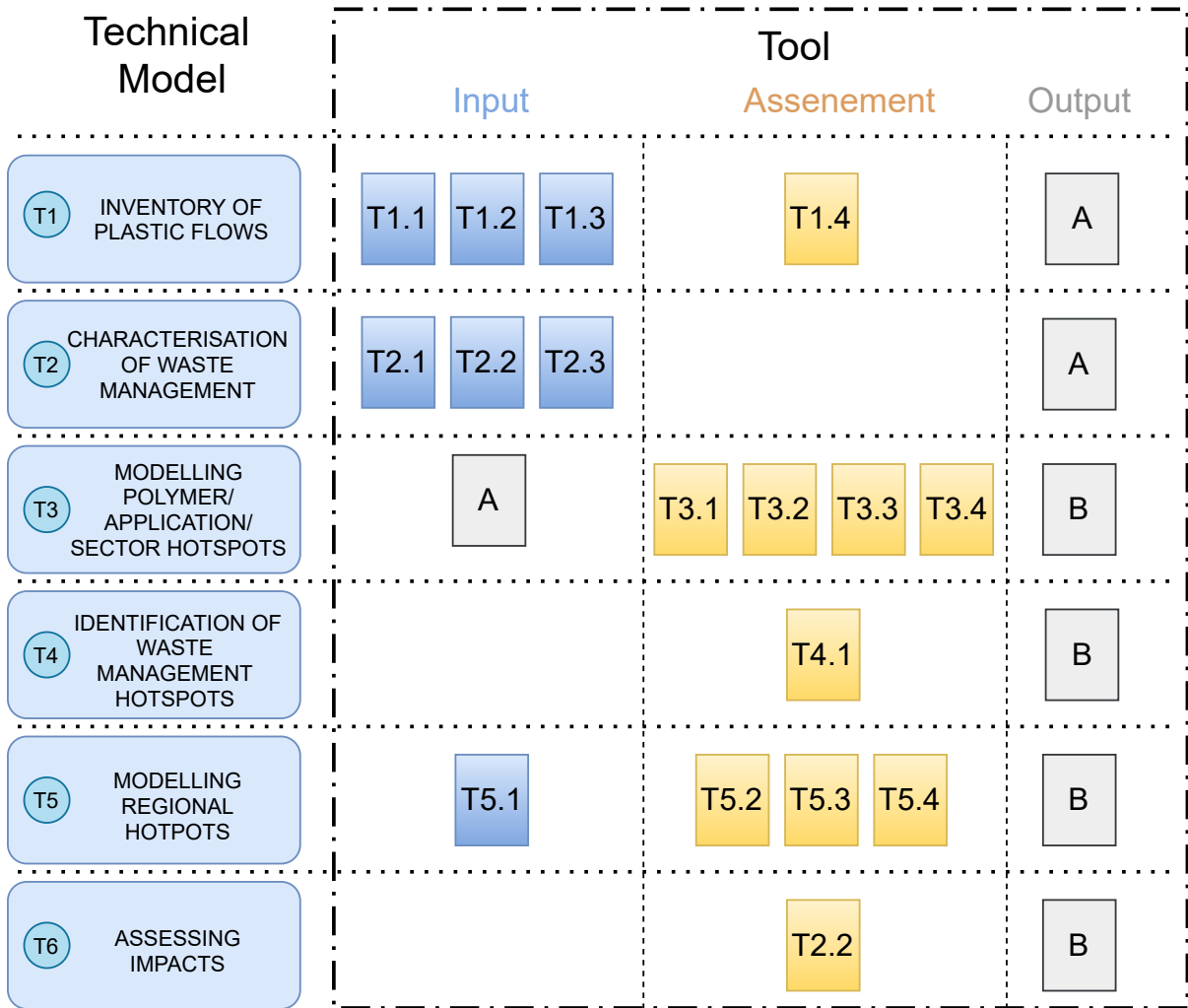


Figure 12 Technical models and related tools

Table 2 Object of tools in technical stream

Tool	Name	Type	Function
T1.1	Inventory of data sources and data gaps (plastic sources)	Input	List data sources and identify data gaps on plastic flows
T1.2	Data collection template (plastic sources)	Input	Support data collection on topics related to domestic plastic use and plastic flows
T1.3	Fisheries model canvas	Input	Support data collection on topics related to fishing activities
T1.4	COMTRADE data extraction	Assessment	Extract and organise relevant figures from COMTRADE database to be used in the modelling process
T2.1	Inventory of data sources and data gaps (waste management practices)	Input	List data sources and identify data gaps on waste management
T2.2	Data collection template (waste management practices)	Input	Support quantitative data collection on topics related to waste management at country level (waste collection, plastic waste recycling. etc.)
T2.3	Waste model canvas	Input	Canvas for guiding interviews with municipalities or waste management organisation (waste collection, plastic waste recycling, etc.)
T3.1	Fisheries leakage calculation	Assessment	Estimate plastic weights by type of fishing gear and calculate plastic leakage from the fishing sector
T3.2	Polymer/application/sector MFA & leakage calculation	Assessment	Compute mass balance and plastic leakage for polymer/application/sector hotspots categories
T3.3	MFA modelling quality assessment	Assessment	Assess the quality of hotspot results based on source reliability and modelling criteria
T3.4	Hotspot prioritisation canvas	Assessment	Prioritise hotspots based on absolute leakage quantities as well as relative leakage rates
T4.1	Waste management hotspot canvas	Assessment	Build a waste management dashboard highlighting components of the waste management system that contributes either positively or negatively to plastic leakage mitigation
T5.1	GIS model	Assessment	Provide the user with a pre-computed GIS model to facilitate the generation of relevant maps as an illustration of geographical results
T5.2	GIS modelling quality assessment	Assessment	Assess the quality of hotspot results based on source reliability and modelling criteria
T6.1	Plastic application impact assessment	Assessment	Impact assessment of plastic applications, to complement the analysis in Module T3
A	Domestic plastic data repository	Output	Gather all relevant data from T1 and T2 as an input to the following modules for modelling and assessment
B	Summary of hotspots per category	Output	Summarise all hotspots by category resulting from Module T3 to T6

2.3 Pilot report

By the 28th of February 2021, 7 countries/regions (Vietnam, Thailand, South Africa, Kenya, Mozambique, Menorca of Spain, and Cyprus) have completed the national guidance and published their pilot report online (IUCN et al., 2020a, 2020b, 2020a, 2020c, 2020e, 2020f, 2020d). Participants are located on the coastline of Africa, Asia and Europe.

All the reports are structured in the same way (Figure 13), among all the Chapters presented in the report, 2nd , 3rd and 4th Chapters are the most country / region oriented.

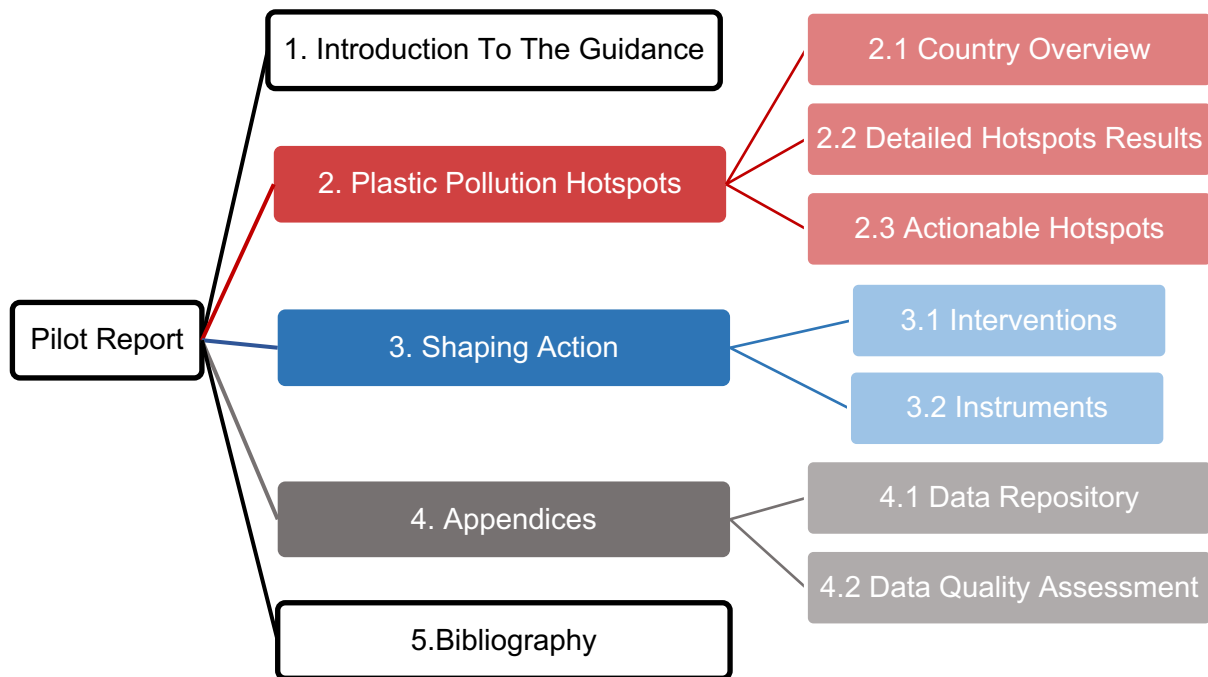


Figure 13 The pilot report structure.

3.Method

3.1. Hotspots comparison of the pilots

The comparison of the completed pilot projects is the first focus of this thesis. Reports from pilot countries published before 2021 Feb 28th were downloaded from the website of the national guidance project (<https://plastichotspotting.lifecycleinitiative.org/pilots/>). All reports published are structured in the same way as mentioned in the previous chapter: the 1st chapter of introduction to the Guidance, 2nd chapter of plastic pollution hotspots, and the 3rd chapter of shaping action.

As for this thesis, the 2nd chapter is of greatest interest. Primarily, the subchapter of 2.1 and 2.2 in the pilot reports about country overview and detailed hotspots results, are investigated. In this thesis, 5 hotspot categories presented in reports are sorted into quantitative ones (application, polymers, sectors) and qualitative ones (regional, waste management) in accordance with the form of the results presenting: quantitative ones are expressed in form of numbers while the qualitative ones are descriptive and conceptual (Table 3).

Tables and figures have been created to better present the processes and findings of this thesis. Unless otherwise specified, all figures and tables without citation in this thesis are the author's original work.

Table 3 Hotspots categories

Polymer	Quantitative		Qualitative	
	Application	Sector	Waste Management	Region
PET	Other bottles	Packaging	Different elements of the waste management system, such like "Value of recycled plastics", "Segregation of compostable waste", and so on.	City, district, sub-district level
PP	Other packaging	Agriculture		
Polyster	Lids and caps	Textiles		
LDPE	Dairy packing	Construction		
HDPE	Bags	Tourism		
PS	Baby diapers	Fishing		
Other	Drinke bottles	Medical		
Synthetic Rubber	Boxes,cases, crates	Electrical & Electronics		
PVC	Cigarette filters	Others		
	Sanitray towels	Automotive		
	Fishing nets	Transportation		

Individual pilot country's data is extracted from their own report and merged with other pilot countries for comparison in this thesis. Quantitative ones are kept to the same dimensioned tables, while qualitative ones are recorded into lists by the level of their assessment.

Visualization of data is derived after data gathering and interpretations are developed to better understand the different behaviors of pilot countries.

3.2. Case study in Norway

The second main focus of this study is to explore the applicability of this guidance to a Norwegian context. As the main object for this study, the technical stream (model T1 to T6) network is constructed with the instruction of models and tools provided by the Guidance (<https://plastichotspotting.lifecycleinitiative.org/modules/>), where input and output relation of each model are presented (Figure 14).

The next step is inventory data collection based on data input demand shown in Figure 1. Starting from T1 and T2, the input data demand is further identified with aspects of plastic sources, waste management, leakage, EPR policy, and GIS information. The data search first takes place in published articles and theses related to Norway, the list of stakeholders (environment organization, industry association, research institutes...) is also being completed during this process. The topic-related reports issued by stakeholders are gathered to further fulfill input data demand; some stakeholders are also contacted for interviews on technical support and information support (Table 4).

Table 4 Key stakeholders

Stakeholders	Information support	Technical support
Grønt Punkt Norway	√	
SSB - Statistics Norway	√	
Mepex Consult	√	
Hold Norge Rent	√	
HMF - Handelens Miljøfond	√	
Infinitum	√	
Salt Lofoten AS	√	
PlasticsEurope	√	
EA - Environmental Action		√
PLASTEAX	√	

To keep the consistency with pilots of the Guidance, the Norwegian data from 2018 is prioritized. In the case of unavailable data, assuming that the difference between years can be ignored, the data of other years are temporarily adopted.

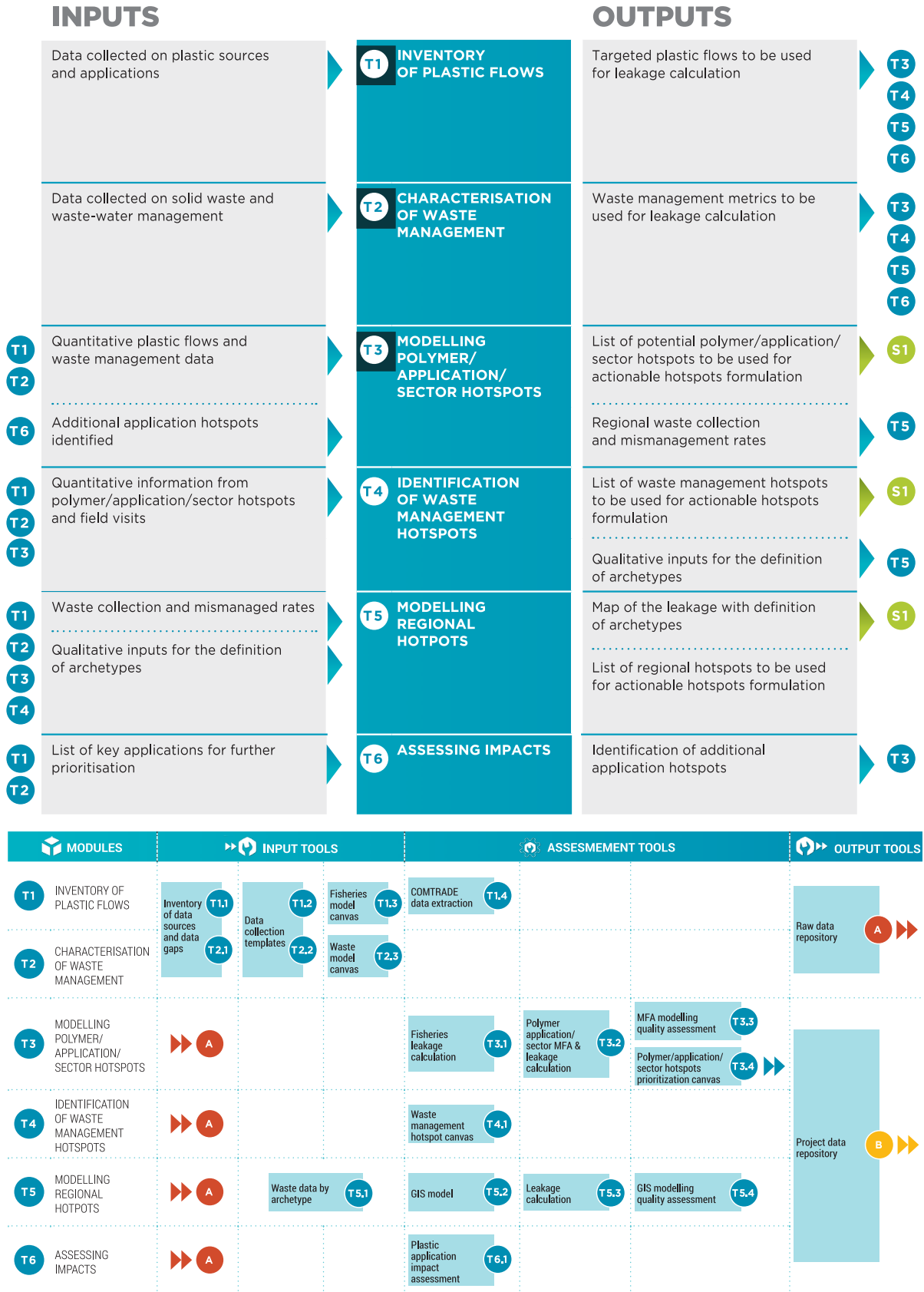


Figure 14 Technical stream network (IUCN et al., 2020b)

3.Method

After preliminary data collection, the data gaps are identified and evaluated on the scale. For each technical model from T1 to T6, the feasibility of model-operation is being assessed with data input demand and data gap. The models are ranked by the order of feasibility, high-feasible ones are chosen to function under the Guidance instruction in the Norwegian context (Figure 15); while the low-feasible ones are recognized and the limiting factors are elaborated for future completion.

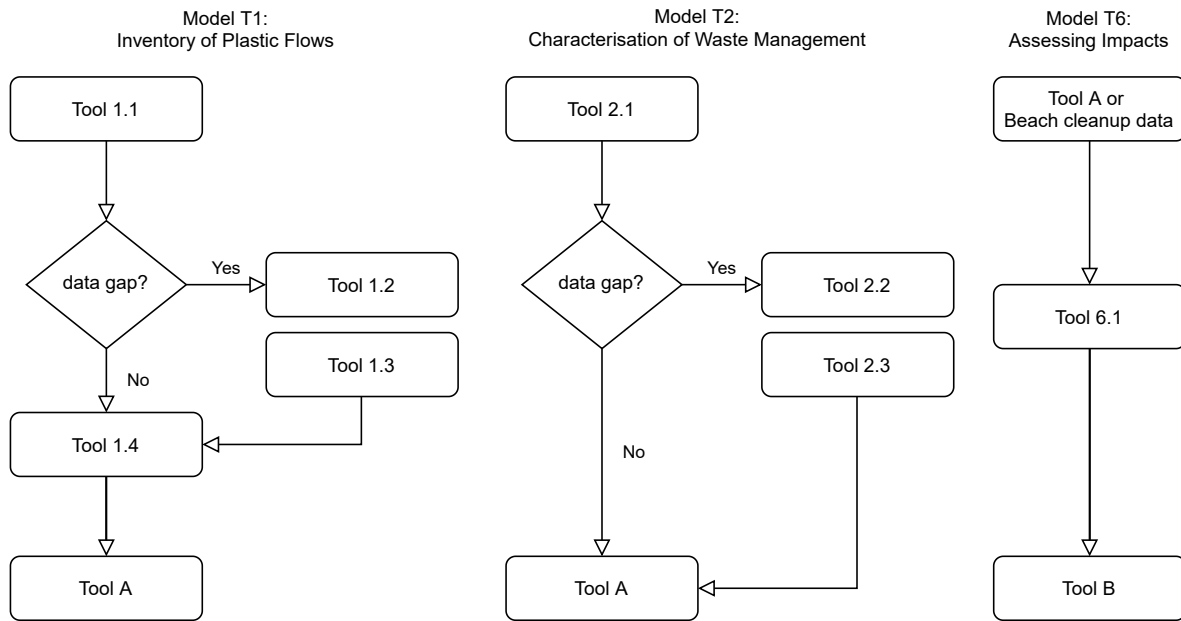


Figure 15 Flowchart of present highly feasible models

The results generated from highly feasible models using Norwegian data are compared with pilot countries to produce transferable lessons and references to policymakers and scientists.

4. Results and discussion

This chapter is divided into two parts:

- 1) comparison of the results of the already existing pilot projects.
- 2) The initial results from the Guidance's modules are displayed and interpreted for Norway, and the results are compared to other studies carried out in a Norwegian context.

4.1 Pilot project

Pilots are compared by the dimension of overview and specific hotspotting categories.

4.1.1 Overview

Subchapter 2.1 of pilot reports highlight on the general overview of plastic flows in each country/ region (Table 5), which involve both input and output of the national/regional plastic material system.

As the reports state absolute values, the internal and external interaction of the plastics flows of the pilot system are depicted by volume. Despite the high recycling mass, the absolute leakage in the Asian pilots is significantly larger than that in the others, suggesting that the Asian countries has the potential to play a crucial role in global efforts of solving the ocean plastic leakage. Although the European pilots reported the smallest absolute value of leakage, one cannot conclude that European countries have successfully responded to plastic leakage: on the one hand, the population of these two pilots is relatively small; on the other hand, their economic and industrial structure is significantly different from that of other pilots since they are recognized as developed countries, and even within the developed countries group, each one is impossible to behave the exactly the same.

In addition to most concerning item of leakage (the 2nd last column of the first part in Table 5), it is worth to point out that the overview in Table 5 also reveals the various plastic flow structure of each pilot, which is closely associated with their economic structures and outputs. For instance, Kenya, Mozambique and South Africa have significantly dissimilar orders of magnitude on the term "Export of primary and products", compared with the volume of "Import of primary and products", the difference indicates the amount used domestically, which suggests that the countries' plastic trade activities are happening at very different scales. The heterogeneity between pilots is thus reflected here.

4. Results and discussion

Table 5 Pilots Overview

All plastic flows in the country

Continent	Pilot	Waste import	Product import	Import of primary and products	Total input component*	Export of primary and products	Change in stock	Waste export	Recycling	Properly disposed	Improperly disposed	Uncollected	Leakage	Total output component**
		(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)	(kt/year)
Africa	Kenya	3	331	433	767	85	177	5	36	N.A.	89	339	37	768
	Mozambique	4	110	144	258	3	72	1	4	N.A.	51	109	17	257
	South Africa	18	904	2743	3665	1084	192	12	352	1066	223	657	79	3665
Asia	Thailand	556	1339	17353	19248	12903	1185	193	500	1463	1297	1372	336	19249
	Vietnam	615	2226	7953	10794	2457	2152	14	923	1255	370	3169	453	10793
Europe	Cyprus	0,3	70	37	107,3	11	5	10	N.A.	77	N.A.	6	1	110
	Menorca (Spain)	N.A.	N.A.	N.A.	N.A.	1,427	N.A.	N.A.	N.A.	7,734	N.A.	0,981	0,078	10,22

*Total input component = Waste import + Product import + Import and production of primary

**Total output component = Export of primary and products + Change in stock + Waste export + Recycling + Properly disposed + Uncollected + Leakage

Plastic waste by origin

Continent	Pilot	Domestic (kt/year)	Imported (kt/year)	Total Waste*** (kt/year)
Africa	Kenya	503	3	506
	Mozambique	179	4	183
	South Africa	2371	18	2389
Asia	Thailand	4605	556	5161
	Vietnam	5569	615	6184
Europe	Cyprus	92,6	0,3	92,9
	Menorca (Spain)	10,22	0	10,22

***Total waste = Waste export + Recycling + Properly disposed + Uncollected + Leakage = Domestic + Imported

However, the findings of the pilot reports focus on the absolute values in statistics, that fail to take into account that the size, population and the plastic consumption pattern of the pilot country/region would affect those values. To provide another perspective of this general picture, a plastic management analysis of pilot countries with more relative indicators provided by PLASTEAX is introduced (Table 6), including the leakage per capita per year. As part of Spain, Menorca Island's data is not available, so alternatively the data from the country level is adopted assuming that within the same country the regional difference can be neglected. Although Norway is not a pilot yet, its data are extracted from PLASTEAX considering the fact that it is compared with other pilots in this thesis. South Africa has the highest collection rate and recycle rate of collected plastics waste in developing countries, which suggests its outstanding performance in waste collection, whose system and policies is likely to be more transferable to developing countries. In terms of per capita plastic leakage, the value of two Asian pilots is dramatically higher than that of other countries, indicating that the plastic leakage situation in Asia may have been severely underestimated in the past.

Table 6 Pilot country plastic management in the PLASTEAX database(PLASTEAX, 2021)

Country/ region	Total plastic waste generation (kt/year)	Packaging waste generation (kt/year)	Collection rate	Recycling rate of the collected	Recycling rate including imports	Export for recycling	Plastic leakage per capita (kg/year)
South Africa	2371	1093	70%	14%	15%	0%	1,8
Kenya	502	201	27%	7%	7%	1%	0,8
Mozambique	179	115	29%	0%	1%	0%	0,5
Vietnam	5569	3071	36%	6%	15%	0%	4,7
Thailand	4605	2285	67%	10%	10%	4%	4,4
Spain*	1814	1814	100%	20%	n.a	n.a	n.a
Cyprus	93	32	93%	0%	0%	11%	0,9
Norway*	540**	49	99%	31%	n.a	n.a	n.a

* Spain and Norway have reference year of 2016, the rest has reference year of 2018

**data from "Materialstrømmen til plast i Norge - Hva vet vi?"

When going one step further and taking population into consideration, PLASTEAX's records are also in agreement with our previous stress on Asian pilot's impact of plastic leakage, but one unanticipated discovery was that Cyprus, one of the European pilots, has a higher plastic leakage per capita than several of the African pilots.

In addition, the term “Recycling rate of the collected” and “Recycling rate including imports” demand special attention as well, since they could indicate “the efficiency of recycling” and “Shifting the Burden of Recycling in EPR” respectively (Soo et al., 2018).\

4.1.2 Hotspot categories

The quantifiable hotspots are displayed in the form of tables and figures, while the qualitative hotspots are summarized by characterization.

4.1.2.1 Polymer

Different Polymer types have different properties such as density, durability, and so on, which will determine their behaviors and impacts once entering the marine system (Figure 16). For example, plastic bags are often made of PS and EPS, whose relative density is about 0.95 compared with seawater, resulting in floating on the surface and influencing the marine ecosystem there (ASC, 2019). Therefore, it is necessary to trace the plastic leakage by polymer types as suggested by the Guidance.

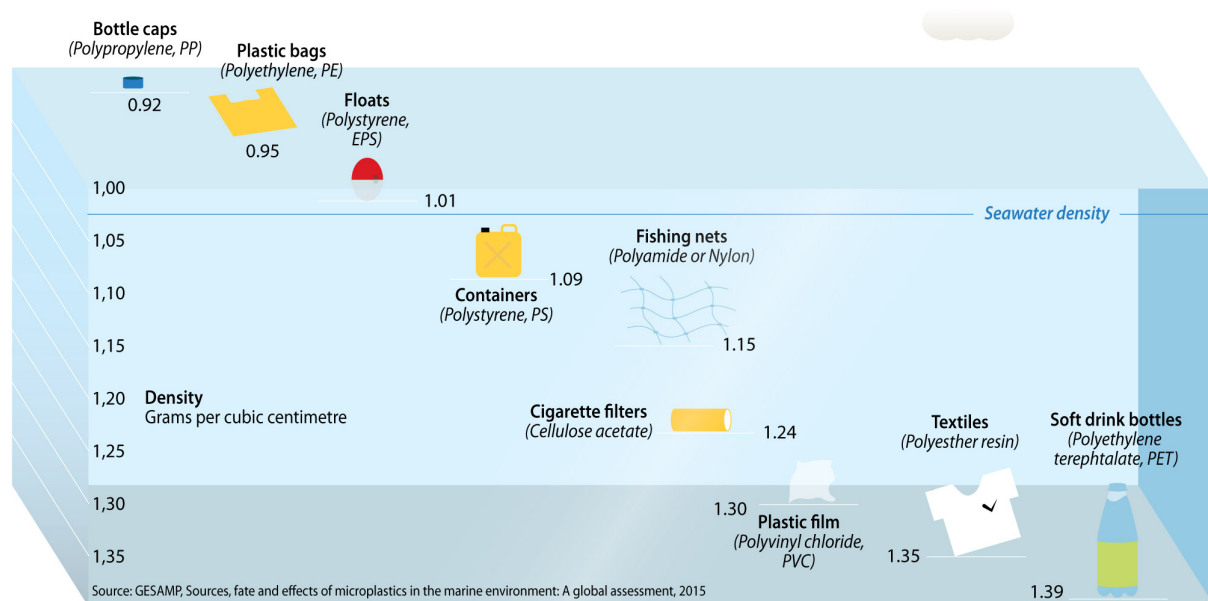


Figure 16 Plastics debris' density affecting its fate and effect (GRID-Arendal, 2016)

The pilot reports count both absolute and relative leakage rate in polymer type (Figure 17). It is observed that LDPE (Low-density polyethylene) leakage stands out from others in Vietnam, Thailand and South Africa. As suggested by its name, the density of LDPE ranges from 0.91 to 0.94 g/cm³, plus, it is resistant to moisture, impact, and chemicals (American Chemistry Council, 2018), and hence it is widely applied in filming and packaging. The high

absolute leakage of LDPE indicates that LDPE is used abundantly and that waste collection and proper disposal for LDPE are insufficient in Vietnam and Thailand.

However, we should be aware that the absolute leakage mass is closely related to the size of the population and consumption patterns, as well as other factors. As a result, it represents the severity of the leakage unilaterally. In this case, it's meaningful to set a benchmark and compare relative leakage rate.

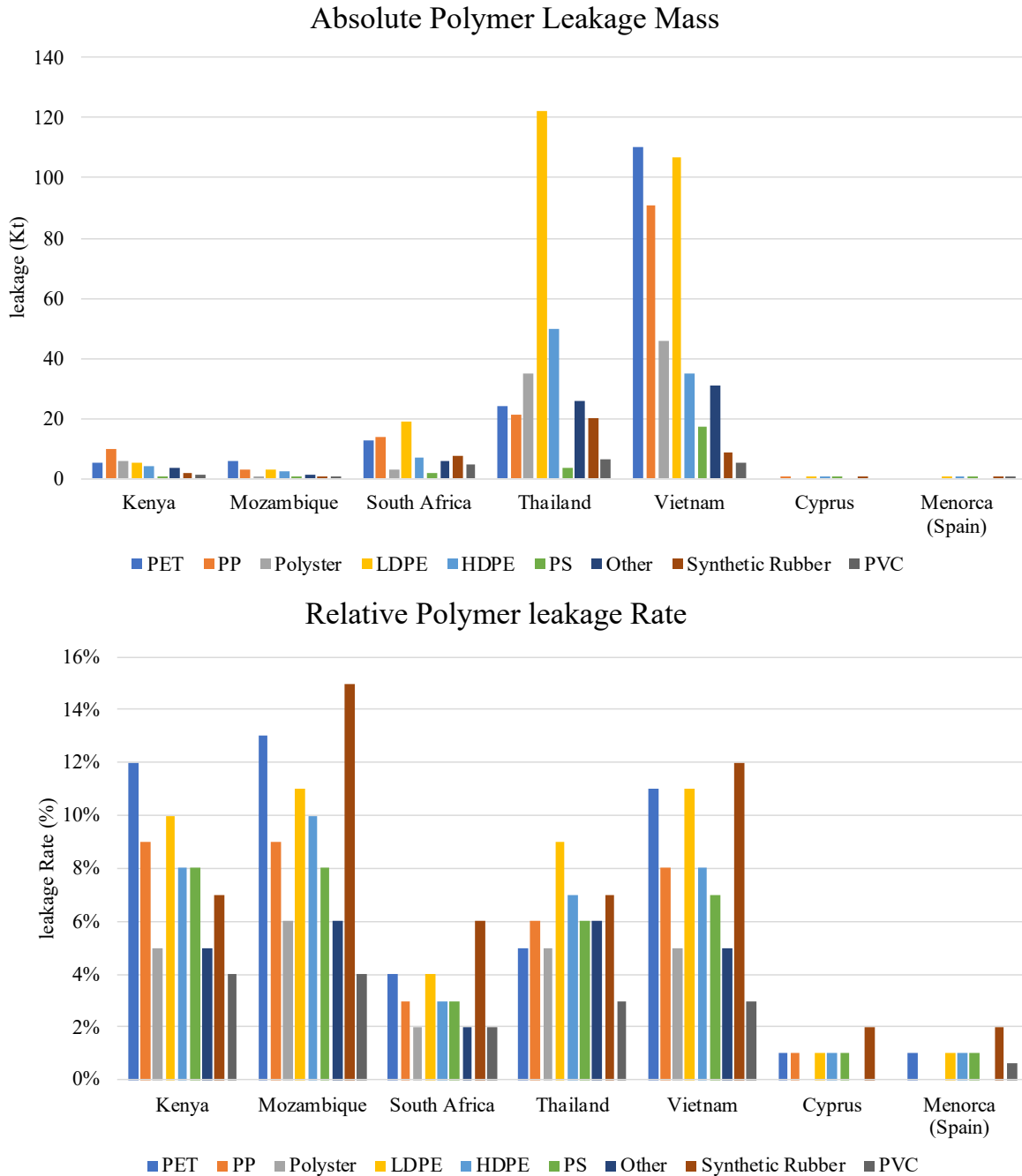


Figure 17 Polymer leakage of pilots

4. Results and discussion

In terms of relative leakage rate, the overall leakage rate of polymers in Mozambique, Kenya and Vietnam is high, which may indicate that there are systemic defects and plenty of room for improvement in their plastic management and treatment processes. In contrast, although South Africa is also a developing country, its overall polymer leakage rate is closer to that of European pilots, which suggests that there are some transferable experiences to learn from.

4.1.2.2 Application

To better function, plastics deployed in different applications are often shaped accordingly, making their behaviors not the same once they entered the oceans. Fishing nets mostly result in entanglement of marine animals whereas plastic films are more likely to be ingested due to their similar appearance to jellyfish (Laist, 1997).

Gaining better knowledge on the application leakage origin could benefit not only to develop specific strategy to control the leakage (for example, deposit return scheme to recycle PET bottles) but also to form the actions purposefully to alleviate the damage they cause in the marine ecosystem (for example, ‘Fishing for Litter’ project and ‘Ghost-fishing retrieve’ plan).

In the pilot reports, origin of plastics debris by application is ranked by both absolute and relative leakage, the top 3 ones are identified as hotspots (Table 7). The applications types chosen in the Guidance cover most of short-lived products.

During hotspotting, “Other packaging” are not included in the rank of Table 7, not because their amount is small, but their sources are hard to identify and classify, therefore hotspotting “Other packaging” would only contribute very little benefit to policy making.

The results show that some applications have surprising wide influence in both absolute mass and relative rate ranking. In the table of absolute mass, bags, lids and caps often appear as hotspot in various countries; Cigarette filter is almost recognized as relative leakage hotspot for every country. Bags, lids and caps, baby diapers exist in both absolute and relative table, which could be the consequence of being small objects and not readily noticeable disposal.

Although hotspots are close in terms of application types, the order of application ranking among countries is not the same. The reason behind this phenomenon may still be mainly related to the national conditions. For example, Vietnam has a much longer coastline than Thailand, the fishery is relatively more developed there, and the relative leakage of fishing nets is more obvious in Vietnam.

Table 7 Application leakage of pilot

Continent	Pilot	Application leakage mass (kt)			
Africa	Kenya	Other bottles 5,4	Lids and caps 3,1	Dairy packing 2,4	
	Mozambique	Bags 4,9	Baby diapers 1,6	Other bottles 0,9	
	South Africa	Bottles-PET 8	Baby diapers 2,5	Food containers-PS 1	Cigarette filters 1
Asia	Thailand	Bags 113	Snacks Bags/Pouches 21	Trays/Boxes/Cups 11	
	Vietnam	Bags 244	Lids and caps 18	Boxes,cases, crates 17	
Europe	Cyprus	Bags 0,107	Lids and caps 0,106	Fishing nets 0,084	
	Menorca	N.A	N.A	N.A	
	(Spain)	N.A	N.A	N.A	

the ranking doesn't count Other packaging

Continent	Pilot	Application leakage rate (2018)			
Africa	Kenya	Cigarette filters 22%	Bags 20%	Baby diapers 14%	Sanitray towels 14%
	Mozambique	Cigarette filters 21%	Bags 20%	Baby diapers 13%	Sanitray towels 13%
	South Africa	Cigarette filters 0,19	Snacks 0,12	Fishing nets 0,12	
Asia	Thailand	Cigarette filters 12%	Baby diapers 12%	Bags 11%	Snacks Bags/Pouches 11%
	Vietnam	Fishing nets 15%	Bags 12%	Lids and caps 11%	
Europe	Cyprus	Fishing nets 16%	Cigarette filters 6%	Baby diapers 3%	Sanitray towels 3%
	Menorca	N.A	N.A	N.A	N.A
	(Spain)	N.A	N.A	N.A	N.A

4.1.2.3 Sector

The top 1 absolute leakage for all the pilots is from packaging, while most of the time tires have the 2nd or 3rd biggest leakage mass in pilot countries and the next most-common sector is Textiles (Table 8). Except for European pilots, the top 2 leakage rates of Asian and African pilots are all from fishing and medical. Fishery, medical and tire are the common areas with high incidence of plastic leakage.

To a certain extent, this is linked to the selection of application hotspots. The industries with large leakage volume are often deploying short-life applications massively such like packaging and medical. Tires and textiles, although they have longer life-time, leakage occurs commonly through wear and tear.

Same principle as the hotspotting of application, the rank in Table 8 does not cover the “Others” sector, for the difficulty to trace back its origin and plan actions accordingly.

4. Results and discussion

Table 8 Sector leakage of pilot

Continent	Pilot	Sector leakage mass (kt)		
Africa	Kenya	Packaging 20,3	Textiles 4,4	Automotive-tyres 2
	Mozambique	Packaging 12,9	Textiles 0,7	Automotive-tyres 0,7
	South Africa	Packaging 46	Automotive-tyres 8	Construction 4
Asia	Thailand	Packaging 166	Textiles 19	Automotive-tyres 18
	Vietnam	Packaging 317	Textiles 32	Automotive-others 10
Europe	Cyprus	Packaging 0,325	Automotive-tyres 0,167	Fishing 0,093
	Menorca (Spain)	Packaging 0,042	Tourism 0,019	Automotive-tyres 0,005

the ranking doesn't count Others

Continent	Pilot	Sector leakage rate (2018)		
Africa	Kenya	Medical 19%	Fishing 12%	Agriculture 10%
	Mozambique	Fishing 20%	Medical 19%	Automotive-tyres 15%
	South Africa	Fishing 14%	Medical 8%	Automotive-tyres 6%
Asia	Thailand	Fishing 24%	Medical 15%	Agriculture 9%
	Vietnam	Fishing 35%	Medical 18%	Automotive-tyres 12%
Europe	Cyprus	Fishing 28%	Automotive-tyres 2%	Packaging 1%
	Menorca (Spain)	Fishing 22%	Automotive-tyres 2%	Packaging 1%

4.1.2.4 Waste management

Ocean plastics debris is often the consequence of poorly-managed waste (US EPA, 2015), this fact highlights the importance of investigation and assessment of waste management. In the Guidance, waste management associated with plastic is subdivided into 32 items and their performance is graded as exacerbating hotspots, neutral spots and alleviating coolspots (Table 9). On the right of the Table 9, number of pilots scored hotspots/coolspots in certain item are counted and the top/bottom 10% on rank are shadowed with red or green according to their impacts on leakage occurrence; on the bottom of the Table 9, total numbers of hotspots/coolspots /natural /non-assessed items of each pilot are summed.

The results show that based on the known information, Menorca has relatively advanced plastic waste management, more hotspots where leakage are likely to occur emerged in the waste management in Thailand, Kenya and Mozambique. Among the developing countries, South Africa has the fewest hotspots in waste management, which may partly explain the relatively low polymer leakage rate mentioned previously.

From each level of processes on waste management, the majority of pilots' performance on tertiary processes of “Segregation of compostable waste”, “Formal collection of municipal waste” and “Littering due to a lack of public waste bins” is poor. The numbers of coolspots in secondary processes of “waste collection” and “waste related behaviors” are the lowest, which suggests that more attention should be paid to these two.

However, it's worth pointing out that in several nations, roughly a quarter of the sections have not been evaluated. The assessment of these sections still has the chance to be graded as hotspots once adequate knowledge is accessible.

4. Results and discussion

Table 9 Waste management hotspotting of pilot

Primary	Secondary	Tertiary	Kenya	Mozambique	South Africa	Thailand	Vietnam	Cyprus	Menorca (Spain)					
SOURCE	Waste Generation	Plastic waste import	●	○	○	●	●	●	●	●	2	2	3	0
		Plastic waste export	●	○	○	●	○	●	○	2	4	0	1	
		Plastic waste per capita generation	●	●	●	●	●	●	●	●	5	0	2	0
		Share of plastic in waste stream	●	●	●	●	●	●	●	●	5	0	2	0
COLLECTION	Waste Segregation	Segregation of compostable waste	●	●	●	●	●	○	●	6	1	0	0	
		Segregation of recyclable plastics	●	●	●	●	●	○	●	5	1	1	0	
		Segregation by the informal sector	●	○	●	●	●	●	●	0	1	4	2	
		Public infrastructure availability	●	○	○	●	●	●	●	4	2	1	0	
	WASTE COLLECTION	Formal collection of municipal waste	●	●	●	●	●	●	●	7	0	0	0	
		Formal collection of industrial waste	●	●	●	●	●	●	●	2	0	0	5	
		Value of recycled plastics	●	●	●	●	○	●	●	4	1	0	2	
		Value of non-recycled plastics	●	●	●	●	●	●	●	5	0	0	2	
	LEAKAGE WHILE WAITING FOR COLLECTION	Design of waste bins	●	●	●	●	●	●	●	2	0	0	5	
		Frequency of collection	●	●	○	●	●	●	●	3	1	1	2	
		Climatic conditions	●	●	●	●	●	○	●	5	1	1	0	
		Other (e.g. animals)	●	●	●	●	●	○	●	0	1	0	6	
END-OF-LIFE	WASTE RELATED BEHAVIOURS	Littering driven by cultural habits	●	●	○	●	●	●	○	3	2	0	2	
		Littering due to a lack of public waste bins	●	●	●	●	●	●	●	6	1	0	0	
		Frequency of fly-tipping	●	○	●	●	○	●	●	2	3	0	2	
		Frequency of illegal burning	●	●	○	●	●	●	●	4	1	1	1	
	WASTE MANAGEMENT INFRASTRUCTURE	Share of waste in dumpsites	●	●	○	●	●	○	○	4	3	0	0	
		Share of waste in unsanitary landfills	●	●	○	●	●	●	●	4	1	2	0	
		Informal recycling	●	○	●	●	●	●	●	1	1	3	2	
		Recycling capacity	●	●	●	●	●	●	○	4	1	2	0	
	POST-LEAKAGE MANAGEMENT	Frequency of city cleaning and sweeping	●	●	●	●	●	●	●	2	0	2	3	
		Frequency of waterway cleaning	●	●	●	●	●	●	○	0	1	1	5	
		Frequency of coastal clean-up	○	○	○	●	●	○	●	0	4	3	0	
		Frequency of other clean-up activities	●	●	●	●	●	●	●	1	0	2	4	
	WASTE WATER MANAGEMENT	Management of run-off waters	●	●	●	●	●	●	●	0	0	1	6	
		Waste water collection	●	●	●	●	●	●	●	1	0	3	3	
		Waste water treatment efficiency	●	●	●	●	●	●	●	1	0	3	3	
		Fate of WWTP sludges	●	●	●	●	●	○	○	0	2	0	5	

Evaluation summary on waste management's contribution to plastics leakage			Kenya	Mozambique	South Africa	Thailand	Vietnam	Cyprus	Menorca (Spain)
●	Negative contribution	(hotspot of plastics leakage)	16	16	10	18	15	10	5
○	Neutral contribution		1	7	9	0	3	7	8
●	Positive contribution	(coolspot of plastics leakage)	6	1	5	4	5	4	13
●	Not assessed		9	8	8	10	9	11	6

4.1.2.5 Region

Due to data availability and data granularity, different pilots do not use the same scale for regional hotspot analysis, which makes it hard to achieve cross-comparison.

A common pattern observed is that plastic waste generation centralize around cities, the waste collection rate and per capita plastic waste production in urban areas are also significantly higher than those in remote areas. An area with easy access to water bodies (rivers or sea) has bigger leakage volume than those without.

4.2 Case study in Norway

Following the same order as subchapter 4.1, the case study covers Norwegian national overview and hotspotting results calculated from the Guidance.

4.2.1 Overview

It is estimated that the plastics waste generated in Norway is around 540 kt in 2019, equivalent to 101 kg per capita per year. Most of the plastic in Norway is consumed for packaging, followed by tires, textiles and construction (HMF, 2021a). Consumed plastics could have the status of “in use” (the ‘stock’ of a MFA system in Figure 11), or alternatively “waste”.

Norwegian plastic waste system is heavily reliant on export, 80% of the plastic waste sorted for recycling is exported (SYSTEMIQ et al., 2021). According to the Norwegian company Nofir, the fishing nets collected in Norway were sent to Lithuania and Turkey for disposal and preparation for recycling (Nofir, 2017). Another Norwegian company Infinitum tells 18 kt of collected PET bottles under Deposit Return Scheme (DRS) are exported to Sweden, Germany and the Netherland for recycling annually, but those products made of reused PET frequently end up discarded and incinerated (Infinitum, 2020). Finland is also one of the receivers of collected plastic packaging waste from Norway (Grønt Punkt Norge, 2020).

Driven by growing Norwegian population and increasing waste generation per capita, the plastic waste generation is projected to grow at a rate of 1.2% per year (SYSTEMIQ et al., 2021). Consequently, the scientific management and monitoring of plastics is particularly important.

Properly managed plastics waste usually is not considered as emission. As for the plastic emitted to the Norwegian nature, a pessimistic estimation on microplastic emission gives a total volume of 45 kt in 2020 (Table 10). Note that Plastic emission to environment doesn't equal to the concept of plastic leakage as mentioned earlier: plastic leakage emphasizes on the part staying in ocean, while the emission could happen on land and not all would end up in oceans, thereby the leakage is only a fraction of plastic emissions.

Norway's most famous industries, fisheries and aquaculture, lost enormous amount of plastics to sea (ASC, 2019), but the reason this fact is not reflected in Table 10 is caused by “Allocation rule to avoid double-counting”. For example, the plastics used to build fish farms are classified as “Construction”, and the plastics wrapping of the fish is taken as “Packaging”. Only very small portion of plastics appliance in fisheries and aquaculture, such like commercial fishing net and feeding pipes, can be certainly allocated back to these 2 sectors.

Table 10 Estimated Norwegian microplastic emissions in 2020

Source	Pessimistic (ton)	Optimistic (ton)	Most-likely (ton)
Car traffic	10780	4880	8325
Artificial turf pitches	9760	2656	5958
Waste management	1780	550	1030
Land base*			
Synthetic fabrics	3601	361	1017
Littering	2500	500	1000
Product with microplastic added	1182	297	776
Wear, weathering, maintenance	2464	287	763
Plastic pellets	330	60	170
Sea base**			
Breakdown of active fishing gear	10000	1000	n.a
Import of raw plastic material	1500	-	n.a
Maritime coatings (commercial vessels)	300	-	n.a
Petroleum activities	487	102	n.a
Feeding tubes	100	0,1	n.a
Maritime coatings (recreational vessels)	88	43	n.a
Export of raw plastic material	50	-	n.a

Data: *Report 'Norske landbaserte kilder til mikroplast'
**Report 'Sea-based sources of microplastics to the Norwegian marine environment'

A survey about Norwegian marine litter indicates that plastic leakage from fisheries and aquaculture sectors weights around half, that is the highest ratio among all type of marine litter sampled from 50 beach cleanup sites; meanwhile HDPE is in the first place in terms of polymer weight (Table 11). The origin of around 10% of marine plastic waste collected can be identified, with more than 70% of these identifiable objects traced back to Norway.

Table 11 Key findings from beach cleanup along Norwegian coast (Mepex & Miljødirektoratet, 2020)

Most found Item by weight	Percentage (%)	Polymer type of found plastic	Percentage by weight (%)
Rope	20,9	HDPE	62,3
Trawl, nets and seines	8,7	EPS	11,3
Buoys and floating elements	7,5	LDPE	8,4
Styrofoam pieces over 5 cm	6,5	PP	5,8
Jerry cans	5,7	ABS	5,6
Plastic film	4,5	PET	3,7
Fishing crates	4,5		
Tires	3,3		
Clothes and textiles	2,7		
Beverage bottles	2,3		
Most found Item by number	Percentage (%)	Non-fishing/aquaculture items	Percentage by weight (%)
Styrofoam pieces under 5 cm	20,7	Food and drink packaging	36,8
Plastic film	10,4	Textiles	17,7
Unidentifiable plastic pieces	9	Car parts	13,6
Rope	8,6	Water recreation	6,7
Lids and caps	5,6	Oil and chemicals industry	4,3
Styrofoam pieces over 5 cm	4,9	Hobbies and sports	3,1
Cotton buds	4,2	Personal hygiene	2,3
Food packaging	3,8	Smoking/snus	0,7
Reinforcing fiber	3,5		
Strapping bands	2,1		

4. Results and discussion

The general idea behind hotspotting methods of polymers/applications/sectors presented in the Guidance can be shortly described as coherent matrix: data on plastic flows in polymers/applications/sectors processed with the information on the waste front such like littering rate/recycling rate and so on, then the leakage is simulated based on the principle of mass balance.

Following the Guidance, the biggest bottleneck lies on the plastic waste system, very limited information is known on the waste side, for instance, domestic recycling of collected polymers, littering rate for applications, and so on are not publicly available. Lacking these crucial parameters making the completion of full hotspotting impossible. However, the coherent matrix deployed in the Guidance makes the estimated plastic net inflows and hotspotting in certain aspect feasible. Net inflows here are defined as “the difference between import and export”, a positive value suggests an increasing in the Norwegian plastic stock

Polymers/applications/sectors hotspotting is gained through Tool 1.4 while the impact matrix is completed with Tool 6.1. Many findings in Norway demonstrate similar trend as the published pilot reports, more results and detailed discussions are presented in the sections below.

4.2.2. Norwegian hotspotting

With high feasibility of Tool 1, Tool 2 and Tool 6 (hereinafter Tool abbreviated as T), the status of Norway’s plastic leakage is explored. Other existing studies are introduced to interpret the findings.

4.2.2.1 Polymer Type

Based on the Norwegian external trade in goods of 2018 provided by Statistics Norway, different polymers are aggregated to build the estimation of their own net inflows (Figure 18). Among the 8 polymers the Guidance focuses on, High Density Polyethylene (HDPE) has significant high volume, followed by Polystyrene (PS), Synthetic Rubber (SR) and other plastics.

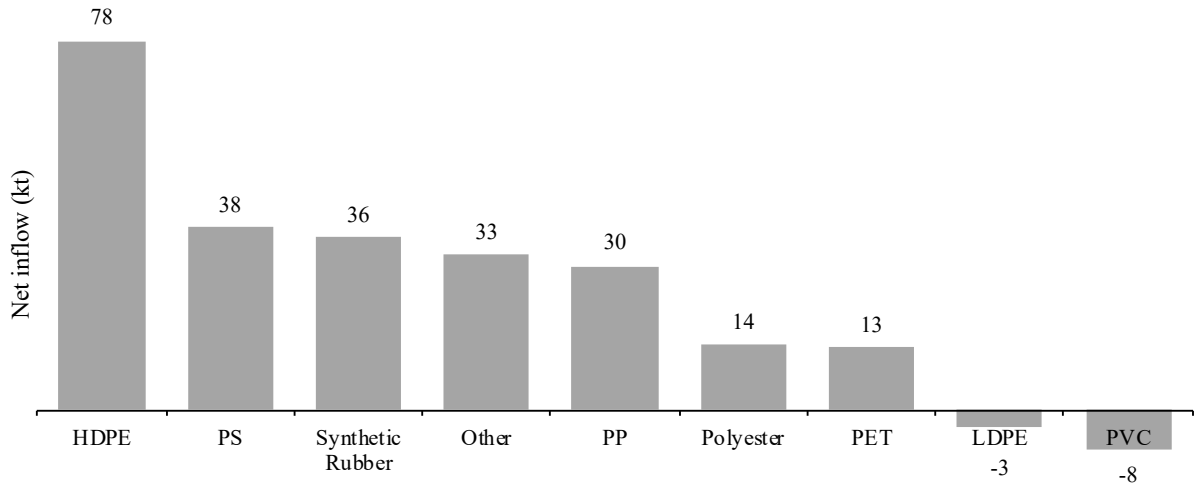


Figure 18 Net inflow downward ranking by polymer

Despite the fact that the results only show the net inflows to Norway, it is crucial to highlight that such a vast volume of HDPE would intimately turn into waste once it reached the end of lifetime, which could add pressure to the waste system. In Norway, HDPE is also widely deployed in fisheries and aquaculture, such like floating cages and pipes (NIVA & Miljødirektoratet, 2021). Fortunately, HDPE is recyclable and nowadays being recycled, it is commonly used in durable plastic water bottles, toys, chemical containers and pipes.

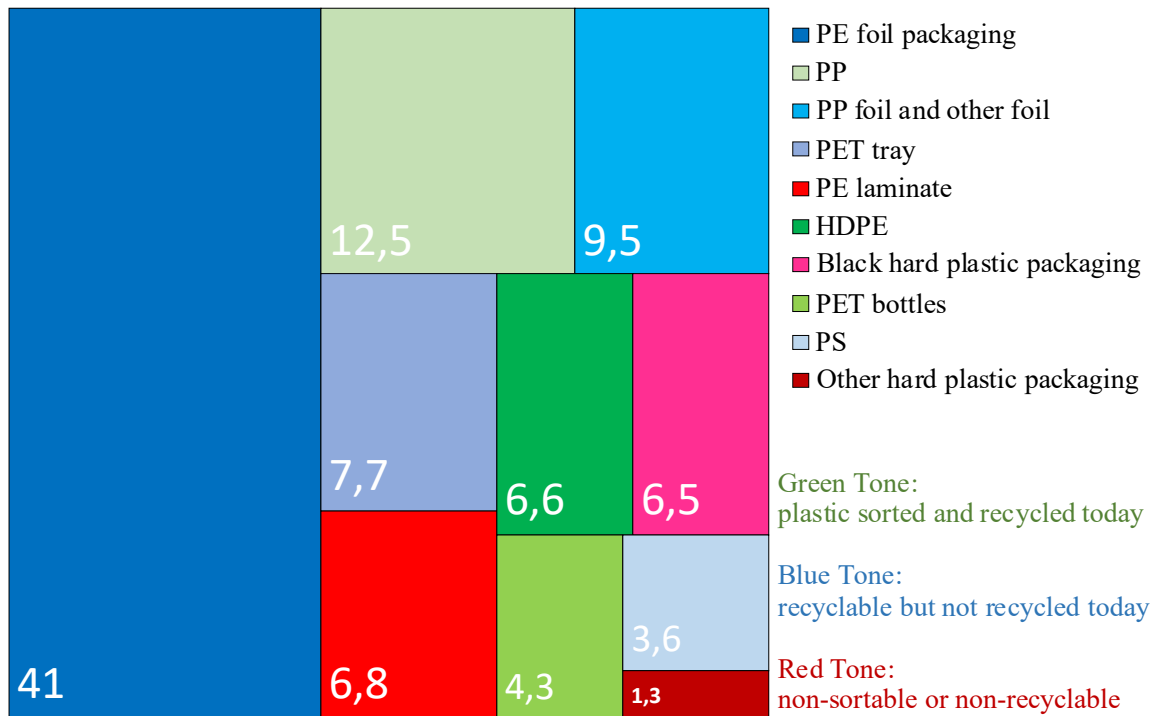


Figure 19 Weight percentage composition of Norwegian household plastic waste (Mepex & HMF, 2020)

4. Results and discussion

It's worth noting that the estimate is based on a nationwide scale, taking into account all activities happening related to Norway, and the 'net inflow' is not equivalent to the concept 'plastic waste', which emphasizes on plastic after consumption/use. However, it is interesting to compare the result with polymers' contribution on the waste front. According to a study about Norwegian household plastic waste, PE foil is dominant with a total of 41% (Figure 19) while the HDPE is only taking 4.3%. The difference between the results given by the Guidance's method and the other report may be led by the following factors:

- Various polymers products are consumed at different ratio on a household and a national level.

E.g. HDPE feeding pipe used in salmon farming usually won't show up in the household waste.

- The polymers' fates vary after consumption according to their function.

E.g. The fate can vary for different polymers, PET bottles for convenience-sized beverages often have shorter lifetime than HDPE bottles for shampoo, and even the same polymer, the fate could also vary such like PVC drainage pipes have longer lifetime than PVC disposable gloves.

From the perspective of plastic leakage, Table 11 addresses that the HDPE is the most found polymer in terms of weight, which can be linked to the result given by the Guidance, laying the stress on necessity of special attention on waste management and leakage prevention of polymer HDPE.

4.2.2.2 Application

Plastics net influx entering Norway in 2018 are mapped to different applications categories with a full list of 65 items (see appendix Table 17), the top 10 contributors are illustrated below where the bags, new tires, other packaging ranked the top 3 (Figure 20). The results suggest great coherence with the net inflow estimation by polymers, as HDPE, PS are commonly consumed in packaging while the Synthetic Rubber (SR) is a common ingredient for car tires.

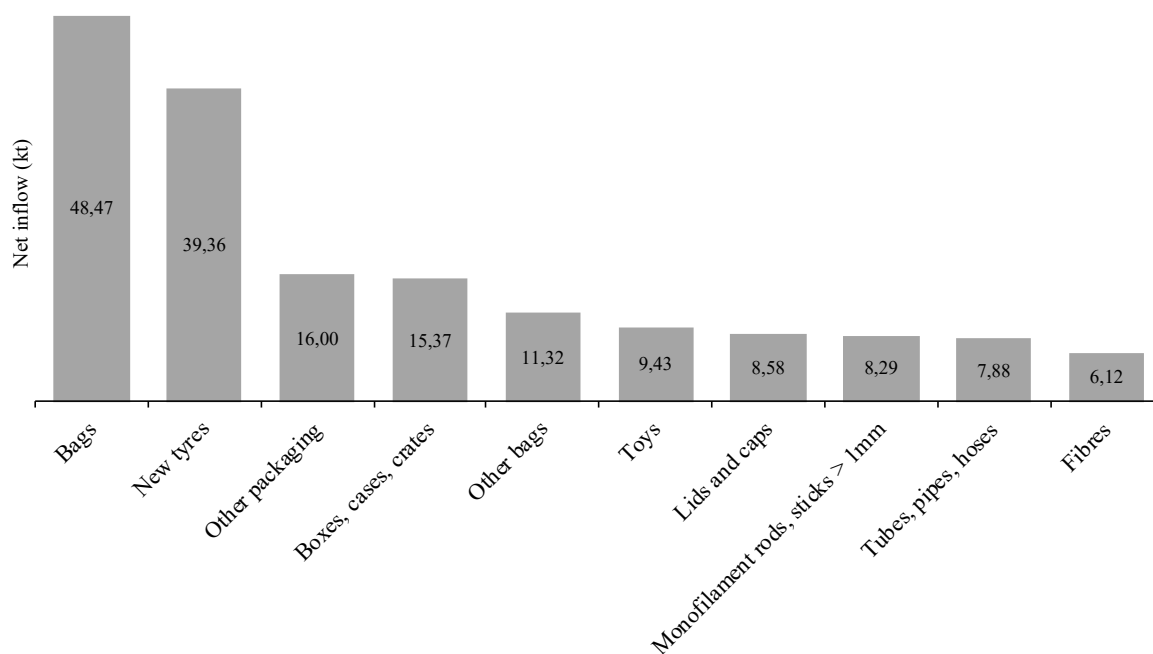


Figure 20 Net inflow downward ranking by application (top 10)

Among the top 10 appliances, the new tires draw attention. Not following the same pathway to the nature as packaging product, plastics from tires wear into small pieces and dusts spreading into the environment when driving (Miljødirektoratet & Mepex, 2021). In addition, the fibers and pipes also show up in the top 10 list. An increasing proportion of textiles are wholly or partly based on micro-thin plastic fibers; during use and washing, clothing, furniture and other textile-based products release microplastic fibers to both air and water (Miljødirektoratet & Mepex, 2021). A huge ratio of synthetic textile fibers is captured in sewage treatment plants but it is then spread further with the sludge used for soil improvement and brought back to water by runoffs. As for tubes and pipes, a considerable part of the plastic debris they emit originate from weathering or wear of plastics. Tires, pipes, and Fibres' unique potential pathways set them worrisome because of the difficulties in collecting and managing their debris in the waste system (Mepex & Miljødirektoratet, 2014).

Among the previous researches, a report calculates the percentage of plastic waste generated by applications from different industries (Mepex & HMF, 2020). Due to disparate scope and targets, there are discrepancies between the application classification standards adopted in this report and the Guidance (Figure 21). Although the classification standards used by the two are not the same, the similarity of the results can still be observed. In the plastic waste generated by the application of various industries, packaging, tires and textile fibers still

4. Results and discussion

occupy relatively high ratios, which is similar to net inflow order given by the Guidance. Meanwhile, another report on land-based plastic emission to Norwegian nature underlines the volume of traffic vehicles and textiles can not be ignored (Miljødirektoratet & Mepex, 2021). Last but not the least, as the leakage described in Table 11, Food and drink packaging, Textiles and Car parts happen to be the top 3 most found item, suggesting immediate intervention in these three types of applications is urgently needed.

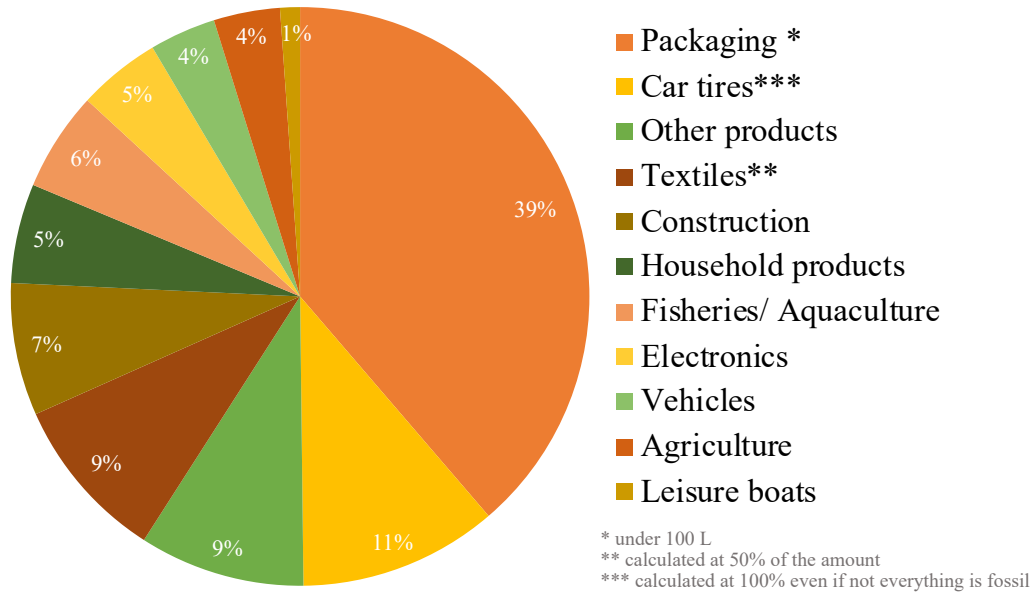


Figure 21 Estimated share of applications' plastic waste (Mepex & HMF, 2020)

It should be always emphasized that the estimates given by the Guidance are not plastic waste, plastic emission nor plastic leakage, but the net inflow adding to Norwegian MFA system. However, the similar trend of the four studies focusing on Norway which are conducted with different data basis and hence validate each other: the results generated by the Guidance's method in this thesis, Norwegian plastic waste generation (Figure 21), Norwegian microplastic emission (Table 10) and Norwegian marine litter found in beach cleanup (Table 11), shows that the adoption of the Guidance could assemble instructive and transferable knowledge in the Norwegian context. Car tires, packaging and textiles should be the key application objects to manage plastic and monitor plastic leakage.

4.2.2.3 Sector

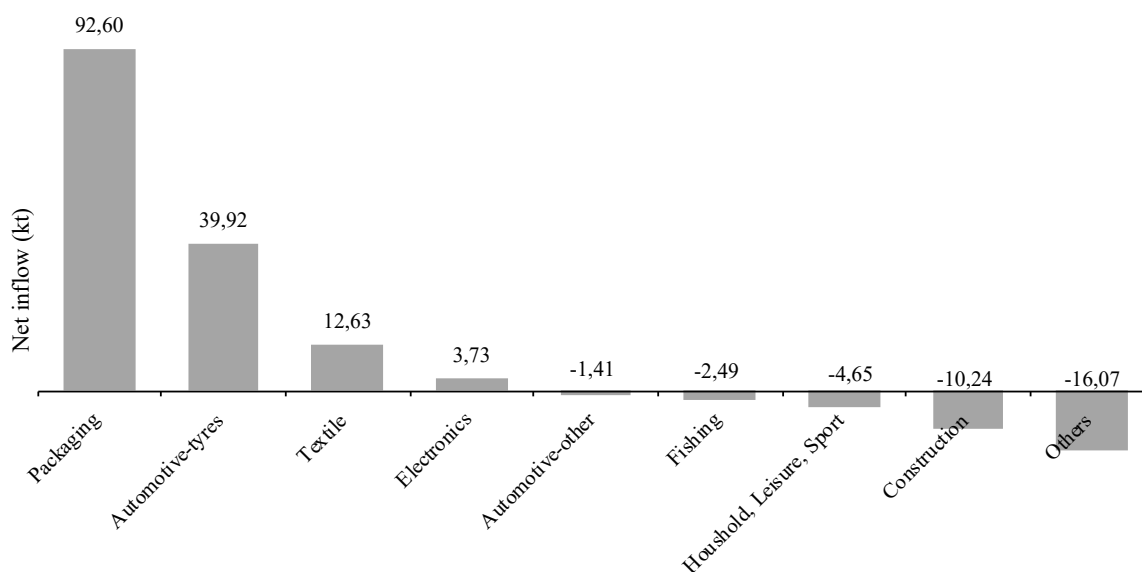


Figure 22 Net inflow downward ranking by sectors

The net input of Norwegian plastics in 2018 can also be broken down according to the sectors where the plastics are/will be needed. Although definitions of some sectors vary slightly in the published pilots' reports, the Guidance primarily examines 11 industries of which data on medical, and agriculture are temporarily unavailable in the Norwegian context (Leisure in Figure 22 is regarded as equivalent to Tourism). The results given in the Guidance still have great value for comparison with the report issued by Mepex & Handelens Miljøfond in 2020, both highlight the big contribution of packaging, tires and textiles to the plastics flows.

Realizing the heavy impacts of plastic packaging, Norway aims to consume 50% fewer plastic bags by 2025, banning single-use bags has made a difference, people are more likely to choose reusable and recyclable packaging (Tiller, 2021). Coca-Cola in Norway has also followed this change and launched the "Pant meg igjen / Return me again" drinks, whose packaging is entirely made of recycled PET (Coca-Cola Norge, 2021). Although it is gratifying to see the efforts of the packaging industry to fight against plastic waste, it is particularly noteworthy that while the recycling rate of plastic materials in the packaging industry has exceeded 20% nowadays, a considerable part of it is achieved through the Deposit Return Scheme (DRS) of PET bottles. In reality, PET bottles only account for less than 10% of the entire packaging industry and recycled plastics counts less than 9% in material input for production (Mepex & HMF, 2020), which makes the recyclability of plastic waste systems in other industries in Norway questionable.

4. Results and discussion

In terms of plastic waste emissions from differing sectors, although there are currently no comprehensive studies at the Norwegian national scale, some researches manage to enlighten the situation of plastic waste in specific industries. Predominately contributed by Abandoned, Lost or Discarded Fishing Gears (ALDFG), a study investigating plastic material flow in Norwegian fisheries compute an annual leakage to oceans of 0.308 kt (Deshpande et al., 2020). Another report also highlights the fishing and aquaculture contributed most weight in the marine litter found in Norway (Mepex & Miljødirektoratet, 2020). In other sectors, Norwegian plastic waste from household and packaging revealed 72% of plastics collected from these sectors are ultimately incinerated (Figure 23), leaving only 25% sent to material recycle, and less than 2% (approximately 2 kt today) may face the fate of being disposed of in unsanitary landfills, leaked to waterbodies or burnt openly according to the data from 2019 (SYSTEMIQ et al., 2021).

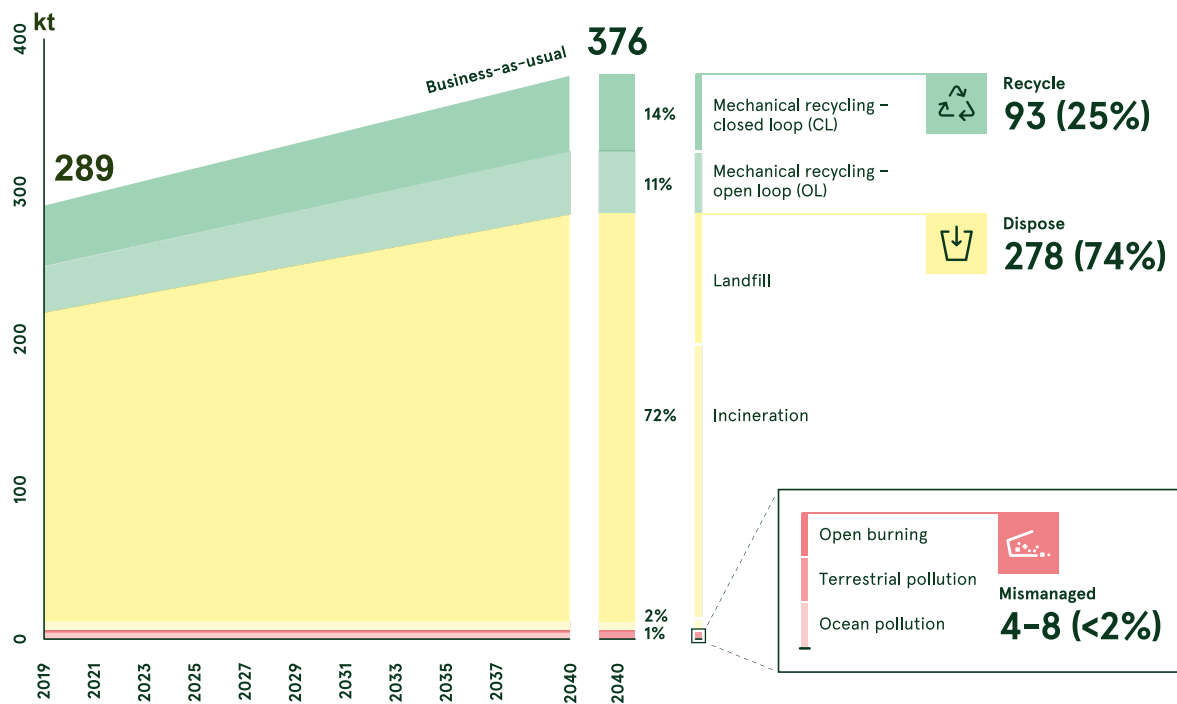


Figure 23 Projection of plastic waste from household and packaging under business-as-usual (SYSTEMIQ et al., 2021)

Except for fisheries and aquaculture, the order of plastic input is basically the same with that of leakage in other industries concluded from beach cleanup, the possible reasons for the differences are as follows:

- Sector allocation:

E.g. plastics used to pack up seafood may not be counted as in fisheries and aquaculture but in packaging, the buoys equipped in fish farm may be sorted as construction.
- Relevance of plastic leakage in different sectors

E.g. Fishery and aquaculture are in direct contact with the water body, and the plastic debris formed can directly enter the ocean, therefore these sectors are highly relevant to plastic leakage. The relevance of plastic leakage in electronic and electrical industry can be relatively low because its application won't have direct contact with water under normal condition.
- Plastic waste exported

E.g. As mentioned earlier, the plastic waste from Norwegian fisheries and aquaculture was exported (Nofir, 2017), the exported volume was detected when calculating the net inflows.

Considering the above reasons at the same time: the plastic input of fishery and aquaculture is underestimated due to sector allocation principle, plastic waste is exported abroad, and fishery and aquaculture are highly relevant to plastic leakage. The combined effect of these factors leads to the difference of their behaviors differentiate in net inflow and marine litter.

4.2.2.4 Impact assessment matrix

Unlike the hotspotting method mentioned above, the environmental impact matrix of plastics in Norwegian waters uses the data from beach cleanup. More specifically, tool 6.1 uses *Ocean Trash Index* published by Ocean Conservancy (Ocean Conservancy, 2021). The estimation of fishing nets varies according to the situation of each country/region (see appendix Table 21 and Figure 25). The mechanism of this evaluation matrix lies in that the impact scores are obtained by allocating the level of severity (high, medium/unknown and low) in each aspect of plastic applicants on terms of Fate, Exposure and Effect.

The scores show that under the simulation given by the current guidance, the issue of bags, boxes, cases and crates in ocean plastic should be given the priority (Table 12).

4. Results and discussion

Table 12 Plastic application's impact matrix

Application	Impact Score	Hotspot
Lids and caps	7	not considered
Other packaging	5	not considered
Bags	9	hotspot
Cigarette filters	6	not considered
Fishing nets	5	not considered
Drinks bottles + Other bottles	6	not considered
Dairy packaging	5	not considered
Boxes, cases, crates	8	hotspot
Sanitary towels	6	not considered
Baby diapers	5	not considered

The default attached data of tool 6.1 comes from the database of ocean conservation in 2017, the lagging in time may lead to the error of the predicted impact scores. However, the applications with higher impact scores (7,8,9) are more centering at the packaging industry, ringing the bell that the management in this sector still needs to be strengthened.

5. Conclusion and limitation

Conclusions from pilots comparison and Norwegian case study are demonstrated, limitations of the method and implement of the Guidance are discussed.

5.1 Conclusion

The findings are summarized here.

5.1.1 Accomplished pilot project

- Polymers

LDPE, synthetic rubber, and PET have high level of leakage rate in majority of pilots.

- Applications

Bags, lids and caps, baby diapers and cigarette filters are common hotspots.

- Sectors

Packaging, textiles and automotive-tires are most worrying hotspots.

- Waste management

Tertiary processes of “Segregation of compostable waste”, “Formal collection of municipal waste” and “Littering due to a lack of public waste bins”, secondary processes of “Waste collection” and “Waste related behaviors” call for more attentions.

- Region

Urban areas usually have the characteristics of high plastic waste production per capital, high leakage, high waste collected rate and waste generation centralized, while waterfronts have greater leakage volume.

5.1.2 Developing pilot in Norway

- Polymers

HDPE, PS and synthetic rubber contributed the largest plastics net inflows to Norway. HDPE and PS also weight most in Norwegian marine plastic waste found, more investment is needed in the management and monitoring of these polymers.

- Applications

Bags and new tires are the top 2 net plastic inflows, the top 10 applications are mostly packaging applications.

5. Conclusion and limitation

- Sectors

Similar with pilots, special emphasis should be paid to Norwegian packaging, automotive-tire, and textile sectors.

- Applicants' impact

Bags, boxes, cases and crates in Norwegian seas are concerning impacts hotspots.

5.2 Limitation

The limitation of the Guidance and restrictions affecting implement are elaborated.

5.2.1 The Guidance

- Assumptions and simplification

For the analysis to be as much detailed as possible but not overly complicated, many assumptions and simplifications are introduced into the Guidance. For example, the guide believes that "properly disposed plastic waste" in a sanitary landfill will not have leakage, but in reality, leachate is almost inevitable in every single landfill (El-Fadel et al., 2003).

Moreover, many conditions that vary from country to country cannot be reflected in the results of the Guidance, such as lifestyle (per capita plastic consumption/ waste generation), role in the plastic industry chain (plastic waste exporter / importer), public awareness, etc. Assumption and simplification are mostly established on homogeneity, yet the heterogeneity of each object has not been adequately emphasized

- Data coherence

As mentioned earlier, the method developed by the Guidance is heavily dependent on national trade data to derivative estimates of plastic flows. The matrix are mapped through the allocation: plastics products are categorized to polymers, applications and sectors based on the certain properties. For example, Filaments (HS code 540610) is assigned as '*Application (Product Type), Polyester (Polymer), Filament (Application), Textile (Sector)*' and its volume will be added to the input of Textile Sector. Polyethers; in primary forms, excluding polyacetals (HS code 390720) is '*Primary (Product Type), Other (Polymer), None (Application), General (Sector)*' hence the statistics of Other polymer include its value. Properties and assignments of more Trade products can be found in the appendix. This method undoubtedly ensures the consistency of the results, but consequently the data deviation is transferred in different level of aggregation.

- Database availability

Tool 1.4 plays an extremely important and irreplaceable role in the Guidance's technical stream, bridging the data gap exposed by previous studies. However, the 'UN Comtrade Database (<https://comtrade.un.org/db/mr/rfGlossaryList.aspx>)' deployed in the Tool 1.4 is only open for premium users instead of publicly available. The threshold of the availability UN Comtrade Database will undoubtedly lift the difficulty of widely implementing the guidelines in more countries and regions. In the case study of Norway, national trade data were fortunately extracted from Statistics Norway (<https://www.ssb.no/>)

- Index: absolute mass VS relative rate

Absolute leakage mass and relative leakage rate are equally considered when hotspotting. Nonetheless, in 3rd chapter Action Shaping in many pilot reports, despite of the fact medical waste has a high leakage rate, but the action suggestions in the report often do not further take the initiative in this front because of the small absolute leakage mass. Unfortunately, under the shadow of the COVID-19 pandemic today, plastic waste from the medical industry shows more worrying environment and public health consequences: plastic waste from disposable gloves and face masks carrying microbial can spread contamination in addition to entanglement of animals (Flint, 2020). The gap between rapidly changing reality and action shaping founded on index chosen could be a deficiency of the Guidance.

- Allocation rule to avoid double-counting

The method in the Guidance only classifies the trade data in a single dimension (for example, a product can only be classified into the industry where h it is mainly used), the advantage is to prevent "double counting", but meanwhile the disadvantage t that the plastic flow in some categories is transferred also exist. As mentioned earlier, the plastics used to build fish farms are seen as 'construction' rather than 'fisheries' for example

5.2.2 Knowledge and data gap

- Complex life-cycle of plastics

There are so many processes in the life-cycle of plastic products plus the fact that the interactions among them are complicated, that it is not easy to understand the environmental problems of plastics and carefully distinguish the subtle differences between concepts, terms are often used imprecisely and interchangeably. This thesis made attempts to identify different definitions with concept map. However, many studies do not strictly define and distinguish terms used.

5. Conclusion and limitation

In addition, the plastics industry involves a large number of stakeholders, they may be distributed all over the world, this further greatly worsens the tracking of specific material flows. In the case of Norway, the plastic waste sorted for recycling is processed in Finland, Germany, Sweden, Turkey, Lithuania and so on, the system and detailed processes occurring there are often unclear.

- Insufficient information on waste and recycle

Compared with the production and consumption of plastics, the knowledge of waste generation and treatment is relatively lacking in the picture of Norway. Municipalities and private waste hauling firms collect plastic waste. Depending on the product use or assumption made, it can be collected as a single product stream (for example, through a deposit system), a single waste stream (for example, mixed plastic sorted at source by companies or household), or mixed waste with other materials and residuals (SYSTEMIQ et al., 2021). There is no unified waste collection pattern, which makes it difficult to obtain high granularity data and information easily.

In terms of recycling, since Norway relies heavily on exports to recycle plastic materials, what happened in the foreign sorting plants remains in a black box, hence there is barely any Norwegian plastic waste study diving deep into recycling rate, recover rate and so on.

The process of plastic waste collection and treatment involves many processes and stakeholders. Insufficient information on waste and recycling is not only a problem emerging in Norway. Experts from EA also reveal in the meeting that the insufficient information has also been encountered in the implementation of many pilot projects, and EA's solution is to purchase data from consulting companies.

6. Outlook

The findings in this thesis reveal the urgent call for immediate interventions, and there is further work to be done in the future.

6.1 Plastic leakage crisis

In the global context of the continuous impact of the Covid-19 pandemic, plastic leakage has once again become an obvious and urgent environmental crisis. The prevention and control of plastic pollution is a comprehensive measure, its use, disposal, waste treatment and other aspects need more environmental-oriented intervention. For instance, in the aspect of plastic consumption and usage alternative materials such as paper, polylactic acid (PLA) and so on are worthy promoting, as well as recycled plastics are advocated to replace virgin materials.

In addition, in view of the universal occurrence of some leakage hotspots, the intervention measures should be taken in the corresponding sector, application and so on.

6.2 Implement of pilot in Norway

The biggest challenge in implementing the guidelines in the Norwegian context is “Insufficient information on waste and recycle”. Considering the workload of completing the Guidance (mainly data collection), the subordinate work of implement can be used to design master's thesis project, semester project, internship project or summer school. In a specific case, a viable semester project could focus on polymer recovery rate in Norway using the questionnaires provided by the Guidance.

Alternatively, Scenarios can be sketched accordingly to bridge knowledge and data gap, fulfilling the estimation through simulation. In this aspect, the “Plastsimulator (<https://handelensmiljofond.no/plastsimulator>)” built by the Norwegian Retailers' Environment Fund offers a nice example (Figure 24).

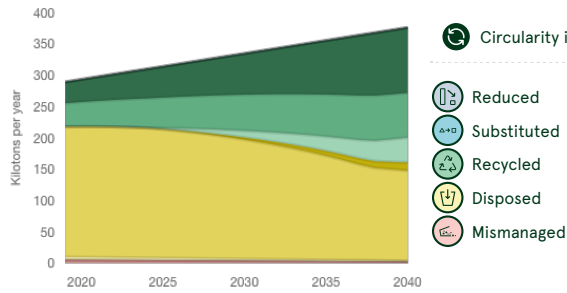
6. Outlook

2019

25%

Circularity index for plastic waste

Plastic Waste



2040

with central sorting

57%

Circularity index for plastic waste

Create your own scenario

Scenario 2: Central Sorting ^

Scenario 1: Business as usual

Scenario 2: Central Sorting ✓

Scenario 3: System change

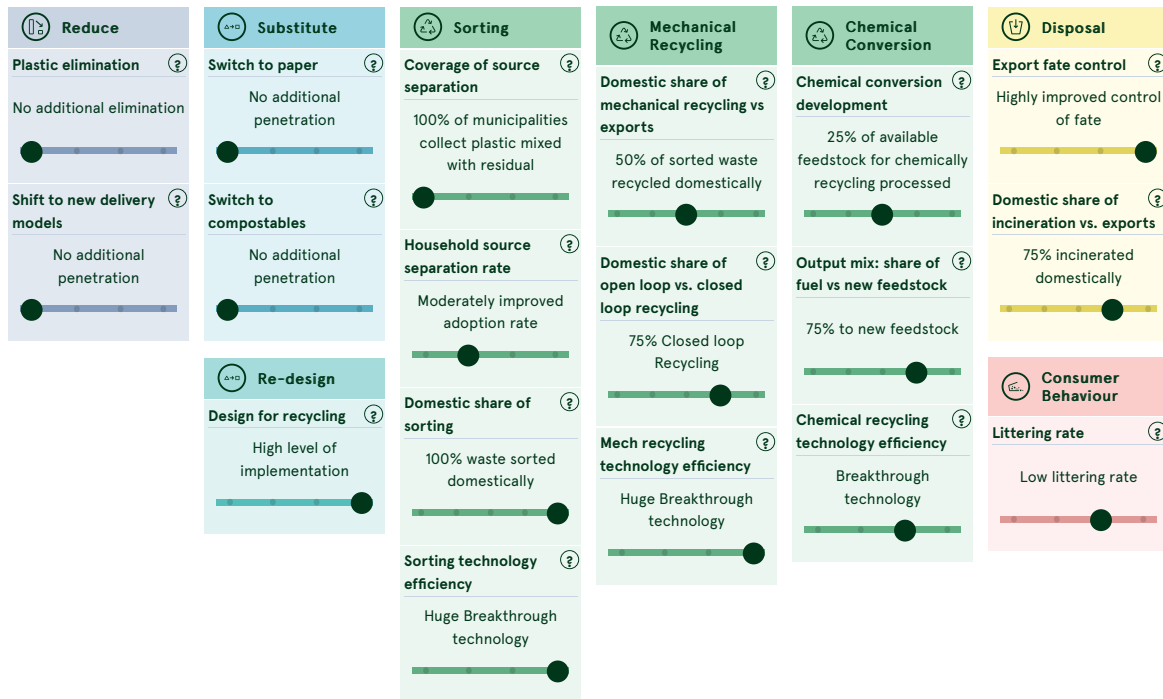


Figure 24 Parameters of scenarios in Plastsimulator(HMF, 2021b)

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Appendix

Table 13 Polymer leakage of pilots (2018)

Continent	Pilot		Polymer (2018)									Total Leakage (kt)
			PET	PP	Polyster	LDPE	HDPE	PS	Other	Synthetic Rubber	PVC	
Africa	Kenya	Dometic Waste (kt)	44	109	113	53	52	5	69	24	35	37,13
		Leakage rate	12%	9%	5%	10%	8%	8%	5%	7%	4%	
		Leakage (kt)	5,28	9,81	5,65	5,30	4,16	0,40	3,45	1,68	1,40	
	Mozambique	Dometic Waste (kt)	45	35	12	27	27	3	22	5	6	17,94
		Leakage rate	13%	9%	6%	11%	10%	8%	6%	15%	4%	
		Leakage (kt)	5,85	3,15	0,72	2,97	2,70	0,24	1,32	0,75	0,24	
	South Africa	Dometic Waste (kt)	314	467	161	469	241	72	286	131	229	76,10
		Leakage rate	4%	3%	2%	4%	3%	3%	2%	6%	2%	
		Leakage (kt)	12,56	14,01	3,22	18,76	7,23	2,16	5,72	7,86	4,58	
Asia	Thailand	Dometic Waste (kt)	485	359	698	1355	708	64	432	289	216	308,67
		Leakage rate	5%	6%	5%	9%	7%	6%	6%	7%	3%	
		Leakage (kt)	24,25	21,54	34,90	121,95	49,56	3,84	25,92	20,23	6,48	
	Vietnam	Dometic Waste (kt)	1003	1135	922	972	434	245	618	71	169	450,51
		Leakage rate	11%	8%	5%	11%	8%	7%	5%	12%	3%	
		Leakage (kt)	110,33	90,80	46,10	106,92	34,72	17,15	30,90	8,52	5,07	
Europe	Cyprus	Dometic Waste (kt)	9	11	6	11	15	7	18	9	6	0,71
		Leakage rate	1%	1%	0%	1%	1%	1%	0%	2%	0%	
		Leakage (kt)	0,09	0,11	0	0,11	0,15	0,07	0	0,18	0	
	Menorca (Spain)	Dometic Waste (kt)	1,781	2,642	0,264	2,652	0,663	0,481	0,171	0,283	1,283	0,07
		Leakage rate	1%	0%	0%	1%	1%	1%	0%	2%	1%	
		Leakage (kt)	0,02	0,00	0,00	0,03	0,01	0,00	0,00	0,01	0,01	

Table 14 Norwegian polymer detailed flows

Polymer Type	Import of primary form [kilo tonnes]	Export of primary form [kilo tonnes]	Import in products [kilo tonnes]	Export in products [kilo tonnes]	Import in Waste [kilo tonnes]	Export in Waste [kilo tonnes]	Net inflow [kilo tonnes]
HDPE	75	0	10	9	0	0	76
PS	53	0	7	15	0	4	42
Synthetic Rubber	1	4	41	1	0	0	36
Other	97	18	34	31	1	31	51
PP	31	2	9	9	0	0	30
Polyester	8	1	10	0	0	0	17
PET	1	0	4	0	0	0	5
LDPE	13	0	42	46	1	22	-12
PVC	11	0	12	20	0	0	3

Product of unknown polymer

Sector	Import in products	Export in product	inflow [kilo ton]
Automotive-other	20,98	22,39	-1,41
Construction	15,83	41,72	-25,88
Electronics	4,56	0,83	3,72
Houshold, Leisure	10,80	27,56	-16,76
Packaging	99,62	54,42	45,20
Textile	33,53	30,97	2,56
Others	0,02	24,38	-24,36

Import Unknown by polymer

Polymer	Automotive-other	Construction	Electronics	shold, Leisure, S	Packaging	Textile	Others	TOTAL from unknown import
LDPE	0,75	2,03	0,07	0,52	16,52	0,00	3,47	23,37
HDPE	1,56	5,40	0,04	2,90	9,77	0,00	1,48	21,15
PET	0,01	0,00	0,00	0,09	10,02	0,00	0,03	10,15
PVC	0,69	15,61	0,02	2,82	1,29	0,00	0,76	21,20
PP	5,80	3,37	0,13	9,30	11,88	1,88	2,43	34,79
PS	0,34	5,64	0,05	2,86	3,32	0,00	0,81	13,03
Polyester	4,36	0,00	0,00	0,00	0,00	25,93	5,12	35,40
Other	8,89	9,67	0,52	9,06	1,61	3,16	10,28	43,18

Export of Unknown by polymer

Polymer	Automotive-other	Construction	Electronics	shold, Leisure, S	Packaging	Textile	Others	TOTAL from unknown export
LDPE	-0,05	-1,26	0,32	-0,31	13,72	0,00	-3,47	8,95
HDPE	-0,10	-3,35	0,19	-1,77	8,11	0,00	-1,48	1,60
PET	0,00	0,00	0,01	-0,06	8,32	0,00	-0,03	8,24
PVC	-0,04	-9,69	0,09	-1,72	1,07	0,00	-0,76	-11,04
PP	-0,37	-2,09	0,58	-5,65	9,87	0,16	-2,43	0,06
PS	-0,02	-3,50	0,22	-1,74	2,76	0,00	-0,81	-3,09
Polyester	-0,27	0,00	0,00	0,00	0,00	2,14	-5,11	-3,25
Other	-0,56	-6,00	2,31	-5,51	1,34	0,26	-10,27	-18,43

National Guidance for Plastic Pollution Hotspotting and Shaping Action: developing the pilot for Norway

Table 15 Norwegian result of tool 1.1 & 2.1

Ref. code	Resource title	Type	Year	Link
1	Norwegian Trade database	Database		https://www.ssb.no/en/statbank/table/11009/
2	Norwegian Waste accounts	Database		https://www.ssb.no/en/natur-og-miljo/statistikker/avfregno/aar
3	Using Material Flow Analysis (MFA) to generate the evidence on plastic waste management from commercial fishing gears in Norway	Article	2019	https://www.sciencedirect.com/science/article/pii/S2590289X19300210
4	Multi-criteria decision analysis (MCDA) method for assessing the sustainability of end-of-life alternatives for waste plastics: A case study of Norway	Article	2020	https://www.sciencedirect.com/science/article/pii/S0048969720308639
5	Infinitum annual report 2020	Report	2020	https://infinitum.no/aktuelt/rapporterer-fra-rekordaret-2020/
6	A deep dive into our plastic ocean (final report english)	Report	2020	https://mepex.no/wp-content/uploads/2020/03/Mepex_sluttrapport.pdf
7	Barriers in the EPR System for plastic packaging, Norway	Article	2001	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/242683
8	The Use of Pay as You Throw Schemes and Central Sorting in Municipal Solid Waste Management - A case study of potential measures to increase sorting and recycling rates of plastic packaging in More and Romsdal, Norway.	Master Thesis	2018	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2577208
9	Plastemballasje fra husholdning	Website	2020	https://www.grontpunkt.no/gjenvinning/plastemballasje-fra-husholdninger/#row-4
10	Analysing the sustainability performance and critical improvement factors of urban municipal waste systems - Case study Trondheim	Master Thesis	2017	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2454942
11	A systems approach to extended producer responsibility: Economic efficiency and environmental effectiveness for packaging in plastic industry in Norway	Article	1998	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/242685
12	Analysing the sustainability performance and critical improvement factors of urban municipal waste systems - case study RoAF	Master Thesis	2017	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2454900
13	Analysing the sustainability performance and critical improvement factors of urban municipal waste systems - case study RfD	Master Thesis	2017	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2454937
14	Transitioning to a Circular Plastics Economy. A suggestion of indicators for a circular plastics economy in Norwegian enterprise	Master Thesis	2019	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2616819
15	Environmental benefits of household plastic and bioplastic packaging management in the municipality of Trondheim	Master Thesis	2018	https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2562287
16	Materialstrømmen til plast i Norge – hva vet vi?	Report	2020	https://handelensmiljofond.no/prosjekter/forskningsrapporter-innen-plast-og-miljo
17	Plastics - the Facts 2020	Report	2020	https://www.plasticseurope.org/en/resources/market-data
18	Rapport – Et dypdykk i plashavet versjon 1 (detailed report Norwegian)	Report	2018	https://mepex.no/wp-content/uploads/2018/02/Rapport-Et-dypdykk-i-plashavet-versjon-1.pdf
19	ODIMS - OSPAR's Data & Information Management System	Database		https://odims.ospar.org/
20	Emballasjeutviklingen i Norge 2018	Report	2018	https://www.emballasjeforeningen.no/wp-content/uploads/2021/01/Emballasjeutviklingen-i-Norge-2018.pdf
21	Næringslivets arbeid med emballasjeoptimering 2016	Report	2016	https://www.emballasjeforeningen.no/wp-content/uploads/2021/01/NOK-rapport-2016.pdf
22	Fishing for Litter - som tiltak mot marin forspølling i Norge Årsrapport 2020	Report	2020	https://salt.nu/prosjekter/fishing-for-litter-2020
23	Achieving Circularity - A zero-waste circular plastic economy in Norway	Report	2021	https://handelensmiljofond.no/fakta-og-kunnskap-om-plast/kunnskapsrapporter-om-plast-og-miljo
24	Increased utilization of resources in plastic waste (in Norwegian)	Report	2011	https://www.miljodirektoratet.no/globalassets/publikasjoner/klif2/publikasjoner/2956/ta2956.pdf
25	Norwegian land-based sources of microplastics (in Norwegian)	Report	2021	https://www.miljodirektoratet.no/publikasjoner/2021/april-2021/norske-landbaserte-kilder-til-mikroplast/
26	Sea-based sources of microplastics to the Norwegian marine environment	Report	2021	https://www.miljodirektoratet.no/publikasjoner/2021/april-2021/sea-based-sources-of-microplastics-to-the-norwegian-marine-environment/

Appendix

Norway		LEAKAGE PATHWAY				EPR POLICIES	GIS INFORMATION		
Resource title	Ref. code	Littering		Climatic / topographic patterns	Release rate		Fisheries	Tourism	Landfill
		Qty	Management						
Norwegian Trade database	1								
Norwegian Waste accounts	2								
Using Material Flow Analysis (MFA) to generate the evidence on plastic waste management from commercial fishing gears in Norway	3	x	x						
Multi-criteria decision analysis (MCDA) method for assessing the sustainability of end-of-life alternatives for waste plastics: A case study of Norway	4								
Infinitem annual report 2020	5								
A deep dive into our plastic ocean (final report in English)	6	x							
Barriers in the EPR System for plastic packaging, Norway	7					x			
The Use of Pay as You Throw Schemes and Central Sorting in Municipal Solid Waste Management. -A case study of potential measures to increase sorting and recycling rates of plastic packaging in More and Romsdal, Norway.	8								
Plastemballasje fra husholdning	9								
Analysing the sustainability performance and critical improvement factors of urban municipal waste systems - Case study Trondheim	10								
A systems approach to extended producer responsibility: Economic efficiency and environmental effectiveness for packaging in plastic industry in Norway	11					x			
Analysing the sustainability performance and critical improvement factors of urban municipal waste systems - case study RoAF	12								
Analysing the sustainability performance and critical improvement factors of urban municipal waste systems - case study RfD	13								
Transitioning to a Circular Plastics Economy. A suggestion of indicators for a circular plastics economy in Norwegian enterprise	14								
Environmental benefits of household plastic and bioplastic packaging management in the municipality of Trondheim	15								
Materialstrømmen til plast i Norge – hva vet vi?	16								
Plastics - the Facts 2020	17								
Rapport – Et dypdykk i plasthavet versjon 1 (detailed report in Norwegian)	18								
ODIMS - OSPAR's Data & Information Management System	19								
Emballasjeutviklingen i Norge 2018	20								
Næringslivets arbeid med emballasjeoptimering 2016	21								
Fishing for Litter som tiltak mot marin forspøpling i Norge Årsrapport 2020	22	x	x				x		
Achieving Circularity - A zero-waste circular plastic economy in Norway	23								
Increased utilization of resources in plastic waste (in Norwegian)	24								
Norwegian land-based sources of microplastics (in Norwegian)	25	x							
Sea-based sources of microplastics to the Norwegian marine environment	26	x							

Table 16 Norwegian Commodity Trade 2018

Data Source: Statistics Norway (<https://www.ssb.no/en/statbank/table/11009/>)

Trade Flow Code	Commodity Code	Quantity (Unit)	Supplementary Quantity	Netweight (kg)	Value	Estimation Co	Simple description	Weight to Supplementary Quantity Ratio	Weight to supplementary Extrapolated	Weight to Value Ratio	Weight to Value Ratio Extrapolated	Estimated weight (kg)	Estimated plastic weight (kg)	Polymer Type	Type	Application Type	Sector	Application	Polymer
1	3303	1	0	907926	411213069	6	Other Bottles	N/A	N/A	0,00220792	0,00220792	907926	90792,6	Unknown	Application	Other Bottles	Packaging	Other Bottles	Unknown
2	3303	1	0	42993	23493143	6	Other Bottles	N/A	N/A	0,00183002	0,00183002	42993	4299,3	Unknown	Application	Other Bottles	Packaging	Other Bottles	Unknown
1	3304	1	0	10258871	2621524043	6	Other Bottles	N/A	N/A	0,00391332	0,00391332	10258871	1025887,1	Unknown	Application	Other Bottles	Packaging	Other Bottles	Unknown
2	3304	1	0	336064	142252331	6	Other Bottles	N/A	N/A	0,00236245	0,00236245	336064	33606,4	Unknown	Application	Other Bottles	Packaging	Other Bottles	Unknown
1	3401	1	0	25174463	682936500	6	Other Bottles	N/A	N/A	0,03686208	0,03686208	25174463	2517446,3	Unknown	Application	Other Bottles	Packaging	Other Bottles	Unknown
2	3401	1	0	4503781	73960222	6	Other Bottles	N/A	N/A	0,06089464	0,06089464	4503781	450378,1	Unknown	Application	Other Bottles	Packaging	Other Bottles	Unknown
1	3902	1	0	31399226	462791649	6	None	N/A	N/A	0,06784743	0,06784743	31399226	31399226	PP	Primary	None	General	None	PP
2	3902	1	0	1650839	28814657	6	None	N/A	N/A	0,05729164	0,05729164	1650839	1650839	PP	Primary	None	General	None	PP
1	3903	1	0	53057208	849389758	6	None	N/A	N/A	0,06246509	0,06246509	53057208	53057208	PS	Primary	None	General	None	PS
2	3903	1	0	374212	7600745	6	None	N/A	N/A	0,04923359	0,04923359	374212	374212	PS	Primary	None	General	None	PS
1	3904	1	0	10600704	138605305	6	None	N/A	N/A	0,07648123	0,07648123	10600704	10600704	PVC	Primary	None	General	None	PVC
1	3904	1	0	10182	426147	6	None	N/A	N/A	0,02389316	0,02389316	10182	10182	PVC	Primary	None	General	None	PVC
1	3905	1	0	7586126	144709465	6	None	N/A	N/A	0,05242315	0,05242315	7586126	7586126	Other	Primary	None	General	None	Other
1	3905	1	0	189177	3250262	6	None	N/A	N/A	0,05820362	0,05820362	189177	189177	Other	Primary	None	General	None	Other
1	3906	1	0	47195520	547300957	6	None	N/A	N/A	0,08623321	0,08623321	47195520	47195520	Other	Primary	None	General	None	Other
1	3906	1	0	3144423	151649664	6	None	N/A	N/A	0,02073478	0,02073478	3144423	3144423	Other	Primary	None	General	None	Other
2	3909	1	0	14484846	334317561	6	None	N/A	N/A	0,04332661	0,04332661	14484846	14484846	Other	Primary	None	General	None	Other
1	3909	1	0	277249	14254293	6	None	N/A	N/A	0,01945021	0,01945021	277249	277249	Other	Primary	None	General	None	Other
1	3910	1	0	4143464	171223581	6	None	N/A	N/A	0,02419914	0,02419914	4143464	4143464	Other	Primary	None	General	None	Other
1	3910	1	0	3578989	63808265	6	None	N/A	N/A	0,05608974	0,05608974	3578989	3578989	Other	Primary	None	General	None	Other
1	3911	1	0	5749686	103831188	6	None	N/A	N/A	0,05537533	0,05537533	5749686	5749686	Other	Primary	None	General	None	Other
1	3911	1	0	58726	953750	6	None	N/A	N/A	0,06157379	0,06157379	58726	58726	Other	Primary	None	General	None	Other
2	3912	1	0	1354263	43778585	6	None	N/A	N/A	0,03093437	0,03093437	1354263	1354263	Other	Primary	None	General	None	Other
1	3912	1	0	3196699	38716718	6	None	N/A	N/A	0,08256637	0,08256637	3196699	3196699	Other	Primary	None	General	None	Other
2	3914	1	0	131837	10871106	6	None	N/A	N/A	0,01212728	0,01212728	131837	131837	Other	Primary	None	General	None	Other
1	3914	1	0	13159	996701	6	None	N/A	N/A	0,01320256	0,01320256	13159	13159	Other	Primary	None	General	None	Other
2	3922	1	0	11522079	598009783	6	Baths, sinks, etc	N/A	N/A	0,01926738	0,01926738	11522079	11522079	Unknown	Application	Baths, sinks, etc	Household, Leisure, Sport	Baths, sinks, etc	Unknown
1	3922	1	0	229794	22085106	6	Baths, sinks, etc	N/A	N/A	0,01040493	0,01040493	229794	229794	Unknown	Application	Baths, sinks, etc	Household, Leisure, Sport	Baths, sinks, etc	Unknown
2	4002	1	0	4378421	112945087	6	None	N/A	N/A	0,03876593	0,03876593	4378421	4378421	Synthetic Rub	Primary	None	General	None	Synthetic Rubber
1	4002	1	0	844329	24557218	6	None	N/A	N/A	0,03438211	0,03438211	844329	844329	Synthetic Rub	Primary	None	General	None	Synthetic Rubber
2	6307	1	0	6724330	730445972	6	Clothes	N/A	N/A	0,00920579	0,00920579	6724330	2891461,9	Unknown	Application	Clothes	Textile	Clothes	Unknown
1	6307	1	0	281161	50325548	6	Clothes	N/A	N/A	0,00558684	0,00558684	281161	120899,23	Unknown	Application	Clothes	Textile	Clothes	Unknown
2	6308	1	0	22900	8116090	6	Rugs	N/A	N/A	0,00282156	0,00282156	22900	9847	Unknown	Application	Rugs	Textile	Rugs	Unknown
1	6308	1	0	5602	425647	6	Rugs	N/A	N/A	0,01316114	0,01316114	5602	2408,86	Unknown	Application	Rugs	Textile	Rugs	Unknown
2	6309	1	0	46162	3069381	6	Clothes	N/A	N/A	0,01503951	0,01503951	46162	19849,66	Unknown	Application	Clothes	Textile	Clothes	Unknown
1	6309	1	0	36257959	230666946	6	Clothes	N/A	N/A	0,15718749	0,15718749	36257959	15590922,4	Unknown	Application	Clothes	Textile	Clothes	Unknown
2	6310	1	0	1644888	13803545	6	Ropes	N/A	N/A	0,11916417	0,11916417	1644888	707301,84	Unknown	Application	Ropes	Textile	Ropes	Unknown
1	6310	1	0	203905	1273187	6	Ropes	N/A	N/A	0,16015322	0,16015322	203905	87679,15	Unknown	Application	Ropes	Textile	Ropes	Unknown
2	6401	6	1340470	1470536	207675803	6	Footwear	1,09703015	1,09703015	0,00708092	0,00708092	1470536	632330,48	Unknown	Application	Footwear	Textile	Footwear	Unknown
1	6401	6	24967	6500295	60038409	6	Footwear	0,86630812	0,86630812	0,0038409	0,0038409	24967	10735,81	Unknown	Application	Footwear	Textile	Footwear	Unknown
2	6402	6	5125083	3866146	957799384	6	Footwear	0,75435773	0,75435773	0,00403649	0,00403649	3866146	1662442,78	Unknown	Application	Footwear	Textile	Footwear	Unknown
1	6402	6	119467	99408	34728834	6	Footwear	0,83209589	0,83209589	0,00286241	0,00286241	99408	42745,44	Unknown	Application	Footwear	Textile	Footwear	Unknown
2	6403	6	6074422	6048631	2377737854	6	Footwear	0,99575416	0,99575416	0,00254386	0,00254386	6048631	2600911,33	Unknown	Application	Footwear	Textile	Footwear	Unknown
1	6403	6	158402	195867	59933707	6	Footwear	1,23933511	1,23933511	0,00326806	0,00326806	195867	84222,81	Unknown	Application	Footwear	Textile	Footwear	Unknown
2	6404	6	8939529	6331163	2054191783	6	Footwear	0,70822109	0,70822109	0,00308207	0,00308207	6331163	2722400,09	Unknown	Application	Footwear	Textile	Footwear	Unknown
1	6404	6	171249	119100	55330616	6	Footwear	0,69547851	0,69547851	0,00215252	0,00215252	119100	51213	Unknown	Application	Footwear	Textile	Footwear	Unknown
2	6405	6	1063523	348250	108759824	6	Footwear	0,32744943	0,32744943	0,00320201	0,00320201	348250	149747,5	Unknown	Application	Footwear	Textile	Footwear	Unknown
1	6405	6	13203	8724	4891933	6	Footwear	0,66075892	0,66075892	0,00178334	0,00178334	8724	3751,32	Unknown	Application	Footwear	Textile	Footwear	Unknown
2	6406	6	27885	292695	92607094	6	Footwear	10,4965035	10,4965035	0,00316061	0,00316061	292695	125858,85	Unknown	Application	Footwear	Textile	Footwear	Unknown
1	6406	6	930	14465	3601945	6	Footwear	15,5537634	15,5537634	0,00401589	0,00401589	14465	6219,95	Unknown	Application	Footwear	Textile	Footwear	Unknown
2	6501	1	0	2279	1360098	6	Hats	N/A	N/A	0,00167561	0,00167561	2279	979,97	Unknown	Application	Hats	Textile	Hats	Unknown
1	6501	1	0	298	105371	6	Hats	N/A	N/A	0,00282821	0,00282821	298	128,14	Unknown	Application	Hats	Textile	Hats	Unknown
2	6502	1	0	3411	1195623	6	Hats	N/A	N/A	0,00285291	0,00285291	3411	1466,73	Unknown	Application	Hats	Textile	Hats	Unknown
1	6502	1	0	155	21205	6	Hats	N/A	N/A	0,0073096	0,0073096	155	66,65	Unknown	Application	Hats	Textile	Hats	Unknown
2	6503	1	0	0	0	6	Hats	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hats	Textile	Hats	Unknown
1	6503	1	0	0	0	6	Hats	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hats	Textile	Hats	Unknown
2	6504	5	465071	42271	15270941	6	Hats	0,0908915	0,0908915	0,00276807	0,00276807	42271	18176,53	Unknown	Application	Hats	Textile	Hats	Unknown
1	6504	5	36190	5336	2144763	6	Hats	0,14744405	0,14744405	0,00248792	0,00248792	5336	2294,48	Unknown	Application	Hats	Textile	Hats	Unknown
1	6505	5	14876631	802812	294715985	6	Hats	0,05396464	0,05396464	0,00272402	0,00272402	802812	345209,16	Unknown	Application	Hats	Textile	Hats	Unknown
2	6505	5	613143	51884	21026217	6	Hats	0,08461974	0,08461974	0,00246759	0,00246759	51884	22310,12	Unknown	Application	Hats	Textile	Hats	Unknown
1	6506	5	3050706	788346	265767986	6	Hats												

2	200911	1	0	0	0	Drinks bottles	N/A	N/A	N/A	0,04551508	0	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200912	1	0	23563584	231753086	6 Drinks bottles	N/A	N/A	0,10167538	0,10167538	23563584	801161,856	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200912	1	0	1126	21406	6 Drinks bottles	N/A	N/A	0,05260207	0,05260207	1126	38,284	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200919	1	0	6570265	130447465	6 Drinks bottles	N/A	N/A	0,05036713	0,05036713	6570265	223389,01	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200919	1	0	937	8693	6 Drinks bottles	N/A	N/A	0,10778788	0,10778788	937	31,858	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200920	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200920	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200921	1	0	1111549	16080831	6 Drinks bottles	N/A	N/A	0,06912261	0,06912261	1111549	37792,666	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200921	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	0	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200929	1	0	11537	379437	6 Drinks bottles	N/A	N/A	0,03040557	0,03040557	11537	392,258	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200929	1	0	11475	249720	6 Drinks bottles	N/A	N/A	0,04595147	0,04595147	11475	390,15	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200930	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200930	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200931	1	0	1254145	18955547	6 Drinks bottles	N/A	N/A	0,06616243	0,06616243	1254145	42640,93	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200931	1	0	1200	79084	6 Drinks bottles	N/A	N/A	0,01517374	0,01517374	1200	40,8	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200939	1	0	90705	3808577	6 Drinks bottles	N/A	N/A	0,02381598	0,02381598	90705	3083,97	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200939	1	0	1661	9360	6 Drinks bottles	N/A	N/A	0,17745726	0,17745726	1661	56,474	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200940	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200940	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200949	1	0	33009	645955	6 Drinks bottles	N/A	N/A	0,05110108	0,05110108	33009	1122,306	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200949	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	0	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200950	1	0	484048	3135568	6 Drinks bottles	N/A	N/A	0,15437331	0,15437331	484048	16457,632	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200950	1	0	114	3352	6 Drinks bottles	N/A	N/A	0,03400955	0,03400955	114	3,876	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200960	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200960	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200961	1	0	568452	8104790	6 Drinks bottles	N/A	N/A	0,07013778	0,07013778	568452	19327,368	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200961	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	0	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200969	1	0	785049	15366090	6 Drinks bottles	N/A	N/A	0,0510897	0,0510897	785049	26691,666	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200969	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	0	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200970	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200970	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200971	1	0	999045	7355682	6 Drinks bottles	N/A	N/A	0,13581949	0,13581949	999045	33967,53	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200971	1	0	9993	212370	6 Drinks bottles	N/A	N/A	0,04705467	0,04705467	9993	339,762	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200979	1	0	8292002	138774894	6 Drinks bottles	N/A	N/A	0,05975146	0,05975146	8292002	281928,068	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200979	1	0	218439	4553065	6 Drinks bottles	N/A	N/A	0,04797625	0,04797625	218439	7426,926	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200980	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200980	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200981	1	0	18714	2284311	6 Drinks bottles	N/A	N/A	0,0081924	0,0081924	18714	636,276	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200981	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	0	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200989	1	0	1040188	39816827	6 Drinks bottles	N/A	N/A	0,02612433	0,02612433	1040188	35366,392	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200989	1	0	37004	2128083	6 Drinks bottles	N/A	N/A	0,01738842	0,01738842	37004	1258,136	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	200990	1	0	1467123	30519926	6 Drinks bottles	N/A	N/A	0,04807099	0,04807099	1467123	49882,182	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	200990	1	0	10099	496302	6 Drinks bottles	N/A	N/A	0,0203485	0,0203485	10099	343,366	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	210310	1	0	1708066	59617882	6 Other bottles	N/A	N/A	0,02865023	0,02865023	1708066	58074,244	Unknown	Application	Other bottles	Packaging	Other bottlesUnknown
2	210310	1	0	42975	2610108	6 Other bottles	N/A	N/A	0,01646484	0,01646484	42975	1461,15	Unknown	Application	Other bottles	Packaging	Other bottlesUnknown
2	220110	7	1529392	1549182	10820868	6 Drinks bottles	1,01293978	1,01293978	0,14316615	0,14316615	1549182	52672,188	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220110	7	24117734	30947606	134854438	6 Drinks bottles	1,28318879	1,28318879	0,22948897	0,22948897	30947606	1052218,6	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220190	7	5776786	5817488	10571558	6 Drinks bottles	1,00704579	1,00704579	0,55029618	0,55029618	5817488	197794,592	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220190	7	83164600	92268430	283392942	6 Drinks bottles	1,10946761	1,10946761	0,3258478	0,3258478	92268430	3137126,62	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220210	7	91026669	91921550	959448670	6 Drinks bottles	1,00983098	1,00983098	0,09580664	0,09580664	91921550	3125332,7	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220210	7	37621751	38151768	119964131	6 Drinks bottles	1,01408805	1,01408805	0,31802646	0,31802646	38151768	1297160,11	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220290	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220290	1	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220291	7	3306653	3322308	27570761	6 Drinks bottles	1,00473439	1,00473439	0,12050114	0,12050114	3322308	112958,472	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220291	7	54292	56885	626646	6 Drinks bottles	1,04776026	1,04776026	0,09077693	0,09077693	56885	1934,09	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220299	7	34568703	35424496	658803926	6 Drinks bottles	1,02475629	1,02475629	0,05377092	0,05377092	35424496	1204432,86	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220299	7	37005	38459	1187131	6 Drinks bottles	1,03929199	1,03929199	0,03239659	0,03239659	38459	1307,606	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220300	7	35598472	36968910	378169296	6 Drinks bottles	1,0384971	1,0384971	0,09775757	0,09775757	36968910	1256942,94	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220300	7	5042347	5282321	73075270	6 Drinks bottles	1,04759173	1,04759173	0,07228603	0,07228603	5282321	179598,914	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220410	7	7029305	7057559	498372604	6 Drinks bottles	1,00405803	1,00405803	0,01416121	0,01416121	7057559	239957,006	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220410	7	47879	48303	2649811	6 Drinks bottles	1,00885566	1,00885566	0,01822885	0,01822885	48303	1642,302	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220430	7	0	0	0	6 Drinks bottles	N/A	N/A	N/A	N/A	0,01610378	0	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220430	7	3885	5276	327625	6 Drinks bottles	1,35804376	1,35804376	0,01610378	0,01610378	5276	179,384	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	220600	7	8233503	8347028	103270232	6 Drinks bottles	1,01378818	1,01378818	0,08082705	0,08082705	8347028	283798,952	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
1	220600	7	20472	32551	851319	6 Drinks bottles	1,5900254	1,5900254	0,03823596	0,03823596	32551	1106,734	Unknown	Application	Drinks bottles	Packaging	Drinks bottlesUnknown
2	240220	1	0	1715226	1241247558	6 Cigarette filters	N/A	N/A	0,00138186	0,00138186	1715226	291588,42	Unknown	Application	Cigarette filters	Others	Cigarette filtersUnknown
1	240220	1	0	678	454067	6 Cigarette filters	N/A	N/A	0,00149317	0,00149317	678	115,26	Unknown	Application	Cigarette filters	Others	Cigarette filtersUnknown
2	330510	1	0	6563342	390563290	6 Other bottles	N/A	N/A	0,01680481	0,01680481	6563342	656334,2	Unknown	Application	Other bottles	Packaging	Other bottlesUnknown
1	330510	1	0	395137	43163578	6 Other bottles	N/A	N/A	0,00915441	0,00915441	395137	39513,7	Unknown	Application	Other bottles	Packaging	Other bottlesUnknown
2	330520	1	0	55416	7913134	6 Other bottles	N/A	N/A	0,00700304	0,00700304	55416	5541,6	Unknown	Application	Other bottles	Packaging	Other bottlesUnknown
1	330520	1	0	2277	565178	6 Other bottles	N/A	N/A	0,00402882	0,00402882	2277	227,7	Unknown	Application	Other bottles	Packaging	Other bottlesUnknown
2	370120	1	0	12577	7410413	6 Photographic films	N/A	N/A	0,00169721	0,00169721	12577	12577	Other	Application	Photographic film	Household, Leisure, Sport	Photographic filmsOther
1	370120	1	0	227	236733	6 Photographic films	N/A	N/A	0,00095889	0,00095889	227	227	Other	Application	Photographic film	Household, Leisure, Sport	Photographic filmsOther
2	370130	2	1426490	1148410	75662759	6 Photographic films	0,80505997	0,80505997	0,01517801	0,01517801	1148410	1148410	Other	Application	Photographic film	Household, Leisure, Sport	Photographic filmsOther
1	370130	2	10125	7518	529344	6 Photographic films	0,74251852	0,74251852	0,01420248	0,01420248	7518	7518	Other	Application	Photographic film	Household, Leisure, Sport	Photographic filmsOther
2	370191	1	0	1587	429843	6 Photographic films	N/A	N/A	0,00369205	0,00369205	1587	1587	Other	Application	Photographic film	Household, Leisure, Sport	Photographic filmsOther
1	370191	1	0	0	0	6 Photographic films	N/A	N/A	N/A								

2	370199	2	3647	2313	1264695	6 Photographic films	0,63421991	0,63421991	0,0018289	0,0018289	2313	2313	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370199	2	1	1	4000	6 Photographic films	1	1	0,00025	0,00025	1	1	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370210	2	350	298	151416	6 Photographic films	0,85142857	0,85142857	0,00196809	0,00196809	298	298	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370210	2	1	6	1217	6 Photographic films	6	6	0,00493016	0,00493016	6	6	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370220	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370220	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370231	5	24842	4186	1625898	6 Photographic films	0,16850495	0,16850495	0,00257458	0,00257458	4186	4186	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370231	5	3	1	1000	6 Photographic films	0,33333333	0,33333333	0,001	0,001	1	1	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370232	2	138	14	8936	6 Photographic films	0,10144928	0,10144928	0,0015667	0,0015667	14	14	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370232	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370239	2	8135	419	145647	6 Photographic films	0,05150584	0,05150584	0,00287682	0,00287682	419	419	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370239	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370241	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370241	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370242	2	246	299	80071	6 Photographic films	1,21544715	1,21544715	0,00373419	0,00373419	299	299	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370242	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370243	2	3009	1081	315147	6 Photographic films	0,35925557	0,35925557	0,00343015	0,00343015	1081	1081	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370243	2	1	2	1117	6 Photographic films	2	2	0,00179051	0,00179051	2	2	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370244	2	45853	1482	390955	6 Photographic films	0,03232068	0,03232068	0,00379072	0,00379072	1482	1482	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370244	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370251	4	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370251	4	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370252	4	1813	119	87897	6 Photographic films	0,06563707	0,06563707	0,00135386	0,00135386	119	119	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370252	4	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370253	2	312	78	30544	6 Photographic films	0,25	0,25	0,00255369	0,00255369	78	78	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370253	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370254	2	28240	2727	3434660	6 Photographic films	0,09656516	0,09656516	0,00079397	0,00079397	2727	2727	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370254	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370255	2	15448	867	1057614	6 Photographic films	0,05612377	0,05612377	0,00081977	0,00081977	867	867	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370255	2	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	0	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370256	2	12593	327	104207	6 Photographic films	0,02596681	0,02596681	0,00313798	0,00313798	327	327	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370256	2	6	6	1080	6 Photographic films	1	1	0,00555556	0,00555556	6	6	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370291	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370291	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370292	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370292	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370293	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370293	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370294	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370294	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	370295	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
2	370295	1	0	0	0	6 Photographic films	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Photographic film Household, Leisure, Sport	Photographic filmsOther	
1	390110	1	0	12516483	212111605	6 None	N/A	N/A	0,05900895	0,05900895	12516483	12516483	LDPE	Primary	None	General	NoneLDPE
2	390110	1	0	35376	165737	6 None	N/A	N/A	0,21344661	0,21344661	35376	35376	LDPE	Primary	None	General	NoneLDPE
1	390120	1	0	74630641	950154868	6 None	N/A	N/A	0,07854577	0,07854577	74630641	74630641	HDPE	Primary	None	General	NoneHDPE
2	390120	1	0	0	0	6 None	N/A	N/A	N/A	N/A	0	0	HDPE	Primary	None	General	NoneHDPE
1	390130	1	0	673251	14261605	6 None	N/A	N/A	0,04720724	0,04720724	673251	673251	Other	Primary	None	General	NoneOther
2	390130	1	0	12760	369129	6 None	N/A	N/A	0,03456786	0,03456786	12760	12760	Other	Primary	None	General	NoneOther
1	390140	1	0	3254379	64705654	6 None	N/A	N/A	0,05029513	0,05029513	3254379	3254379	Other	Primary	None	General	NoneOther
2	390140	1	0	0	0	6 None	N/A	N/A	N/A	N/A	0	0	Other	Primary	None	General	NoneOther
1	390190	1	0	1879645	50411860	6 None	N/A	N/A	0,03728577	0,03728577	1879645	1879645	Other	Primary	None	General	NoneOther
2	390190	1	0	327614	4213452	6 None	N/A	N/A	0,0777543	0,0777543	327614	327614	Other	Primary	None	General	NoneOther
1	390710	1	0	414761	10516078	6 None	N/A	N/A	0,03944065	0,03944065	414761	414761	Other	Primary	None	General	NoneOther
2	390710	1	0	120706	1450514	6 None	N/A	N/A	0,08321602	0,08321602	120706	120706	Other	Primary	None	General	NoneOther
1	390720	1	0	7845130	160052421	6 None	N/A	N/A	0,049016	0,049016	7845130	7845130	Other	Primary	None	General	NoneOther
2	390720	1	0	52175	13623690	6 None	N/A	N/A	0,00382973	0,00382973	52175	52175	Other	Primary	None	General	NoneOther
1	390730	1	0	3461672	123296348	6 None	N/A	N/A	0,02807603	0,02807603	3461672	3461672	Other	Primary	None	General	NoneOther
2	390730	1	0	399458	20465013	6 None	N/A	N/A	0,01951907	0,01951907	399458	399458	Other	Primary	None	General	NoneOther
1	390740	1	0	1024442	36135952	6 None	N/A	N/A	0,02834966	0,02834966	1024442	1024442	Other	Primary	None	General	NoneOther
2	390740	1	0	44082	2018238	6 None	N/A	N/A	0,02184182	0,02184182	44082	44082	Other	Primary	None	General	NoneOther
1	390750	1	0	3584908	80186146	6 None	N/A	N/A	0,04470732	0,04470732	3584908	3584908	Other	Primary	None	General	NoneOther
2	390750	1	0	1208805	21603954	6 None	N/A	N/A	0,05595295	0,05595295	1208805	1208805	Other	Primary	None	General	NoneOther
1	390760	1	0	0	0	6 None	N/A	N/A	N/A	N/A	#VALUE!	0	PET	Primary	None	General	NonePET
2	390760	1	0	0	0	6 None	N/A	N/A	N/A	N/A	#VALUE!	0	PET	Primary	None	General	NonePET
1	390761	1	0	659721	7638189	6 None	N/A	N/A	0,08637139	0,08637139	659721	659721	PET	Primary	None	General	NonePET
2	390761	1	0	0	0	6 None	N/A	N/A	N/A	N/A	0	0	PET	Primary	None	General	NonePET
1	390769	1	0	404553	3509378	6 None	N/A	N/A	0,11527769	0,11527769	404553	404553	PET	Primary	None	General	NonePET
2	390769	1	0	528	142826	6 None	N/A	N/A	0,00369681	0,00369681	528	528	PET	Primary	None	General	NonePET
1	390770	1	0	57	10176	6 None	N/A	N/A	0,00560142	0,00560142	57	57	Other	Primary	None	General	NoneOther
2	390770	1	0	0	0	6 None	N/A	N/A	N/A	N/A	0	0	Other	Primary	None	General	NoneOther
1	390791	1	0	6006540	162895480	6 None	N/A	N/A	0,03687358	0,03687358	6006540	6006540	Polyester	Primary	None	General	NonePolyester
2	390791	1	0	0	0	6 None	N/A	N/A	N/A	N/A	0	0	Polyester	Primary	None	General	NonePolyester
1	390799	1	0	1870003	81798241	6 None	N/A	N/A	0,02286116	0,02286116	1870003	1870003	Polyester	Primary	None	General	NonePolyester
2	390799	1	0	561773	40604947	6 None	N/A	N/A	0,01383509	0,01383509	561773	561773	Polyester	Primary	None	General	NonePolyester
1	391510	1	0	1220017	6986416	6 Waste, paring and scraps of plastic	N/A	N/A	0,17462702	0,17462702	1220017	1220017	LDPE	Waste	Waste, paring and	General	Waste, paring and scraps of plasticLDPE
2	391510	1	0	22354351	48129820	6 Waste, paring and scraps of plastic	N/A	N/A	0,46445948	0,46445948	22354351	22354351	LDPE	Waste	Waste, paring and	General	Waste, paring and scraps of plasticLDPE
1	391520	1	0	248936	782096	6 Waste, paring and scraps of plastic	N/A	N/A	0,31829341	0,31829341	248936	248936	PS	Waste	Waste, paring and	General	Waste, paring and scraps of plasticPS

2	391520	1	0	3611757	22066007	6 Waste, paring and scraps of plastic	N/A	N/A	0,16367968	0,16367968	3611757	3611757 PS	Waste	Waste, paring and General	Waste, paring and scraps of plasticPS
1	391530	1	0	68478	115584	6 Waste, paring and scraps of plastic	N/A	N/A	0,59245224	0,59245224	68478	68478 PVC	Waste	Waste, paring and General	Waste, paring and scraps of plasticPVC
2	391530	1	0	21000	53976	6 Waste, paring and scraps of plastic	N/A	N/A	0,38906181	0,38906181	21000	21000 PVC	Waste	Waste, paring and General	Waste, paring and scraps of plasticPVC
1	391590	1	0	528712	4314015	6 Waste, paring and scraps of plastic	N/A	N/A	0,12255683	0,12255683	528712	528712 Other	Waste	Waste, paring and General	Waste, paring and scraps of plasticOther
2	391590	1	0	31139825	39055745	6 Waste, paring and scraps of plastic	N/A	N/A	0,34966666	0,34966666	31139825	31139825 Other	Waste	Waste, paring and General	Waste, paring and scraps of plasticOther
1	391610	1	0	1954884	60671029	6 Monofilament rods, sticks > 1mm	N/A	N/A	0,03222105	0,03222105	1954884	1954884 HDPE	Application	Monofilament ro Others	Monofilament rods, sticks > 1mmHDPE
2	391610	1	0	69688	2978915	6 Monofilament rods, sticks > 1mm	N/A	N/A	0,02339375	0,02339375	69688	69688 HDPE	Application	Monofilament ro Others	Monofilament rods, sticks > 1mmHDPE
1	391620	1	0	6137092	154331279	6 Monofilament rods, sticks > 1mm	N/A	N/A	0,0397657	0,0397657	6137092	6137092 PVC	Application	Monofilament ro Others	Monofilament rods, sticks > 1mmPVC
2	391620	1	0	33940	2328768	6 Monofilament rods, sticks > 1mm	N/A	N/A	0,01457423	0,01457423	33940	33940 PVC	Application	Monofilament ro Others	Monofilament rods, sticks > 1mmPVC
1	391690	1	0	1217930	88233611	6 Monofilament rods, sticks > 1mm	N/A	N/A	0,01380347	0,01380347	1217930	1217930 Unknown	Application	Monofilament ro Packaging	Monofilament rods, sticks > 1mmUnknown
2	391690	1	0	918816	108996768	6 Monofilament rods, sticks > 1mm	N/A	N/A	0,00842975	0,00842975	918816	918816 Unknown	Application	Monofilament ro Packaging	Monofilament rods, sticks > 1mmUnknown
1	391710	1	0	411859	35492756	6 Plates, sheets and films	N/A	N/A	0,01160403	0,01160403	411859	411859 Other	Application	Plates, sheets anc Other	Plates, sheets and filmsOther
2	391710	1	0	6789	412392	6 Plates, sheets and films	N/A	N/A	0,01646249	0,01646249	6789	6789 Other	Application	Plates, sheets anc Other	Plates, sheets and filmsOther
1	391721	1	0	8365537	236369986	6 Tubes, pipes, hoses	N/A	N/A	0,03539171	0,03539171	8365537	8365537 HDPE	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesHDPE
2	391721	1	0	8706258	209744694	6 Tubes, pipes, hoses	N/A	N/A	0,04150884	0,04150884	8706258	8706258 HDPE	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesHDPE
1	391722	1	0	5863314	145878567	6 Tubes, pipes, hoses	N/A	N/A	0,04019311	0,04019311	5863314	5863314 PP	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesPP
2	391722	1	0	1880014	42572353	6 Tubes, pipes, hoses	N/A	N/A	0,04416044	0,04416044	1880014	1880014 PP	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesPP
1	391723	1	0	4989689	92678715	6 Tubes, pipes, hoses	N/A	N/A	0,05383856	0,05383856	4989689	4989689 PVC	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesPVC
2	391723	1	0	307384	9582107	6 Tubes, pipes, hoses	N/A	N/A	0,03207896	0,03207896	307384	307384 PVC	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesPVC
1	391729	1	0	4106628	125051668	6 Tubes, pipes, hoses	N/A	N/A	0,03283945	0,03283945	4106628	4106628 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
2	391729	1	0	346331	27284183	6 Tubes, pipes, hoses	N/A	N/A	0,01269347	0,01269347	346331	346331 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391731	1	0	701036	84197009	6 Tubes, pipes, hoses	N/A	N/A	0,00832614	0,00832614	701036	701036 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
2	391731	1	0	835624	27246037	6 Tubes, pipes, hoses	N/A	N/A	0,03066956	0,03066956	835624	835624 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391732	1	0	3938130	202692796	6 Tubes, pipes, hoses	N/A	N/A	0,01942906	0,01942906	3938130	3938130 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391732	1	0	850622	26364276	6 Tubes, pipes, hoses	N/A	N/A	0,03226419	0,03226419	850622	850622 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
2	391733	1	0	1022915	59346727	6 Tubes, pipes, hoses	N/A	N/A	0,01723625	0,01723625	1022915	1022915 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391733	1	0	10661	2278999	6 Tubes, pipes, hoses	N/A	N/A	0,00467793	0,00467793	10661	10661 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
2	391739	1	0	4088969	239730354	6 Tubes, pipes, hoses	N/A	N/A	0,01705653	0,01705653	4088969	4088969 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391739	1	0	2505141	106911014	6 Tubes, pipes, hoses	N/A	N/A	0,02343202	0,02343202	2505141	2505141 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
2	391740	1	0	7236094	444840952	6 Tubes, pipes, hoses	N/A	N/A	0,0162667	0,0162667	7236094	7236094 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391740	1	0	971759	17143170	6 Tubes, pipes, hoses	N/A	N/A	0,01354531	0,01354531	971759	971759 Unknown	Application	Tubes, pipes, hos Construction	Tubes, pipes, hosesUnknown
1	391810	1	0	16679826	460480669	6 Floor, wall or ceiling coverings	N/A	N/A	0,03622264	0,03622264	16679826	16679826 PVC	Application	Floor, wall or ceil Construction	Floor, wall or ceiling coveringsPVC
1	391810	1	0	911340	23559466	6 Floor, wall or ceiling coverings	N/A	N/A	0,03868254	0,03868254	911340	911340 PVC	Application	Floor, wall or ceil Construction	Floor, wall or ceiling coveringsPVC
2	391890	1	0	2620414	84525280	6 Floor, wall or ceiling coverings	N/A	N/A	0,03100154	0,03100154	2620414	2620414 Unknown	Application	Floor, wall or ceil Construction	Floor, wall or ceiling coveringsUnknown
1	391890	1	0	267054	31063376	6 Floor, wall or ceiling coverings	N/A	N/A	0,08596963	0,08596963	267054	267054 Unknown	Application	Floor, wall or ceil Construction	Floor, wall or ceiling coveringsUnknown
2	391910	1	0	3705634	314800170	6 Self-adhesive plates, sheets, films, f	N/A	N/A	0,01177139	0,01177139	3705634	3705634 Unknown	Application	Self-adhesive plat Packaging	Self-adhesive plates, sheets, films, foilUnknown
1	391910	1	0	196728	22188870	6 Self-adhesive plates, sheets, films, f	N/A	N/A	0,00886607	0,00886607	196728	196728 Unknown	Application	Self-adhesive plat Packaging	Self-adhesive plates, sheets, films, foilUnknown
2	391990	1	0	4807267	394814491	6 Self-adhesive plates, sheets, films, f	N/A	N/A	0,01217601	0,01217601	4807267	4807267 Unknown	Application	Self-adhesive plat Packaging	Self-adhesive plates, sheets, films, foilUnknown
1	391990	1	0	765286	63569022	6 Self-adhesive plates, sheets, films, f	N/A	N/A	0,01203866	0,01203866	765286	765286 Unknown	Application	Self-adhesive plat Packaging	Self-adhesive plates, sheets, films, foilUnknown
2	392010	1	0	45139427	1183485329	6 Plates, sheets, films, foil	N/A	N/A	0,0381411	0,0381411	45139427	45139427 LDPE	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilLDPE
1	392010	1	0	1298910	30613673	6 Plates, sheets, films, foil	N/A	N/A	0,04242908	0,04242908	1298910	1298910 LDPE	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilLDPE
2	392020	1	0	7013113	248491392	6 Plates, sheets, films, foil	N/A	N/A	0,02822276	0,02822276	7013113	7013113 PP	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPP
1	392020	1	0	2807115	110116819	6 Plates, sheets, films, foil	N/A	N/A	0,02549215	0,02549215	2807115	2807115 PP	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPP
2	392030	1	0	2630824	79432650	6 Plates, sheets, films, foil	N/A	N/A	0,03312018	0,03312018	2630824	2630824 PS	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPS
1	392030	1	0	7241	399323	6 Plates, sheets, films, foil	N/A	N/A	0,01813319	0,01813319	7241	7241 PS	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPS
2	392041	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	N/A	#VALUE!	0 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
1	392041	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	N/A	#VALUE!	0 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
2	392042	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	N/A	#VALUE!	0 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
1	392042	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	N/A	#VALUE!	0 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
2	392043	1	0	1098885	44619568	6 Plates, sheets, films, foil	N/A	N/A	0,02462787	0,02462787	1098885	1098885 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
1	392043	1	0	15899	756314	6 Plates, sheets, films, foil	N/A	N/A	0,02102169	0,02102169	15899	15899 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
2	392049	1	0	1317233	45888395	6 Plates, sheets, films, foil	N/A	N/A	0,02870514	0,02870514	1317233	1317233 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
1	392049	1	0	63536	5582149	6 Plates, sheets, films, foil	N/A	N/A	0,011382	0,011382	63536	63536 PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
2	392051	1	0	911160	60182584	6 Plates, sheets, films, foil	N/A	N/A	0,01513993	0,01513993	911160	911160 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392051	1	0	8442	1583283	6 Plates, sheets, films, foil	N/A	N/A	0,00533196	0,00533196	8442	8442 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392059	1	0	246646	11464731	6 Plates, sheets, films, foil	N/A	N/A	0,02151346	0,02151346	246646	246646 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392059	1	0	2258	909103	6 Plates, sheets, films, foil	N/A	N/A	0,00248377	0,00248377	2258	2258 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392061	1	0	844198	47391885	6 Plates, sheets, films, foil	N/A	N/A	0,01781333	0,01781333	844198	844198 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392061	1	0	15078	3982431	6 Plates, sheets, films, foil	N/A	N/A	0,00378613	0,00378613	15078	15078 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392062	1	0	4109202	108271247	6 Plates, sheets, films, foil	N/A	N/A	0,03795285	0,03795285	4109202	4109202 PET	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPET
2	392062	1	0	139632	1983804	6 Plates, sheets, films, foil	N/A	N/A	0,07038599	0,07038599	139632	139632 PET	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPET
1	392063	1	0	6458	1492771	6 Plates, sheets, films, foil	N/A	N/A	0,00432618	0,00432618	6458	6458 Polyester	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPolyester
2	392063	1	0	303	59716	6 Plates, sheets, films, foil	N/A	N/A	0,00507402	0,00507402	303	303 Polyester	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPolyester
1	392069	1	0	2926167	67355917	6 Plates, sheets, films, foil	N/A	N/A	0,04344335	0,04344335	2926167	2926167 Polyester	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPolyester
2	392069	1	0	24034	4877956	6 Plates, sheets, films, foil	N/A	N/A	0,00492706	0,00492706	24034	24034 Polyester	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPolyester
1	392071	1	0	19156	1657643	6 Plates, sheets, films, foil	N/A	N/A	0,01155617	0,01155617	19156	19156 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392071	1	0	73	13827	6 Plates, sheets, films, foil	N/A	N/A	0,00527953	0,00527953	73	73 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392072	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	N/A	#VALUE!	0 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392072	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	N/A	#VALUE!	0 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392073	1	0	2635	982713	6 Plates, sheets, films, foil	N/A	N/A	0,00268135	0,00268135	2635	2635 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392073	1	0	22	11767	6 Plates, sheets, films, foil	N/A	N/A	0,00186964	0,00186964	22	22 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392079	1	0	198034	6667888	6 Plates, sheets, films, foil	N/A	N/A	0,02969966	0,02969966	198034	198034 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392079	1	0	112	40274	6 Plates, sheets, films, foil	N/A	N/A	0,00278095	0,00278095	112	112 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392091	1	0	158283	7645122	6 Plates, sheets, films, foil	N/A	N/A	0,02070379	0,02070379	158283	158283 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392091	1	0	1527	31091	6 Plates, sheets, films, foil	N/A	N/A	0,04911389	0,04911389	1527	1527 Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392092	1	0</												

2	392093	1	0	6492	471795	6 Plates, sheets, films, foil	N/A	N/A	0,01376021	0,01376021	6492	6492	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392093	1	0	0	0	6 Plates, sheets, films, foil	N/A	N/A	N/A	0,01376021	0	0	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392094	1	0	83265	6939424	6 Plates, sheets, films, foil	N/A	N/A	0,01199883	0,01199883	83265	83265	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392094	1	0	895	79447	6 Plates, sheets, films, foil	N/A	N/A	0,01126537	0,01126537	895	895	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392099	1	0	2848431	101213320	6 Plates, sheets, films, foil	N/A	N/A	0,02814285	0,02814285	2848431	2848431	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392099	1	0	234620	11997555	6 Plates, sheets, films, foil	N/A	N/A	0,01955565	0,01955565	234620	234620	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392111	1	0	12055199	326478734	6 Plates, sheets, films, foil	N/A	N/A	0,03692491	0,03692491	12055199	12055199	PS	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPS
1	392111	1	0	6873071	163871040	6 Plates, sheets, films, foil	N/A	N/A	0,04194195	0,04194195	6873071	6873071	PS	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPS
2	392112	1	0	636762	53608263	6 Plates, sheets, films, foil	N/A	N/A	0,01187806	0,01187806	636762	636762	PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
1	392112	1	0	2877	339888	6 Plates, sheets, films, foil	N/A	N/A	0,00846455	0,00846455	2877	2877	PVC	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilPVC
1	392113	1	0	1382604	79957627	6 Plates, sheets, films, foil	N/A	N/A	0,01729171	0,01729171	1382604	1382604	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392113	1	0	186493	3421644	6 Plates, sheets, films, foil	N/A	N/A	0,05450392	0,05450392	186493	186493	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392114	1	0	62087	4976655	6 Plates, sheets, films, foil	N/A	N/A	0,01247565	0,01247565	62087	62087	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392114	1	0	3163	416362	6 Plates, sheets, films, foil	N/A	N/A	0,00759675	0,00759675	3163	3163	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392119	1	0	3356937	186052287	6 Plates, sheets, films, foil	N/A	N/A	0,01804298	0,01804298	3356937	3356937	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392119	1	0	80672	5742214	6 Plates, sheets, films, foil	N/A	N/A	0,01404894	0,01404894	80672	80672	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392190	1	0	21874811	887528809	6 Plates, sheets, films, foil	N/A	N/A	0,02464687	0,02464687	21874811	21874811	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
2	392190	1	0	16987840	416814800	6 Plates, sheets, films, foil	N/A	N/A	0,04075633	0,04075633	16987840	16987840	Other	Application	Plates, sheets, filr Packaging	Plates, sheets, films, foilOther
1	392310	1	0	21721091	807237240	6 Boxes, cases, crates	N/A	N/A	0,02690794	0,02690794	21721091	21721091	Unknown	Application	Boxes, cases, crat Packaging	Boxes, cases, cratesUnknown
2	392310	1	0	6350708	187359320	6 Boxes, cases, crates	N/A	N/A	0,03389587	0,03389587	6350708	6350708	Unknown	Application	Boxes, cases, crat Packaging	Boxes, cases, cratesUnknown
1	392321	1	0	41055088	882620742	6 Bags	N/A	N/A	0,04651498	0,04651498	41055088	41055088	LDPE	Application	Bags Packaging	BagsLDPE
2	392321	1	0	912515	27140159	6 Bags	N/A	N/A	0,03362232	0,03362232	912515	912515	LDPE	Application	Bags Packaging	BagsLDPE
1	392329	1	0	11660304	442414486	6 Bags	N/A	N/A	0,02635606	0,02635606	11660304	11660304	Unknown	Application	Bags Packaging	BagsUnknown
2	392329	1	0	3334221	45909671	6 Bags	N/A	N/A	0,07262568	0,07262568	3334221	3334221	Unknown	Application	Bags Packaging	BagsUnknown
1	392330	1	0	26992530	667256674	6 Other bottles	N/A	N/A	0,04045299	0,04045299	26992530	26992530	Unknown	Application	Other bottles Packaging	Other bottlesUnknown
2	392330	1	0	26212952	959009989	6 Other bottles	N/A	N/A	0,02733335	0,02733335	26212952	26212952	Unknown	Application	Other bottles Packaging	Other bottlesUnknown
1	392340	1	0	397032	11663532	6 Other packaging	N/A	N/A	0,03406967	0,03406967	397032	397032	Unknown	Application	Other packaging Packaging	Other packagingUnknown
2	392340	1	0	50351	1121523	6 Other packaging	N/A	N/A	0,0448952	0,0448952	50351	50351	Unknown	Application	Other packaging Packaging	Other packagingUnknown
1	392350	1	0	9982310	443510471	6 Lids and caps	N/A	N/A	0,0225075	0,0225075	9982310	9982310	Unknown	Application	Lids and caps Packaging	Lids and capsUnknown
2	392350	1	0	1405145	18479852	6 Lids and caps	N/A	N/A	0,07603659	0,07603659	1405145	1405145	Unknown	Application	Lids and caps Packaging	Lids and capsUnknown
1	392390	1	0	12642495	462310892	6 Other packaging	N/A	N/A	0,02734631	0,02734631	12642495	12642495	Unknown	Application	Other packaging Packaging	Other packagingUnknown
2	392390	1	0	3015757	84855125	6 Other packaging	N/A	N/A	0,03554007	0,03554007	3015757	3015757	Unknown	Application	Other packaging Packaging	Other packagingUnknown
1	392410	1	0	7246185	481051234	6 Tableware and kitchenware	N/A	N/A	0,01506323	0,01506323	7246185	7246185	Unknown	Application	Tableware and kit Household, Leisure, Sport	Tableware and kitchenwareUnknown
1	392410	1	0	138645	12235626	6 Tableware and kitchenware	N/A	N/A	0,01133126	0,01133126	138645	138645	Unknown	Application	Tableware and kit Household, Leisure, Sport	Tableware and kitchenwareUnknown
2	392490	1	0	6007402	295797555	6 Household, hygenic or toilet articl	N/A	N/A	0,02030917	0,02030917	6007402	6007402	Unknown	Application	Household, hyge Household, Leisure, Sport	Household, hygenic or toilet articlesUnknown
1	392490	1	0	219747	13544872	6 Household, hygenic or toilet articl	N/A	N/A	0,01622363	0,01622363	219747	219747	Unknown	Application	Household, hyge Household, Leisure, Sport	Household, hygenic or toilet articlesUnknown
2	392510	1	0	2945815	125017373	6 Builders's ware	N/A	N/A	0,02356325	0,02356325	2945815	2945815	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
1	392510	1	0	181256	42346546	6 Builders's ware	N/A	N/A	0,01932285	0,01932285	181256	181256	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
2	392520	1	0	8245811	306456695	6 Builders's ware	N/A	N/A	0,02690694	0,02690694	8245811	8245811	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
1	392520	1	0	82126	9127806	6 Builders's ware	N/A	N/A	0,00899734	0,00899734	82126	82126	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
2	392530	1	0	587802	79629056	6 Builders's ware	N/A	N/A	0,00738175	0,00738175	587802	587802	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
1	392530	1	0	98759	7328154	6 Builders's ware	N/A	N/A	0,01347665	0,01347665	98759	98759	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
2	392590	1	0	13787753	573988445	6 Builders's ware	N/A	N/A	0,02402096	0,02402096	13787753	13787753	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
1	392590	1	0	1483144	67356791	6 Builders's ware	N/A	N/A	0,02201922	0,02201922	1483144	1483144	Unknown	Application	Builders's ware Construction	Builders's wareUnknown
2	392610	1	0	1769839	117190439	6 Office supplies	N/A	N/A	0,01510225	0,01510225	1769839	1769839	Unknown	Application	Office supplies Other	Office suppliesUnknown
1	392610	1	0	108610	3475479	6 Office supplies	N/A	N/A	0,03125037	0,03125037	108610	108610	Unknown	Application	Office supplies Other	Office suppliesUnknown
2	392620	1	0	2653612	141315059	6 Clothing accessories	N/A	N/A	0,01877798	0,01877798	2653612	2653612	Unknown	Application	Clothing accessori Textile	Clothing accessoriesUnknown
1	392620	1	0	77547	11372813	6 Clothing accessories	N/A	N/A	0,00681863	0,00681863	77547	77547	Unknown	Application	Clothing accessori Textile	Clothing accessoriesUnknown
2	392630	1	0	537380	70607962	6 Furniture	N/A	N/A	0,00761076	0,00761076	537380	537380	Unknown	Application	Furniture Household, Leisure, Sport	FurnitureUnknown
1	392630	1	0	58786	9162645	6 Furniture	N/A	N/A	0,00641583	0,00641583	58786	58786	Unknown	Application	Furniture Household, Leisure, Sport	FurnitureUnknown
2	392640	1	0	1540756	91310816	6 Ornamental	N/A	N/A	0,01687375	0,01687375	1540756	1540756	Unknown	Application	Ornamental Household, Leisure, Sport	OrnamentalUnknown
1	392640	1	0	16710	1602079	6 Ornamental	N/A	N/A	0,0104302	0,0104302	16710	16710	Unknown	Application	Ornamental Household, Leisure, Sport	OrnamentalUnknown
1	392690	1	0	35351055	2600012997	6 Unknown	N/A	N/A	0,01359649	0,01359649	35351055	35351055	Unknown	Application	Unknown Other	UnknownUnknown
2	392690	1	0	5055894	419656023	6 Unknown	N/A	N/A	0,01204771	0,01204771	5055894	5055894	Unknown	Application	Unknown Other	UnknownUnknown
1	401110	5	4056231	42517390	2234945461	6 New tyres	10,4819942	10,4819942	0,0190239	0,0190239	42517390	25510434	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401110	5	27916	322484	19002199	6 New tyres	11,5519415	11,5519415	0,01697088	0,01697088	322484	193490,4	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401120	5	322791	14924381	517274534	6 New tyres	46,235431	46,235431	0,02885195	0,02885195	14924381	8954628,6	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401120	5	2557	132643	3803130	6 New tyres	51,8744623	51,8744623	0,03487732	0,03487732	132643	79585,8	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401130	5	1590	34124	7864369	6 New tyres	21,4616352	21,4616352	0,00433906	0,00433906	34124	20474,4	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401130	5	31	205	208443	6 New tyres	6,61290323	6,61290323	0,00098348	0,00098348	205	123	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401140	5	84711	435924	43650772	6 New tyres	5,14601409	5,14601409	0,00998663	0,00998663	435924	261554,4	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401140	5	374	790	100929	6 New tyres	2,11229947	2,11229947	0,00782728	0,00782728	790	474	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401150	5	267651	196335	401311138	6 New tyres	0,73354854	0,73354854	0,00489234	0,00489234	196335	117801	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401150	5	4692	6161	1428538	6 New tyres	1,3130861	1,3130861	0,0043128	0,0043128	6161	3696,6	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401162	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401162	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401163	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401163	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401169	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401169	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401170	5	54948	3889941	143708967	6 New tyres	70,7931317	70,7931317	0,02706819	0,02706819	3889941	2333964,6	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401170	5	480	34530	1049066	6 New tyres	71,9375	71,9375	0,03291499	0,03291499	34530	20718	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401180	5	23118	3592144	167189912	6 New tyres	155,382992	155,382992	0,02148541	0,02148541	3592144	2155286,4	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
2	401180	5	767	70639	1915116	6 New tyres	92,0977836	92,0977836	0,03688497	0,03688497	70639	42383,4	Synthetic Rub	Application	New tyres Automotive-tyres	New tyresSynthetic Rubber
1	401190	5	67059	607778	27522284	6 New tyres										

2	401191	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
1	401192	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
2	401192	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
1	401193	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
2	401193	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
1	401194	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
2	401194	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
1	401199	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
2	401199	1	0	0	0	6 New tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	New tyres	Automotive-tyres	New tyresSynthetic Rubber
1	401210	1	0	0	0	6 Retreated tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
2	401210	1	0	0	0	6 Retreated tyres	N/A	N/A	N/A	N/A	#VALUE!	0	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
1	401211	5	3925	61672	2765136	6 Retreated tyres	15,7126115	15,7126115	0,02230342	0,02230342	61672	37003,2	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
2	401211	5	4588	61678	335106	6 Retreated tyres	13,4433304	13,4433304	0,18405519	0,18405519	61678	37006,8	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
1	401212	5	17369	1085381	32058771	6 Retreated tyres	62,4895503	62,4895503	0,03385598	0,03385598	1085381	651228,6	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
2	401212	5	7296	440151	6404252	6 Retreated tyres	60,3277138	60,3277138	0,06872793	0,06872793	440151	264090,6	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
1	401213	5	2103	98591	8518065	6 Retreated tyres	46,8811222	46,8811222	0,01157434	0,01157434	98591	59154,6	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
2	401213	5	0	0	0	6 Retreated tyres	N/A	N/A	N/A	N/A	0	0	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
1	401219	5	2127	70670	2926210	6 Retreated tyres	33,2251998	33,2251998	0,02415069	0,02415069	70670	42402	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
2	401219	5	2874	134055	270800	6 Retreated tyres	46,6440501	46,6440501	0,49503323	0,49503323	134055	80433	Synthetic Rub Application	Retreated tyres	Automotive-tyres	Retreated tyresSynthetic Rubber
1	401310	5	40179	87845	3287530	6 Inner tubes	2,18634112	2,18634112	0,02672067	0,02672067	87845	52707	Synthetic Rub Application	Inner tubes	Automotive-tyres	Inner tubesSynthetic Rubber
2	401310	5	525	325	14864	6 Inner tubes	0,61904762	0,61904762	0,02186491	0,02186491	325	195	Synthetic Rub Application	Inner tubes	Automotive-tyres	Inner tubesSynthetic Rubber
1	401320	5	414118	76068	6785948	6 Inner tubes	0,18368678	0,18368678	0,01120963	0,01120963	76068	45640,8	Synthetic Rub Application	Inner tubes	Automotive-tyres	Inner tubesSynthetic Rubber
2	401320	5	3156	458	41331	6 Inner tubes	0,14512041	0,14512041	0,01108127	0,01108127	458	274,8	Synthetic Rub Application	Inner tubes	Automotive-tyres	Inner tubesSynthetic Rubber
1	401390	5	63069	90773	4648687	6 Inner tubes	1,43926493	1,43926493	0,01952659	0,01952659	90773	54463,8	Synthetic Rub Application	Inner tubes	Automotive-tyres	Inner tubesSynthetic Rubber
2	401390	5	163	474	112289	6 Inner tubes	2,90797546	2,90797546	0,00422125	0,00422125	474	284,4	Synthetic Rub Application	Inner tubes	Automotive-tyres	Inner tubesSynthetic Rubber
1	521011	1	0	122	15142	6 Fabrics	N/A	N/A	0,00805706	0,00805706	122	52,46	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521011	1	0	934	195936	6 Fabrics	N/A	N/A	0,00476686	0,00476686	934	401,62	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521012	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521012	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521019	1	0	82	54802	6 Fabrics	N/A	N/A	0,0014963	0,0014963	82	35,26	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521019	1	0	20	12700	6 Fabrics	N/A	N/A	0,0015748	0,0015748	20	8,6	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521021	1	0	38206	3092141	6 Fabrics	N/A	N/A	0,01235584	0,01235584	38206	16428,58	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521021	1	0	11545	1217323	6 Fabrics	N/A	N/A	0,00948392	0,00948392	11545	4964,35	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521022	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521022	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521029	1	0	737	173880	6 Fabrics	N/A	N/A	0,00423856	0,00423856	737	316,91	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521029	1	0	29	1663	6 Fabrics	N/A	N/A	0,01743836	0,01743836	29	12,47	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521031	1	0	1526	230409	6 Fabrics	N/A	N/A	0,00662301	0,00662301	1526	656,18	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521031	1	0	1702	148530	6 Fabrics	N/A	N/A	0,01145896	0,01145896	1702	731,86	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521032	1	0	53	12696	6 Fabrics	N/A	N/A	0,00417454	0,00417454	53	22,79	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521032	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521039	1	0	1168	187816	6 Fabrics	N/A	N/A	0,00621885	0,00621885	1168	502,24	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521039	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521041	1	0	57	6953	6 Fabrics	N/A	N/A	0,0081979	0,0081979	57	24,51	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521041	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521042	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521042	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521049	1	0	1599	347330	6 Fabrics	N/A	N/A	0,00460369	0,00460369	1599	687,57	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521049	1	0	4	14902	6 Fabrics	N/A	N/A	0,00026842	0,00026842	4	1,72	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521051	1	0	682	195472	6 Fabrics	N/A	N/A	0,00348899	0,00348899	682	293,26	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521051	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521052	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521052	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521059	1	0	1414	300711	6 Fabrics	N/A	N/A	0,00470219	0,00470219	1414	608,02	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521059	1	0	701	105717	6 Fabrics	N/A	N/A	0,00663091	0,00663091	701	301,43	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521111	1	0	318	39611	6 Fabrics	N/A	N/A	0,00802807	0,00802807	318	136,74	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521111	1	0	915	118305	6 Fabrics	N/A	N/A	0,00773425	0,00773425	915	393,45	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521112	1	0	46	20617	6 Fabrics	N/A	N/A	0,00223117	0,00223117	46	19,78	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521112	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521119	1	0	3035	354153	6 Fabrics	N/A	N/A	0,00856974	0,00856974	3035	1305,05	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521119	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521120	1	0	139	56193	6 Fabrics	N/A	N/A	0,00247362	0,00247362	139	59,77	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521120	1	0	8460	557490	6 Fabrics	N/A	N/A	0,01517516	0,01517516	8460	3637,8	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521121	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521121	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521122	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521122	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521129	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521129	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521131	1	0	1896	430009	6 Fabrics	N/A	N/A	0,00440921	0,00440921	1896	815,28	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521131	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521132	1	0	4359	1144586	6 Fabrics	N/A	N/A	0,00380836	0,00380836	4359	1874,37	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521132	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	0	0	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521139	1	0	2267	536569	6 Fabrics	N/A	N/A	0,00422499	0,00422499	2267	974,81	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521139	1	0	3789	526161	6 Fabrics	N/A	N/A	0,00720122	0,00720122	3789	1629,27	Unknown Application	Fabrics	Textile	FabricsUnknown
1	521142	1	0	68	20205	6 Fabrics	N/A	N/A	0,0033655	0,0033655	68	29,24	Unknown Application	Fabrics	Textile	FabricsUnknown
2	521142	1	0	1	1098	6 Fabrics	N/A	N/A	0,00091075	0,00091075	1	0,43	Unknown Application	Fabrics	Textile	FabricsUnknown

1	521143	1	0	1550	194425	6	Fabrics	N/A	N/A	0,00797223	0,00797223	1550	666,5	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	521143	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00797223	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	521149	1	0	17679	3610736	6	Fabrics	N/A	N/A	0,00489623	0,00489623	17679	7601,97	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	521149	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00489623	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	521151	1	0	1153	165141	6	Fabrics	N/A	N/A	0,00698191	0,00698191	1153	495,79	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	521151	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00698191	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	521152	1	0	140	22590	6	Fabrics	N/A	N/A	0,00619743	0,00619743	140	60,2	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	521152	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00619743	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	521159	1	0	5666	908216	6	Fabrics	N/A	N/A	0,0062386	0,0062386	5666	2436,38	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	521159	1	0	7	19425	6	Fabrics	N/A	N/A	0,00036036	0,00036036	7	3,01	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540110	1	0	71711	16175704	6	Filaments	N/A	N/A	0,00443325	0,00443325	71711	71711	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	540110	1	0	3752	999515	6	Filaments	N/A	N/A	0,00375382	0,00375382	3752	3752	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	540210	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Fabrics	Textile	FabricsOther
2	540210	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Fabrics	Textile	FabricsOther
1	540211	1	0	30393	7943679	6	Fabrics	N/A	N/A	0,00382606	0,00382606	30393	30393	Other	Application	Fabrics	Textile	FabricsOther
2	540211	1	0	150	37334	6	Fabrics	N/A	N/A	0,00401779	0,00401779	150	150	Other	Application	Fabrics	Textile	FabricsOther
1	540219	1	0	1385658	39271668	6	Fabrics	N/A	N/A	0,03528391	0,03528391	1385658	1385658	Other	Application	Fabrics	Textile	FabricsOther
2	540219	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,03528391	0	0	Other	Application	Fabrics	Textile	FabricsOther
1	540220	1	0	1453931	24016500	6	Fabrics	N/A	N/A	0,06053884	0,06053884	1453931	1453931	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540220	1	0	75226	153741	6	Fabrics	N/A	N/A	0,48930344	0,48930344	75226	75226	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540231	1	0	2358	423304	6	Fabrics	N/A	N/A	0,00557046	0,00557046	2358	2358	Other	Application	Fabrics	Textile	FabricsOther
2	540231	1	0	22	4572	6	Fabrics	N/A	N/A	0,0048119	0,0048119	22	22	Other	Application	Fabrics	Textile	FabricsOther
1	540232	1	0	1071	269445	6	Fabrics	N/A	N/A	0,00397484	0,00397484	1071	1071	Other	Application	Fabrics	Textile	FabricsOther
2	540232	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00397484	0	0	Other	Application	Fabrics	Textile	FabricsOther
1	540233	1	0	1562	162918	6	Fabrics	N/A	N/A	0,00958765	0,00958765	1562	1562	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540233	1	0	7	1440	6	Fabrics	N/A	N/A	0,00486111	0,00486111	7	7	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540234	1	0	1200	32900	6	Fabrics	N/A	N/A	0,03647416	0,03647416	1200	1200	PP	Application	Fabrics	Textile	FabricsPP
2	540234	1	0	104	99940	6	Fabrics	N/A	N/A	0,00104062	0,00104062	104	104	PP	Application	Fabrics	Textile	FabricsPP
2	540239	1	0	115	91655	6	Fabrics	N/A	N/A	0,00125471	0,00125471	115	115	Other	Application	Fabrics	Textile	FabricsOther
2	540239	1	0	85	18591	6	Fabrics	N/A	N/A	0,0045721	0,0045721	85	85	Other	Application	Fabrics	Textile	FabricsOther
1	540241	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Fabrics	Textile	FabricsOther
2	540241	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Fabrics	Textile	FabricsOther
1	540242	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540242	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540243	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540243	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540244	1	0	8	7100	6	Fabrics	N/A	N/A	0,00112676	0,00112676	8	8	Other	Application	Fabrics	Textile	FabricsOther
2	540244	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00112676	0	0	Other	Application	Fabrics	Textile	FabricsOther
1	540245	1	0	590	172124	6	Fabrics	N/A	N/A	0,00342776	0,00342776	590	590	Other	Application	Fabrics	Textile	FabricsOther
2	540245	1	0	4398	355717	6	Fabrics	N/A	N/A	0,01236376	0,01236376	4398	4398	Other	Application	Fabrics	Textile	FabricsOther
2	540246	1	0	658	242811	6	Fabrics	N/A	N/A	0,00270993	0,00270993	658	658	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540246	1	0	5	2609	6	Fabrics	N/A	N/A	0,00191644	0,00191644	5	5	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540247	1	0	2713	103506	6	Fabrics	N/A	N/A	0,02621104	0,02621104	2713	2713	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540247	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,02621104	0	0	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540248	1	0	12123	272396	6	Fabrics	N/A	N/A	0,04450506	0,04450506	12123	12123	PP	Application	Fabrics	Textile	FabricsPP
1	540248	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,04450506	0	0	PP	Application	Fabrics	Textile	FabricsPP
2	540249	1	0	399477	102561517	6	Fabrics	N/A	N/A	0,003895	0,003895	399477	399477	Other	Application	Fabrics	Textile	FabricsOther
1	540249	1	0	3862	947992	6	Fabrics	N/A	N/A	0,00407387	0,00407387	3862	3862	Other	Application	Fabrics	Textile	FabricsOther
2	540251	1	0	1879	144775	6	Fabrics	N/A	N/A	0,01297876	0,01297876	1879	1879	Other	Application	Fabrics	Textile	FabricsOther
1	540251	1	0	7888	483841	6	Fabrics	N/A	N/A	0,01630288	0,01630288	7888	7888	Other	Application	Fabrics	Textile	FabricsOther
2	540252	1	0	120	58078	6	Fabrics	N/A	N/A	0,00206619	0,00206619	120	120	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540252	1	0	19	2200	6	Fabrics	N/A	N/A	0,00863636	0,00863636	19	19	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540253	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	PP	Application	Fabrics	Textile	FabricsPP
1	540253	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	PP	Application	Fabrics	Textile	FabricsPP
2	540259	1	0	2299	707528	6	Fabrics	N/A	N/A	0,00324934	0,00324934	2299	2299	Other	Application	Fabrics	Textile	FabricsOther
1	540259	1	0	4	8292	6	Fabrics	N/A	N/A	0,00048239	0,00048239	4	4	Other	Application	Fabrics	Textile	FabricsOther
2	540261	1	0	1017558	29207710	6	Fabrics	N/A	N/A	0,03483868	0,03483868	1017558	1017558	Other	Application	Fabrics	Textile	FabricsOther
1	540261	1	0	1303	152402	6	Fabrics	N/A	N/A	0,00854976	0,00854976	1303	1303	Other	Application	Fabrics	Textile	FabricsOther
2	540262	1	0	4718	420059	6	Fabrics	N/A	N/A	0,01123176	0,01123176	4718	4718	Polyester	Application	Fabrics	Textile	FabricsPolyester
1	540262	1	0	227	35626	6	Fabrics	N/A	N/A	0,00637175	0,00637175	227	227	Polyester	Application	Fabrics	Textile	FabricsPolyester
2	540263	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	PP	Application	Fabrics	Textile	FabricsPP
1	540263	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	PP	Application	Fabrics	Textile	FabricsPP
2	540269	1	0	602	324488	6	Fabrics	N/A	N/A	0,00185523	0,00185523	602	602	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540269	1	0	528	97348	6	Fabrics	N/A	N/A	0,00542384	0,00542384	528	528	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540410	1	0	0	0	6	Filaments	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	540410	1	0	0	0	6	Filaments	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	540490	1	0	33049	1990091	6	Filaments	N/A	N/A	0,01660678	0,01660678	33049	33049	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	540490	1	0	29	4785	6	Filaments	N/A	N/A	0,00606061	0,00606061	29	29	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	540500	1	0	190	61086	6	Filaments	N/A	N/A	0,00311037	0,00311037	190	190	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	540500	1	0	0	0	6	Filaments	N/A	N/A	N/A	0,00311037	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	540610	1	0	0	0	6	Filaments	N/A	N/A	N/A	N/A	#VALUE!	0	Polyester	Application	Filaments	Textile	FilamentsPolyester
1	540610	1	0	0	0	6	Filaments	N/A	N/A	N/A	N/A	#VALUE!	0	Polyester	Application	Filaments	Textile	FilamentsPolyester
2	540720	1	0	295662	13164147	6	Fabrics	N/A	N/A	0,02245964	0,02245964	295662	295662	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540720	1	0	592	46735	6	Fabrics	N/A	N/A	0,01266717	0,01266717	592	592	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540730	1	0	1648	285995	6	Fabrics	N/A	N/A	0,00576234	0,00576234	1648	1648	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540730	1	0	620	74996	6	Fabrics	N/A	N/A	0,00826711	0,00826711	620	620	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540771	1	0	519	121774	6	Fabrics	N/A	N/A	0,00426199	0,00426199	519	441,15	Unknown	Application	Fabrics	Textile	FabricsUnknown

1	540771	1	0	30	5305	6 Fabrics	N/A	N/A	0,00565504	0,00565504	30	25,5	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540772	1	0	16083	1888388	6 Fabrics	N/A	N/A	0,00851679	0,00851679	16083	13670,55	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540772	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00851679	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540773	1	0	43873	4830758	6 Fabrics	N/A	N/A	0,00908201	0,00908201	43873	37292,05	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540773	1	0	5	1030	6 Fabrics	N/A	N/A	0,00485437	0,00485437	5	4,25	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540774	1	0	650	102953	6 Fabrics	N/A	N/A	0,00631356	0,00631356	650	552,5	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540774	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00631356	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540781	1	0	197	63164	6 Fabrics	N/A	N/A	0,00311887	0,00311887	197	84,71	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540781	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00311887	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540783	1	0	6943	1172394	6 Fabrics	N/A	N/A	0,00592207	0,00592207	6943	2985,49	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540783	1	0	8	5075	6 Fabrics	N/A	N/A	0,00157635	0,00157635	8	3,44	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540791	1	0	3241	264502	6 Fabrics	N/A	N/A	0,01225322	0,01225322	3241	3241	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540791	1	0	740	20351	6 Fabrics	N/A	N/A	0,03636185	0,03636185	740	740	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540792	1	0	2182	612881	6 Fabrics	N/A	N/A	0,00356023	0,00356023	2182	2182	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540792	1	0	3735	1655436	6 Fabrics	N/A	N/A	0,0022562	0,0022562	3735	3735	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540793	1	0	12699	2873015	6 Fabrics	N/A	N/A	0,0044201	0,0044201	12699	12699	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540793	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,0044201	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	540794	1	0	4602	876990	6 Fabrics	N/A	N/A	0,00524749	0,00524749	4602	4602	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	540794	1	0	43	31832	6 Fabrics	N/A	N/A	0,00135084	0,00135084	43	43	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	550110	1	0	3939	247110	6 Fibres	N/A	N/A	0,01594027	0,01594027	3939	3939	Other	Application	Fibres	Textile	FibresOther
2	550110	1	0	127	9105	6 Fibres	N/A	N/A	0,01394838	0,01394838	127	127	Other	Application	Fibres	Textile	FibresOther
1	550120	1	0	554	217805	6 Fibres	N/A	N/A	0,00254356	0,00254356	554	554	Polyester	Application	Fibres	Textile	FibresPolyester
2	550120	1	0	2566	223806	6 Fibres	N/A	N/A	0,01146529	0,01146529	2566	2566	Polyester	Application	Fibres	Textile	FibresPolyester
1	550130	1	0	11	7586	6 Fibres	N/A	N/A	0,00145004	0,00145004	11	11	Other	Application	Fibres	Textile	FibresOther
2	550130	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,00145004	0	0	Other	Application	Fibres	Textile	FibresOther
1	550190	1	0	14470	1835355	6 Fibres	N/A	N/A	0,00788403	0,00788403	14470	14470	Unknown	Application	Fibres	Textile	FibresUnknown
2	550190	1	0	214	249714	6 Fibres	N/A	N/A	0,00085698	0,00085698	214	214	Unknown	Application	Fibres	Textile	FibresUnknown
1	550311	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,00035486	0	0	Other	Application	Fibres	Textile	FibresOther
2	550311	1	0	6	16908	6 Fibres	N/A	N/A	0,00035486	0,00035486	6	6	Other	Application	Fibres	Textile	FibresOther
1	550319	1	0	4689	491322	6 Fibres	N/A	N/A	0,00954364	0,00954364	4689	4689	Other	Application	Fibres	Textile	FibresOther
2	550319	1	0	7215	224676	6 Fibres	N/A	N/A	0,03211291	0,03211291	7215	7215	Other	Application	Fibres	Textile	FibresOther
1	550320	1	0	2739713	37616037	6 Fibres	N/A	N/A	0,07283364	0,07283364	2739713	5479426	Polyester	Application	Fibres	Textile	FibresPolyester
2	550320	1	0	22714	334435	6 Fibres	N/A	N/A	0,06791753	0,06791753	22714	45428	Polyester	Application	Fibres	Textile	FibresPolyester
1	550330	1	0	26	8141	6 Fibres	N/A	N/A	0,00319371	0,00319371	26	26	Other	Application	Fibres	Textile	FibresOther
2	550330	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,00319371	0	0	Other	Application	Fibres	Textile	FibresOther
1	550340	1	0	698995	13882908	6 Fibres	N/A	N/A	0,05034932	0,05034932	698995	698995	PP	Application	Fibres	Textile	FibresPP
2	550340	1	0	49757	1689418	6 Fibres	N/A	N/A	0,02945215	0,02945215	49757	49757	PP	Application	Fibres	Textile	FibresPP
1	550390	1	0	8988	138408	6 Fibres	N/A	N/A	0,06493844	0,06493844	8988	8988	Unknown	Application	Fibres	Textile	FibresUnknown
2	550390	1	0	94	44437	6 Fibres	N/A	N/A	0,00211535	0,00211535	94	94	Unknown	Application	Fibres	Textile	FibresUnknown
1	550510	1	0	151	87373	6 Fibres	N/A	N/A	0,00172822	0,00172822	151	151	Unknown	Application	Fibres	Textile	FibresUnknown
2	550510	1	0	119	22103	6 Fibres	N/A	N/A	0,00538388	0,00538388	119	119	Unknown	Application	Fibres	Textile	FibresUnknown
1	550610	1	0	14356	729651	6 Fibres	N/A	N/A	0,01967516	0,01967516	14356	14356	Other	Application	Fibres	Textile	FibresOther
1	550610	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,01967516	0	0	Other	Application	Fibres	Textile	FibresOther
2	550620	1	0	49	5954	6 Fibres	N/A	N/A	0,00822976	0,00822976	49	49	Polyester	Application	Fibres	Textile	FibresPolyester
1	550620	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,00822976	0	0	Polyester	Application	Fibres	Textile	FibresPolyester
2	550630	1	0	1390	72465	6 Fibres	N/A	N/A	0,01918167	0,01918167	1390	1390	Unknown	Application	Fibres	Textile	FibresUnknown
1	550630	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,01918167	0	0	Unknown	Application	Fibres	Textile	FibresUnknown
2	550640	1	0	500	17800	6 Fibres	N/A	N/A	0,02808989	0,02808989	500	500	PP	Application	Fibres	Textile	FibresPP
1	550640	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,02808989	0	0	PP	Application	Fibres	Textile	FibresPP
2	550690	1	0	9	2974	6 Fibres	N/A	N/A	0,00302623	0,00302623	9	3,87	Unknown	Application	Fibres	Textile	FibresUnknown
1	550690	1	0	0	0	6 Fibres	N/A	N/A	N/A	0,00302623	0	0	Unknown	Application	Fibres	Textile	FibresUnknown
2	550810	1	0	34962	4001852	6 Filaments	N/A	N/A	0,00873646	0,00873646	34962	15033,66	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550810	1	0	8597	1561798	6 Filaments	N/A	N/A	0,00550455	0,00550455	8597	3696,71	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550911	1	0	14000	10326697	6 Filaments	N/A	N/A	0,01324906	0,01324906	14000	11900	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550911	1	0	12571	553129	6 Filaments	N/A	N/A	0,02272707	0,02272707	12571	10685,35	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550912	1	0	1367	489500	6 Filaments	N/A	N/A	0,00279265	0,00279265	1367	1161,95	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550912	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,00279265	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550921	1	0	1970	64347	6 Filaments	N/A	N/A	0,03061526	0,03061526	1970	1674,5	Polyester	Application	Filaments	Textile	FilamentsPolyester
1	550921	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,03061526	0	0	Polyester	Application	Filaments	Textile	FilamentsPolyester
2	550922	1	0	13480	1265039	6 Filaments	N/A	N/A	0,0106558	0,0106558	13480	11458	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550922	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,0106558	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550931	1	0	2005	827008	6 Filaments	N/A	N/A	0,0024244	0,0024244	2005	1704,25	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550931	1	0	27	8599	6 Filaments	N/A	N/A	0,0031399	0,0031399	27	22,95	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550932	1	0	2839	311886	6 Filaments	N/A	N/A	0,00910268	0,00910268	2839	2413,15	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550932	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,00910268	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550941	1	0	13562	653487	6 Filaments	N/A	N/A	0,02075328	0,02075328	13562	11527,7	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550941	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,02075328	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550942	1	0	4	2728	6 Filaments	N/A	N/A	0,00146628	0,00146628	4	3,4	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550942	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,00146628	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550991	1	0	6	23145	6 Filaments	N/A	N/A	0,00025924	0,00025924	6	2,58	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550991	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,00025924	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550992	1	0	78	9275	6 Filaments	N/A	N/A	0,0084097	0,0084097	78	33,54	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550992	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,0084097	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	550999	1	0	1565	407240	6 Filaments	N/A	N/A	0,00384294	0,00384294	1565	672,95	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	550999	1	0	0	0	6 Filaments	N/A	N/A	N/A	0,00384294	0	0	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	551110	1	0	15141	1742041	6 Filaments	N/A	N/A	0,00869153	0,00869153	15141	12869,85	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	551110	1	0	1015	301413	6 Filaments	N/A	N/A	0,00336747	0,00336747	1015	862,75	Unknown	Application	Filaments	Textile	FilamentsUnknown

2	551120	1	0	3177	865734	6 Filaments	N/A	N/A	0,00366972	0,00366972	3177	1366,11	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	551120	1	0	834	194534	6 Filaments	N/A	N/A	0,00428717	0,00428717	834	358,62	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	551211	1	0	17105	1622250	6 Fabrics	N/A	N/A	0,010544	0,010544	17105	14539,25	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551211	1	0	540	45000	6 Fabrics	N/A	N/A	0,012	0,012	540	459	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551219	1	0	56976	14446277	6 Fabrics	N/A	N/A	0,00394399	0,00394399	56976	48429,6	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551219	1	0	1290	124027	6 Fabrics	N/A	N/A	0,01040096	0,01040096	1290	1096,5	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551221	1	0	3505	499609	6 Fabrics	N/A	N/A	0,00701549	0,00701549	3505	2979,25	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551221	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00701549	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551229	1	0	163311	28061405	6 Fabrics	N/A	N/A	0,00581977	0,00581977	163311	138814,35	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551229	1	0	149	53025	6 Fabrics	N/A	N/A	0,00281	0,00281	149	126,65	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551291	1	0	160	39162	6 Fabrics	N/A	N/A	0,00408559	0,00408559	160	136	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551291	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00408559	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551299	1	0	19514	1884979	6 Fabrics	N/A	N/A	0,01035237	0,01035237	19514	16586,9	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551299	1	0	73	8000	6 Fabrics	N/A	N/A	0,009125	0,009125	73	62,05	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551319	1	0	41	7556	6 Fabrics	N/A	N/A	0,00542615	0,00542615	41	17,63	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551319	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00542615	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551329	1	0	174	85174	6 Fabrics	N/A	N/A	0,00204288	0,00204288	174	74,82	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551329	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00204288	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551339	1	0	40	4443	6 Fabrics	N/A	N/A	0,00900293	0,00900293	40	17,2	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551339	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00900293	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551349	1	0	1180	240033	6 Fabrics	N/A	N/A	0,00491599	0,00491599	1180	507,4	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551349	1	0	31	97336	6 Fabrics	N/A	N/A	0,00031848	0,00031848	31	13,33	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551419	1	0	301	107363	6 Fabrics	N/A	N/A	0,00280357	0,00280357	301	129,43	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551419	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00280357	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551430	1	0	5706	815956	6 Fabrics	N/A	N/A	0,00699302	0,00699302	5706	2453,58	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551430	1	0	14431	1783963	6 Fabrics	N/A	N/A	0,00808929	0,00808929	14431	6205,33	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551439	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551439	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551449	1	0	1298	257261	6 Fabrics	N/A	N/A	0,00504546	0,00504546	1298	558,14	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551449	1	0	495	122387	6 Fabrics	N/A	N/A	0,00404455	0,00404455	495	212,85	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551591	1	0	345	202817	6 Fabrics	N/A	N/A	0,00170104	0,00170104	345	345	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551591	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00170104	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551592	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551592	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	551599	1	0	2543	575080	6 Fabrics	N/A	N/A	0,00442199	0,00442199	2543	1093,49	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	551599	1	0	86	68375	6 Fabrics	N/A	N/A	0,00125777	0,00125777	86	36,98	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	560122	1	0	15659	1604138	6 Fabrics	N/A	N/A	0,00976163	0,00976163	15659	6733,37	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	560122	1	0	30658	1266124	6 Fabrics	N/A	N/A	0,02421406	0,02421406	30658	13182,94	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	560750	1	0	1841338	113110606	6 Ropes	N/A	N/A	0,01627909	0,01627909	1841338	1841338	Unknown	Application	Ropes	Textile	RopesUnknown
1	560750	1	0	602980	47377493	6 Ropes	N/A	N/A	0,01272714	0,01272714	602980	602980	Unknown	Application	Ropes	Textile	RopesUnknown
2	560811	1	0	6145166	361060577	6 Fishing nets	N/A	N/A	0,01701976	0,01701976	6145166	6145166	Other	Application	Fishing nets	Fishing	Fishing netsOther
1	560811	1	0	3655047	163097787	6 Fishing nets	N/A	N/A	0,02241016	0,02241016	3655047	3655047	Other	Application	Fishing nets	Fishing	Fishing netsOther
1	580131	1	0	158	56077	6 Fabrics	N/A	N/A	0,00281755	0,00281755	158	67,94	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	580131	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00281755	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580132	1	0	839	133144	6 Fabrics	N/A	N/A	0,00630145	0,00630145	839	360,77	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	580132	1	0	3	1330	6 Fabrics	N/A	N/A	0,00225564	0,00225564	3	1,29	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580133	1	0	2950	705772	6 Fabrics	N/A	N/A	0,00417982	0,00417982	2950	1268,5	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580133	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00417982	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	580134	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580134	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	580135	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580135	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580136	1	0	63492	11217803	6 Fabrics	N/A	N/A	0,00565993	0,00565993	63492	27301,56	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	580136	1	0	3479	604610	6 Fabrics	N/A	N/A	0,00575412	0,00575412	3479	1495,97	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580137	1	0	49122	14161025	6 Fabrics	N/A	N/A	0,00346882	0,00346882	49122	21122,46	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580137	1	0	205	8214	6 Fabrics	N/A	N/A	0,02495739	0,02495739	205	88,15	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	580421	1	0	7595	1112059	6 Filaments	N/A	N/A	0,00682967	0,00682967	7595	3265,85	Unknown	Application	Filaments	Textile	FilamentsUnknown
1	580421	1	0	9	2149	6 Filaments	N/A	N/A	0,00418799	0,00418799	9	3,87	Unknown	Application	Filaments	Textile	FilamentsUnknown
2	580632	1	0	379614	36149994	6 Fabrics	N/A	N/A	0,01050108	0,01050108	379614	163234,02	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	580632	1	0	8609	1883264	6 Fabrics	N/A	N/A	0,00457132	0,00457132	8609	3701,87	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	581092	1	0	10884	4809067	6 Fabrics	N/A	N/A	0,00226322	0,00226322	10884	4680,12	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	581092	1	0	19	20494	6 Fabrics	N/A	N/A	0,0009271	0,0009271	19	8,17	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600122	1	0	11875	2603287	6 Fabrics	N/A	N/A	0,00456154	0,00456154	11875	5106,25	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600122	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00456154	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600192	1	0	42529	10236860	6 Fabrics	N/A	N/A	0,0041545	0,0041545	42529	18287,47	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600192	1	0	240	63732	6 Fabrics	N/A	N/A	0,00376577	0,00376577	240	103,2	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600243	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600243	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600293	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600293	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600330	1	0	23483	3951995	6 Fabrics	N/A	N/A	0,00594206	0,00594206	23483	23483	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600330	1	0	0	0	6 Fabrics	N/A	N/A	N/A	0,00594206	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600531	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600531	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600532	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600532	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600533	1	0	0	0	6 Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown

1	600533	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600534	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600534	1	0	0	0	6	Fabrics	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600535	1	0	1640	541281	6	Fabrics	N/A	N/A	0,00302985	0,00302985	1640	1640	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600535	1	0	378	119812	6	Fabrics	N/A	N/A	0,00315494	0,00315494	378	378	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600536	1	0	1114863	40464655	6	Fabrics	N/A	N/A	0,02755153	0,02755153	1114863	1114863	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600536	1	0	2825	29875	6	Fabrics	N/A	N/A	0,09456067	0,09456067	2825	2825	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600537	1	0	100778	5207106	6	Fabrics	N/A	N/A	0,01935394	0,01935394	100778	100778	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600537	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,01935394	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600538	1	0	563124	21827853	6	Fabrics	N/A	N/A	0,02579841	0,02579841	563124	563124	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600538	1	0	27	5920	6	Fabrics	N/A	N/A	0,00456081	0,00456081	27	27	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600539	1	0	3543	963652	6	Fabrics	N/A	N/A	0,00367664	0,00367664	3543	3543	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600539	1	0	59	14911	6	Fabrics	N/A	N/A	0,00395681	0,00395681	59	59	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600590	1	0	679482	17005159	6	Fabrics	N/A	N/A	0,0399574	0,0399574	679482	292177,26	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600590	1	0	68577	5354397	6	Fabrics	N/A	N/A	0,0128076	0,0128076	68577	29488,11	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600631	1	0	51874	4278044	6	Fabrics	N/A	N/A	0,01212563	0,01212563	51874	22305,82	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600631	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,01212563	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600632	1	0	24041	3110013	6	Fabrics	N/A	N/A	0,00773019	0,00773019	24041	10337,63	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600632	1	0	1110	121968	6	Fabrics	N/A	N/A	0,00910075	0,00910075	1110	477,3	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600633	1	0	120502	6339364	6	Fabrics	N/A	N/A	0,01900853	0,01900853	120502	51815,86	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600633	1	0	39	20770	6	Fabrics	N/A	N/A	0,00187771	0,00187771	39	16,77	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	600634	1	0	7538	1886722	6	Fabrics	N/A	N/A	0,00399529	0,00399529	7538	3241,34	Unknown	Application	Fabrics	Textile	FabricsUnknown
1	600634	1	0	0	0	6	Fabrics	N/A	N/A	N/A	0,00399529	0	0	Unknown	Application	Fabrics	Textile	FabricsUnknown
2	610130	5	405599	215028	77265965	6	Clothes	0,53014924	0,53014924	0,00278296	0,00278296	215028	92462,04	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610130	5	15001	13401	3000979	6	Clothes	0,89334044	0,89334044	0,00446554	0,00446554	13401	5762,43	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610230	5	623173	365985	10948785	6	Clothes	0,58729277	0,58729277	0,0033427	0,0033427	365985	157373,55	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610230	5	10317	5769	2130454	6	Clothes	0,55917418	0,55917418	0,00270787	0,00270787	5769	2480,67	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610312	1	0	0	0	6	Clothes	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610312	1	0	0	0	6	Clothes	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610323	5	77872	31550	6611623	6	Clothes	0,40515204	0,40515204	0,0047719	0,0047719	31550	13566,5	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610323	5	460	390	36558	6	Clothes	0,84782609	0,84782609	0,00613613	0,00613613	390	167,7	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610333	5	50323	27640	10678833	6	Clothes	0,54925183	0,54925183	0,0025883	0,0025883	27640	11885,2	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610333	5	1972	1432	615396	6	Clothes	0,72616633	0,72616633	0,00232696	0,00232696	1432	615,76	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610343	5	1416656	389945	125295295	6	Clothes	0,27525737	0,27525737	0,00311221	0,00311221	389945	167676,35	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610343	5	40921216	28323	3232895	6	Clothes	0,6921216	0,6921216	0,00876099	0,00876099	28323	12178,89	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610413	5	50092	22627	8499809	6	Clothes	0,45170886	0,45170886	0,00266206	0,00266206	22627	9729,61	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610413	5	14617	2084	299028	6	Clothes	0,14257372	0,14257372	0,00696925	0,00696925	2084	896,12	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610423	5	49325	17034	4400351	6	Clothes	0,34534212	0,34534212	0,00387105	0,00387105	17034	7324,62	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610423	5	2212	681	211341	6	Clothes	0,30786618	0,30786618	0,00322228	0,00322228	681	292,83	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610433	5	278311	130502	36854443	6	Clothes	0,46890709	0,46890709	0,00354101	0,00354101	130502	56115,86	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610433	5	4547	2171	513134	6	Clothes	0,47745766	0,47745766	0,00423086	0,00423086	2171	933,53	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610443	5	1749531	568085	217076513	6	Clothes	0,32470702	0,32470702	0,00261698	0,00261698	568085	244276,55	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610443	5	50296	21427	6515423	6	Clothes	0,42601797	0,42601797	0,00328866	0,00328866	21427	9213,61	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610453	5	425803	103652	34285064	6	Clothes	0,24342712	0,24342712	0,00302324	0,00302324	103652	44570,36	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610453	5	2950	758	228057	6	Clothes	0,25694915	0,25694915	0,00332373	0,00332373	758	325,94	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610463	5	3992919	1044027	342611692	6	Clothes	0,26146962	0,26146962	0,00304726	0,00304726	1044027	448931,61	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610463	5	74462	19919	6441619	6	Clothes	0,26750557	0,26750557	0,00309224	0,00309224	19919	8565,17	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610520	5	257962	71302	30540490	6	Clothes	0,27640505	0,27640505	0,00233467	0,00233467	71302	30659,86	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610520	5	10543	2201	388908	6	Clothes	0,20876411	0,20876411	0,00565944	0,00565944	2201	946,43	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610620	5	1255382	300463	93402779	6	Clothes	0,2393399	0,2393399	0,00321685	0,00321685	300463	129199,09	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610620	5	17396	4153	966341	6	Clothes	0,23873304	0,23873304	0,00429765	0,00429765	4153	1785,79	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610712	5	1658875	212946	50850225	6	Clothes	0,12836772	0,12836772	0,00418771	0,00418771	212946	91566,78	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610712	5	86757	10533	3241098	6	Clothes	0,12140807	0,12140807	0,00324982	0,00324982	10533	4529,19	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610722	5	25869	8002	1385476	6	Clothes	0,30932777	0,30932777	0,00577563	0,00577563	8002	3440,86	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610722	5	2259	819	266187	6	Clothes	0,3625498	0,3625498	0,00307678	0,00307678	819	352,17	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610792	1	0	0	0	6	Clothes	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610792	1	0	0	0	6	Clothes	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610811	5	87156	13152	5312473	6	Clothes	0,15090183	0,15090183	0,00247568	0,00247568	13152	5655,36	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610811	5	3209	343	77664	6	Clothes	0,10688688	0,10688688	0,00441646	0,00441646	343	147,49	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610822	5	7499435	368957	140821675	6	Clothes	0,04919797	0,04919797	0,00262003	0,00262003	368957	158651,51	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610822	5	276446	13281	6735765	6	Clothes	0,04804193	0,04804193	0,00197171	0,00197171	13281	5710,83	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610832	5	151183	36118	9568665	6	Clothes	0,23890252	0,23890252	0,00377461	0,00377461	36118	15530,74	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610832	5	2175	691	209825	6	Clothes	0,31770115	0,31770115	0,00329322	0,00329322	691	297,13	Unknown	Application	Clothes	Textile	ClothesUnknown
2	610892	5	262741	126318	18979193	6	Clothes	0,48077004	0,48077004	0,0066556	0,0066556	126318	54316,74	Unknown	Application	Clothes	Textile	ClothesUnknown
1	610892	5	1850	605	88996	6	Clothes	0,38291139	0,38291139	0,00679806	0,00679806	605	260,15	Unknown	Application	Clothes	Textile	ClothesUnknown
2	611030	5	11780791	4082782	982192715	6	Clothes	0,34656264	0,34656264	0,0041568	0,0041568	4082782	1755596,26	Unknown	Application	Clothes	Textile	ClothesUnknown
1	611030	5	170730	61587	15333806	6	Clothes	0,36072746	0,36072746	0,00401642	0,00401642	61587	26482,41	Unknown	Application	Clothes	Textile	ClothesUnknown
2	611130	6	17806	62655	17166503	6	Accessories	3,51875772	3,51875772	0,00364984	0,00364984	62655	26941,65	Unknown	Application	Accessories	Textile	AccessoriesUnknown
1	611130	6	1261	1809	480212	6	Accessories	1,43457573	1,43457573	0,00376709	0,00376709	1809	777,87	Unknown	Application	Accessories	Textile	AccessoriesUnknown
2	611212	5	65809	28526	12525062	6	Clothes	0,43346655	0,43346655	0,00227751	0,00227751	28526	12266,18	Unknown	Application	Clothes	Textile	ClothesUnknown
1	611212	5	5062	1774	529137	6	Clothes	0,35045437	0,35045437	0,00335263	0,0							

2	611511	1	0	0	0	6	Hosiery	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hosiery	Textile	HosieryUnknown
1	611511	1	0	0	0	6	Hosiery	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hosiery	Textile	HosieryUnknown
2	611512	1	0	0	0	6	Hosiery	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hosiery	Textile	HosieryUnknown
1	611512	1	0	0	0	6	Hosiery	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hosiery	Textile	HosieryUnknown
2	611521	5	5817447	314153	7837022	6	Hosiery	0,05400187	0,05400187	0,00400858	0,00400858	314153	135085,79	Unknown	Application	Hosiery	Textile	HosieryUnknown
1	611521	5	995751	51177	8542157	6	Hosiery	0,05139538	0,05139538	0,00599111	0,00599111	51177	22006,11	Unknown	Application	Hosiery	Textile	HosieryUnknown
2	611522	5	982905	93601	21162255	6	Hosiery	0,09522894	0,09522894	0,00442302	0,00442302	93601	40248,43	Unknown	Application	Hosiery	Textile	HosieryUnknown
1	611522	5	17545	1659	651294	6	Hosiery	0,09455685	0,09455685	0,00254724	0,00254724	1659	713,37	Unknown	Application	Hosiery	Textile	HosieryUnknown
2	611593	1	0	0	0	6	Hosiery	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hosiery	Textile	HosieryUnknown
1	611593	1	0	0	0	6	Hosiery	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Hosiery	Textile	HosieryUnknown
2	611596	6	9164383	525464	98275679	6	Hosiery	0,05733763	0,05733763	0,00534684	0,00534684	525464	225949,52	Unknown	Application	Hosiery	Textile	HosieryUnknown
1	611596	6	590839	26229	4174518	6	Hosiery	0,0443928	0,0443928	0,00628312	0,00628312	26229	11278,47	Unknown	Application	Hosiery	Textile	HosieryUnknown
2	611693	6	2582045	182422	61005707	6	Gloves	0,0706502	0,0706502	0,00299024	0,00299024	182422	78441,46	Unknown	Application	Gloves	Textile	GlovesUnknown
1	611693	6	277701	12664	2660899	6	Gloves	0,045603	0,045603	0,00475929	0,00475929	12664	5445,52	Unknown	Application	Gloves	Textile	GlovesUnknown
2	620113	5	323537	266042	122350533	6	Clothes	0,82229235	0,82229235	0,00217442	0,00217442	266042	114398,06	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620113	5	8847	7830	2348688	6	Clothes	0,88504578	0,88504578	0,00333378	0,00333378	7830	3366,9	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620193	5	1689989	1161553	498645504	6	Clothes	0,68731394	0,68731394	0,00232942	0,00232942	1161553	499467,79	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620193	5	652944	33685	12897729	6	Clothes	0,51629269	0,51629269	0,0026117	0,0026117	33685	14484,55	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620213	5	869185	758566	297649108	6	Clothes	0,8727325	0,8727325	0,00254852	0,00254852	758566	326183,38	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620213	5	13888	13081	4621290	6	Clothes	0,94189228	0,94189228	0,00283059	0,00283059	13081	5624,83	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620293	5	1986348	1224487	503405797	6	Clothes	0,6164514	0,6164514	0,00243241	0,00243241	1224487	526259,41	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620293	5	60804	36364	10736050	6	Clothes	0,59805276	0,59805276	0,00338709	0,00338709	36364	15636,52	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620312	5	49052	40769	18085386	6	Clothes	0,83113838	0,83113838	0,00225425	0,00225425	40769	17530,67	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620312	5	1023	977	438046	6	Clothes	0,95503421	0,95503421	0,00223036	0,00223036	977	420,11	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620323	5	27400	15790	3670586	6	Clothes	0,57627737	0,57627737	0,00430177	0,00430177	15790	6789,7	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620323	5	2935	568	154155	6	Clothes	0,19352641	0,19352641	0,0036846	0,0036846	568	244,24	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620333	5	32173	247758	104944146	6	Clothes	0,76664202	0,76664202	0,00236086	0,00236086	247758	106535,94	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620333	5	7221	6010	3428560	6	Clothes	0,8322947	0,8322947	0,00175292	0,00175292	6010	2584,3	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620343	5	2585562	1386459	504295197	6	Clothes	0,53623119	0,53623119	0,0027493	0,0027493	1386459	596177,37	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620343	5	105647	57960	26466877	6	Clothes	0,54861946	0,54861946	0,00218991	0,00218991	57960	24922,8	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620413	5	41900	17923	7370016	6	Clothes	0,42775656	0,42775656	0,00243188	0,00243188	17923	7706,89	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620413	5	126	42	34007	6	Clothes	0,33333333	0,33333333	0,00123504	0,00123504	42	18,06	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620423	5	21923	17653	3561044	6	Clothes	0,80522739	0,80522739	0,00495725	0,00495725	17653	7590,79	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620423	5	12108	14585	941000	6	Clothes	1,20457549	1,20457549	0,01549947	0,01549947	14585	6271,55	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620433	5	537785	280508	104352822	6	Clothes	0,52159878	0,52159878	0,00268807	0,00268807	280508	120618,44	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620433	5	32555	17045	3651250	6	Clothes	0,52357549	0,52357549	0,00466826	0,00466826	17045	7329,35	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620443	5	2015605	657735	343952129	6	Clothes	0,32632138	0,32632138	0,00191229	0,00191229	657735	282826,05	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620443	5	53538	25834	7690030	6	Clothes	0,48253577	0,48253577	0,00335941	0,00335941	25834	11108,62	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620453	5	563295	141200	66133135	6	Clothes	0,25066794	0,25066794	0,00213509	0,00213509	141200	60716	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620453	5	7205	2277	728105	6	Clothes	0,31603053	0,31603053	0,0031273	0,0031273	2277	979,11	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620463	5	3439398	1242571	428034365	6	Clothes	0,36127572	0,36127572	0,00290297	0,00290297	1242571	1242571	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620463	5	121203	51049	18709281	6	Clothes	0,42118594	0,42118594	0,00272854	0,00272854	51049	51049	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620530	5	426699	112832	37009217	6	Clothes	0,26444855	0,26444855	0,00304875	0,00304875	112832	48517,76	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620530	5	9129	2488	1298802	6	Clothes	0,27253807	0,27253807	0,00191561	0,00191561	2488	1069,84	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620640	5	4935902	1026858	432475485	6	Clothes	0,20803857	0,20803857	0,00237437	0,00237437	1026858	441548,94	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620640	5	7027	17007	5408124	6	Clothes	0,24199952	0,24199952	0,00314471	0,00314471	17007	7313,01	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620719	5	1041107	29047	4189084	6	Clothes	0,02790011	0,02790011	0,00693397	0,00693397	29047	12490,21	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620719	5	592	315	185423	6	Clothes	0,53209459	0,53209459	0,00169882	0,00169882	315	135,45	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620722	5	2094	629	186598	6	Clothes	0,30038204	0,30038204	0,00337088	0,00337088	629	270,47	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620722	5	70	2	7000	6	Clothes	0,02857143	0,02857143	0,00028571	0,00028571	2	0,86	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620792	1	0	0	0	6	Clothes	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620792	1	0	0	0	6	Clothes	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620811	5	5435	1465	1528685	6	Clothes	0,26954922	0,26954922	0,00095834	0,00095834	1465	629,95	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620811	5	611	158	239446	6	Clothes	0,25859247	0,25859247	0,00065986	0,00065986	158	67,94	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620822	5	73977	14718	5018595	6	Clothes	0,19895373	0,19895373	0,00293269	0,00293269	14718	6328,74	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620822	5	1152	258	67844	6	Clothes	0,22395833	0,22395833	0,00380284	0,00380284	258	110,94	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620892	5	170389	34127	9409063	6	Clothes	0,20028875	0,20028875	0,00362703	0,00362703	34127	14674,61	Unknown	Application	Clothes	Textile	ClothesUnknown
1	620892	5	1554	287	83523	6	Clothes	0,18468468	0,18468468	0,00343618	0,00343618	287	123,41	Unknown	Application	Clothes	Textile	ClothesUnknown
2	620930	5	229865	64904	19078836	6	Accessories	0,28235704	0,28235704	0,00340188	0,00340188	64904	64904	Unknown	Application	Accessories	Textile	AccessoriesUnknown
1	620930	5	4372	1898	419969	6	Accessories	0,43412626	0,43412626	0,00451938	0,00451938	1898	1898	Unknown	Application	Accessories	Textile	AccessoriesUnknown
2	621111	5	348036	59503	23253695	6	Clothes	0,17096795	0,17096795	0,00255886	0,00255886	59503	25586,29	Unknown	Application	Clothes	Textile	ClothesUnknown
1	621111	5	21907	3793	1538099	6	Clothes	0,17314101	0,17314101	0,00246603	0,00246603	3793	1630,99	Unknown	Application	Clothes	Textile	ClothesUnknown
2	621112	5	116313	16257	10392510	6	Clothes	0,13976942	0,13976942	0,0015643	0,0015643	16257	6990,51	Unknown	Application	Clothes	Textile	ClothesUnknown
1	621112	5	1595	190	260705	6	Clothes	0,11912226	0,11912226	0,00072879	0,00072879	190	81,7	Unknown	Application	Clothes	Textile	ClothesUnknown
2	621120	5	50844	48734	19264763	6	Clothes	0,95850051	0,95850051	0,0025297	0,0025297	48734	20955,62	Unknown	Application	Clothes	Textile	ClothesUnknown
1	621120	1	3172	1308	587501	6	Clothes	0,41235813	0,41235813	0,00222638	0,00222638	1308	562,44	Unknown	Application	Clothes	Textile	ClothesUnknown
2	621133	5	602339	402020	107680007	6	Clothes	0,66743146	0,66743146	0,00373347	0,00373347	402020	172868,6	Unknown	Application	Clothes	Textile	ClothesUnknown
1	621133	5	13946	13793	5463093	6	Clothes	0,98902911	0,98902911	0,00252476	0,00252476	13793	5930,99	Unknown	Application	Clothes	Textile	

1	630222	1	0	1492	206466	6	Linen	N/A	N/A	0,00722637	0,00722637	1492	641,56	Unknown	Application	Linen	Textile	LinenUnknown
1	630232	1	0	722951	45635478	6	Linen	N/A	N/A	0,01584186	0,01584186	722951	310868,93	Unknown	Application	Linen	Textile	LinenUnknown
2	630232	1	0	1739	247407	6	Linen	N/A	N/A	0,0070289	0,0070289	1739	747,77	Unknown	Application	Linen	Textile	LinenUnknown
1	630253	1	0	311332	26825746	6	Linen	N/A	N/A	0,01160572	0,01160572	311332	133872,76	Unknown	Application	Linen	Textile	LinenUnknown
2	630253	1	0	1497	71662	6	Linen	N/A	N/A	0,02088973	0,02088973	1497	643,71	Unknown	Application	Linen	Textile	LinenUnknown
1	630293	1	0	63280	8672857	6	Linen	N/A	N/A	0,00729633	0,00729633	63280	27210,4	Unknown	Application	Linen	Textile	LinenUnknown
2	630293	1	0	2841	1344868	6	Linen	N/A	N/A	0,00211247	0,00211247	2841	1221,63	Unknown	Application	Linen	Textile	LinenUnknown
1	630312	1	0	101189	19883181	6	Curtains	N/A	N/A	0,00508918	0,00508918	101189	101189	Unknown	Application	Curtains	Textile	CurtainsUnknown
2	630312	1	0	109	86013	6	Curtains	N/A	N/A	0,00126725	0,00126725	109	109	Unknown	Application	Curtains	Textile	CurtainsUnknown
1	630392	1	0	3048857	315825224	6	Curtains	N/A	N/A	0,00965362	0,00965362	3048857	3048857	Unknown	Application	Curtains	Textile	CurtainsUnknown
2	630392	1	0	2225	611265	6	Curtains	N/A	N/A	0,00363999	0,00363999	2225	2225	Unknown	Application	Curtains	Textile	CurtainsUnknown
1	630531	1	0	0	0	6	Other Bags	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Other Bags	Textile	Other BagsUnknown
2	630531	1	0	0	0	6	Other Bags	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Other Bags	Textile	Other BagsUnknown
1	630532	1	0	7110061	193455482	6	Other Bags	N/A	N/A	0,03675296	0,03675296	7110061	7110061	Unknown	Application	Other Bags	Textile	Other BagsUnknown
2	630532	1	0	77960	3071240	6	Other Bags	N/A	N/A	0,02538388	0,02538388	77960	77960	Unknown	Application	Other Bags	Textile	Other BagsUnknown
1	630533	1	0	4308408	98233614	6	Other Bags	N/A	N/A	0,0438588	0,0438588	4308408	4308408	Unknown	Application	Other Bags	Textile	Other BagsUnknown
2	630533	1	0	24330	926890	6	Other Bags	N/A	N/A	0,02624907	0,02624907	24330	24330	Unknown	Application	Other Bags	Textile	Other BagsUnknown
1	660310	1	0	0	0	6	#N/A	N/A	N/A	N/A	#VALUE!	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2	660310	1	0	0	0	6	#N/A	N/A	N/A	N/A	#VALUE!	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
1	660320	1	0	74939	942423	6	#N/A	N/A	N/A	0,07951737	0,07951737	74939	0	#N/A	#N/A	#N/A	#N/A	#N/A
2	660320	1	0	60	4800	6	#N/A	N/A	N/A	0,0125	0,0125	60	0	#N/A	#N/A	#N/A	#N/A	#N/A
1	660390	1	0	741070	7191805	6	#N/A	N/A	N/A	0,10304367	0,10304367	741070	0	#N/A	#N/A	#N/A	#N/A	#N/A
2	660390	1	0	2335	47410	6	#N/A	N/A	N/A	0,04925121	0,04925121	2335	0	#N/A	#N/A	#N/A	#N/A	#N/A
1	847021	5	11502	2341	782879	6	Calculating machines w/ printer	0,20352982	0,20352982	0,00299024	0,00299024	2341	444,79	Unknown	Application	Calculating mach	Electronics	Calculating machines w/ printerUnknown
2	847021	5	96	181	346998	6	Calculating machines w/ printer	1,88541667	1,88541667	0,00052162	0,00052162	181	34,39	Unknown	Application	Calculating mach	Electronics	Calculating machines w/ printerUnknown
1	847029	5	1010	1056	316154	6	Calculating machines w/o printer	1,04554455	1,04554455	0,00334014	0,00334014	1056	232,32	Unknown	Application	Calculating mach	Electronics	Calculating machines w/o printerUnknown
2	847029	5	73	315	133865	6	Calculating machines w/o printer	4,31506849	4,31506849	0,00235312	0,00235312	315	69,3	Unknown	Application	Calculating mach	Electronics	Calculating machines w/o printerUnknown
1	847110	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
2	847110	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
1	847120	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
2	847120	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
1	847191	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
2	847191	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
1	847192	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
2	847192	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
1	847193	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
2	847193	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
1	847199	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
2	847199	1	0	0	0	6	Data processing machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Data processing r	Electronics	Data processing machinesUnknown
1	847310	1	0	0	0	6	Parts of typewriters	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Parts of typewritr	Electronics	Parts of typewritersUnknown
2	847310	1	0	0	0	6	Parts of typewriters	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Parts of typewritr	Electronics	Parts of typewritersUnknown
1	847321	1	0	19447	6503334	6	Parts of calculating machines	N/A	N/A	0,00299031	0,00299031	19447	4278,34	Unknown	Application	Parts of calculati	Electronics	Parts of calculating machinesUnknown
2	847321	1	0	2014	5264928	6	Parts of calculating machines	N/A	N/A	0,00038253	0,00038253	2014	443,08	Unknown	Application	Parts of calculati	Electronics	Parts of calculating machinesUnknown
1	850811	5	582818	3041053	606550367	6	Vacuum cleaners	5,21784331	5,21784331	0,00501369	0,00501369	3041053	1763810,74	Unknown	Application	Vacuum cleaners	Electronics	Vacuum cleanersUnknown
2	850811	5	84813	348197	190177113	6	Vacuum cleaners	4,10546732	4,10546732	0,00183091	0,00183091	348197	201954,26	Unknown	Application	Vacuum cleaners	Electronics	Vacuum cleanersUnknown
1	850860	5	14849	94987	15960170	6	Vacuum cleaners	6,39686174	6,39686174	0,0059515	0,0059515	94987	55092,46	Unknown	Application	Vacuum cleaners	Electronics	Vacuum cleanersUnknown
2	850860	5	516	25046	1454540	6	Vacuum cleaners	48,5387597	48,5387597	0,01721919	0,01721919	25046	14526,68	Unknown	Application	Vacuum cleaners	Electronics	Vacuum cleanersUnknown
1	850870	1	0	281892	43422767	6	Vacuum cleaners	N/A	N/A	0,0064918	0,0064918	281892	163497,36	Unknown	Application	Vacuum cleaners	Electronics	Vacuum cleanersUnknown
2	850870	1	0	22022	5678087	6	Vacuum cleaners	N/A	N/A	0,00387842	0,00387842	22022	12772,76	Unknown	Application	Vacuum cleaners	Electronics	Vacuum cleanersUnknown
1	850940	5	628949	1923753	316875335	6	Electro-mechanical domestic appli	3,05867884	3,05867884	0,00607101	0,00607101	1923753	423225,66	Unknown	Application	Electro-mechanic	Electronics	Electro-mechanical domestic appliancesUnknown
2	850940	5	21282	44461	6387052	6	Electro-mechanical domestic appli	2,08913636	2,08913636	0,00696111	0,00696111	44461	9781,42	Unknown	Application	Electro-mechanic	Electronics	Electro-mechanical domestic appliancesUnknown
1	850980	5	625364	812028	228777275	6	Electro-mechanical domestic appli	1,29848856	1,29848856	0,00354943	0,00354943	812028	178646,16	Unknown	Application	Electro-mechanic	Electronics	Electro-mechanical domestic appliancesUnknown
2	850980	5	34956	106762	23790106	6	Electro-mechanical domestic appli	3,0541824	3,0541824	0,00448766	0,00448766	106762	23487,64	Unknown	Application	Electro-mechanic	Electronics	Electro-mechanical domestic appliancesUnknown
1	850990	1	0	67191	28226383	6	Electro-mechanical domestic appli	N/A	N/A	0,00238043	0,00238043	67191	14782,02	Unknown	Application	Electro-mechanic	Electronics	Electro-mechanical domestic appliancesUnknown
2	850990	1	0	2964	1206185	6	Electro-mechanical domestic appli	N/A	N/A	0,00245733	0,00245733	2964	652,08	Unknown	Application	Electro-mechanic	Electronics	Electro-mechanical domestic appliancesUnknown
1	851010	5	280253	80662	91643691	6	Shavers	0,28781851	0,28781851	0,00088017	0,00088017	80662	17745,64	Unknown	Application	Shavers	Electronics	ShaversUnknown
2	851010	5	8109	2636	3102997	6	Shavers	0,32507091	0,32507091	0,0008495	0,0008495	2636	579,92	Unknown	Application	Shavers	Electronics	ShaversUnknown
1	851020	5	301223	154480	88205334	6	Shavers	0,51284264	0,51284264	0,00175137	0,00175137	154480	33985,6	Unknown	Application	Shavers	Electronics	ShaversUnknown
2	851020	5	4348	4941	1908830	6	Shavers	1,13638454	1,13638454	0,0025885	0,0025885	4941	1087,02	Unknown	Application	Shavers	Electronics	ShaversUnknown
1	851030	5	61342	22212	18302282	6	Shavers	0,36210101	0,36210101	0,00121362	0,00121362	22212	4886,64	Unknown	Application	Shavers	Electronics	ShaversUnknown
2	851030	5	282	324	218264	6	Shavers	1,14893617	1,14893617	0,00148444	0,00148444	324	71,28	Unknown	Application	Shavers	Electronics	ShaversUnknown
1	851090	1	0	14921	7374402	6	Shavers	N/A	N/A	0,00202335	0,00202335	14921	3282,62	Unknown	Application	Shavers	Electronics	ShaversUnknown
2	851090	1	0	75	48660	6	Shavers	N/A	N/A	0,00154131	0,00154131	75	16,5	Unknown	Application	Shavers	Electronics	ShaversUnknown
1	851210	5	340189	66297	22297141	6	Lighting, windscreen wipers, defro	0,19488284	0,19488284	0,00297334	0,00297334	66297	7955,64	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
2	851210	5	18964	4572	1365287	6	Lighting, windscreen wipers, defro	0,24108838	0,24108838	0,00334875	0,00334875	4572	548,64	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
1	851220	5	1079940	1392210	398107565	6	Lighting, windscreen wipers, defro	1,28915495	1,28915495	0,00349707	0,00349707	1392210	167065,2	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
2	851220	5	54374	32487	17202045	6	Lighting, windscreen wipers, defro	0,59747306	0,59747306	0,00188855	0,00188855	32487	3898,44	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
1	851230	5	41403	63737	22883281	6	Lighting, windscreen wipers, defro	1,53942951	1,53942951	0,00278531	0,00278531	63737	7648,44	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
2	851230	5	16522	14390	14872589	6	Lighting, windscreen wipers, defro	0,87095993	0,87095993	0,00096755	0,00096755	14390	1726,8	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
1	851240	5	675375	253175	53880882	6	Lighting, windscreen wipers, defro	0,37486582	0,37486582	0,00469879	0,00469879	253175	30381	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
2	851240	5	1674	4679	2946387	6	Lighting, windscreen wipers, defro	2,79510155	2,79510155	0,00158805	0,00158805	4679	561,48	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
1	851290	5	0	393929	112983199	6	Lighting, windscreen wipers, defro	N/A	N/A	0,00348662	0,00348662	393929	47271,48	Unknown	Application	Lighting, windscr	Automotive-other	Lighting, windscreen wipers, defrostersUnknown
2	851290	5	0	16716	10129043	6	Lighting, windscreen wipers, defro	N/A	N/A	0,0016503	0,0016503	16716	2005,92	Unknown	Application			

1	851650	5	142397	2005518	136379031	6	Microwaves	14,0839905	14,0839905	0,01470547	0,01470547	2005518	441213,96	Unknown	Application	Microwaves	Electronics	MicrowavesUnknown
2	851650	5	1249	20245	1000809	6	Microwaves	16,2089672	16,2089672	0,02022864	0,02022864	20245	4453,9	Unknown	Application	Microwaves	Electronics	MicrowavesUnknown
1	851710	1	0	0	0	6	Telephone sets	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Telephone sets	Electronics	Telephone setsOther
2	851710	1	0	0	0	6	Telephone sets	N/A	N/A	N/A	N/A	#VALUE!	0	Other	Application	Telephone sets	Electronics	Telephone setsOther
1	851711	5	57420	18635	19140109	6	Telephone sets	0,32453849	0,32453849	0,00097361	0,00097361	18635	4099,7	Unknown	Application	Telephone sets	Electronics	Telephone setsUnknown
2	851711	5	2446	4075	8353574	6	Telephone sets	1,66598528	1,66598528	0,00048782	0,00048782	4075	896,5	Unknown	Application	Telephone sets	Electronics	Telephone setsUnknown
1	851712	5	2202088	927991	9890035623	6	Mobile phones	0,42141413	0,42141413	9,3831E-05	9,3831E-05	927991	296957,12	Unknown	Application	Mobile phones	Electronics	Mobile phonesUnknown
2	851712	5	327137	132557	530344189	6	Mobile phones	0,40520332	0,40520332	0,00024995	0,00024995	132557	42418,24	Unknown	Application	Mobile phones	Electronics	Mobile phonesUnknown
1	851718	5	1293131	143010	167289503	6	Telephone sets	1,10748	1,10748	0,00085487	0,00085487	143010	31462,2	Unknown	Application	Telephone sets	Electronics	Telephone setsUnknown
2	851718	5	70189	84542	178771532	6	Telephone sets	1,20449073	1,20449073	0,00047291	0,00047291	84542	18599,24	Unknown	Application	Telephone sets	Electronics	Telephone setsUnknown
1	851720	1	0	0	0	6	Teleprinters	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Teleprinters	Electronics	TeleprintersUnknown
1	851720	1	0	0	0	6	Teleprinters	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Teleprinters	Electronics	TeleprintersUnknown
1	851721	1	0	0	0	6	Fax machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fax machines	Electronics	Fax machinesUnknown
1	851721	1	0	0	0	6	Fax machines	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Fax machines	Electronics	Fax machinesUnknown
1	851722	1	0	0	0	6	Teleprinters	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Teleprinters	Electronics	TeleprintersUnknown
1	851722	1	0	0	0	6	Teleprinters	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Teleprinters	Electronics	TeleprintersUnknown
2	851810	5	272823	190857	165161509	6	Microphones, headphones, loudsp	0,69956345	0,69956345	0,00115558	0,00115558	190857	41988,54	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851810	5	15240	20141	60959463	6	Microphones, headphones, loudsp	1,32158793	1,32158793	0,0003304	0,0003304	20141	4431,02	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851821	5	465910	650153	206443416	6	Microphones, headphones, loudsp	1,39544762	1,39544762	0,0031493	0,0031493	650153	143033,66	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851821	5	191832	367503	135653780	6	Microphones, headphones, loudsp	1,91575441	1,91575441	0,00270912	0,00270912	367503	80850,66	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851822	5	523248	2114136	645566414	6	Microphones, headphones, loudsp	4,03901969	4,03901969	0,00327485	0,00327485	2114136	465109,92	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851822	5	40003	173607	43242432	6	Microphones, headphones, loudsp	4,33984951	4,33984951	0,00401474	0,00401474	173607	38193,54	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
2	851829	5	180333	274709	59999983	6	Microphones, headphones, loudsp	1,52334293	1,52334293	0,00457848	0,00457848	274709	60435,98	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851829	5	89863	120221	482729817	6	Microphones, headphones, loudsp	1,33782536	1,33782536	0,00246709	0,00246709	120221	26448,62	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
2	851830	5	2862349	852268	1093275146	6	Microphones, headphones, loudsp	0,29775125	0,29775125	0,00077955	0,00077955	852268	187498,96	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851830	5	144744	85968	88597416	6	Microphones, headphones, loudsp	0,59393135	0,59393135	0,00097032	0,00097032	85968	18912,96	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
2	851840	5	47768	312743	130750967	6	Microphones, headphones, loudsp	6,5471236	6,5471236	0,0023919	0,0023919	312743	68803,46	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851840	5	5408	61112	45103407	6	Microphones, headphones, loudsp	11,3002959	11,3002959	0,00135493	0,00135493	61112	13444,64	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
2	851850	5	27416	175560	56936878	6	Microphones, headphones, loudsp	6,40355996	6,40355996	0,00308341	0,00308341	175560	38623,2	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851850	5	1829	20471	11267493	6	Microphones, headphones, loudsp	11,1924549	11,1924549	0,00181682	0,00181682	20471	4503,62	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
2	851890	5	0	222011	73368824	6	Microphones, headphones, loudsp	N/A	N/A	0,00302596	0,00302596	222011	48842,42	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
1	851890	5	0	48310	27849142	6	Microphones, headphones, loudsp	N/A	N/A	0,0017347	0,0017347	48310	10628,2	Unknown	Application	Microphones, he	Electronics	Microphones, headphones, loudspeakersUnknown
2	851920	5	1438	5360	1493669	6	Music players	3,72739917	3,72739917	0,00358848	0,00358848	5360	1179,2	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851920	5	20	128	122515	6	Music players	6,4	6,4	0,00104477	0,00104477	128	28,16	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851930	5	9626	65279	12808222	6	Music players	6,78152919	6,78152919	0,00509665	0,00509665	65279	14361,38	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851930	5	201	1860	726946	6	Music players	9,25373134	9,25373134	0,00255865	0,00255865	1860	409,2	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851950	5	1079	5514	1061258	6	Music players	5,1102873	5,1102873	0,00519572	0,00519572	5514	1213,08	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851950	5	20	50	74985	6	Music players	2,5	2,5	0,0006668	0,0006668	50	11	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851981	5	35071	92817	45370353	6	Music players	2,64654558	2,64654558	0,00204576	0,00204576	92817	20419,74	Unknown	Application	Music players	Electronics	Music playersUnknown
2	851981	5	1064	10388	21011169	6	Music players	9,76315789	9,76315789	0,0004944	0,0004944	10388	2285,36	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851989	5	64569	221686	113218489	6	Music players	3,43331939	3,43331939	0,00195804	0,00195804	221686	48770,92	Unknown	Application	Music players	Electronics	Music playersUnknown
1	851989	5	800	24182	35055799	6	Music players	30,2275	30,2275	0,00068981	0,00068981	24182	5320,04	Unknown	Application	Music players	Electronics	Music playersUnknown
1	852010	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852010	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852020	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
2	852020	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852031	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
2	852031	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852033	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
2	852033	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852039	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
2	852039	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852090	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
2	852090	1	0	0	0	6	Sound recording apparatus	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Sound recording	Electronics	Sound recording apparatusUnknown
1	852210	1	0	1631	2018346	6	Sound and video recording apparat	N/A	N/A	0,00080809	0,00080809	1631	358,82	Unknown	Application	Sound and video	Electronics	Sound and video recording apparatusUnknown
2	852210	1	0	168	49313	6	Sound and video recording apparat	N/A	N/A	0,00340681	0,00340681	168	36,96	Unknown	Application	Sound and video	Electronics	Sound and video recording apparatusUnknown
1	852290	1	0	92180	57845058	6	Sound and video recording apparat	N/A	N/A	0,00159357	0,00159357	92180	20279,6	Unknown	Application	Sound and video	Electronics	Sound and video recording apparatusUnknown
1	852290	1	0	12019	6306446	6	Sound and video recording apparat	N/A	N/A	0,00190583	0,00190583	12019	2644,18	Unknown	Application	Sound and video	Electronics	Sound and video recording apparatusUnknown
1	852711	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
1	852711	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
1	852719	5	228800	218544	107447860	6	Radio	0,95517483	0,95517483	0,00203395	0,00203395	218544	48079,68	Unknown	Application	Radio	Electronics	RadioUnknown
1	852719	5	41891	49348	34649991	6	Radio	1,1780096	1,1780096	0,00142419	0,00142419	49348	10856,56	Unknown	Application	Radio	Electronics	RadioUnknown
2	852721	5	86478	117331	73673370	6	Radio	1,35677282	1,35677282	0,00159258	0,00159258	117331	25812,82	Unknown	Application	Radio	Electronics	RadioUnknown
1	852721	5	9700	14293	6097703	6	Radio	1,47350515	1,47350515	0,002344	0,002344	14293	3144,46	Unknown	Application	Radio	Electronics	RadioUnknown
1	852729	5	23053	19591	16596792	6	Radio	0,84982432	0,84982432	0,00118041	0,00118041	19591	4310,02	Unknown	Application	Radio	Electronics	RadioUnknown
1	852729	5	14487	3432	2356778	6	Radio	0,23690205	0,23690205	0,00145623	0,00145623	3432	755,04	Unknown	Application	Radio	Electronics	RadioUnknown
1	852731	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
1	852731	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
2	852732	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
1	852732	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
2	852739	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
1	852739	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
2	852790	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
1	852790	1	0	0	0	6	Radio	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Radio	Electronics	RadioUnknown
2	852812	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	852																	

1	852813	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
2	852821	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	852821	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	852822	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	852822	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	852830	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	852830	1	0	0	0	6	Television	N/A	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Television	Electronics	TelevisionUnknown
1	870110	5	92	25433	4275566	6	Vehicles	276,445652	276,445652	0,00594845	0,00594845	25433	3051,96	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870110	5	0	0	0	6	Vehicles	N/A	N/A	N/A	N/A	0,00594845	0	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870120	5	775	7783045	787620844	6	Vehicles	10042,6387	10042,6387	0,00988172	0,00988172	7783045	933965,4	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870120	5	397	4015522	112612826	6	Vehicles	10114,665	10114,665	0,03565777	0,03565777	4015522	481862,64	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870130	5	74	588966	130165168	6	Vehicles	7959	7959	0,00452476	0,00452476	588966	70675,92	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870130	5	9	38181	2230478	6	Vehicles	4242,33333	4242,33333	0,01711786	0,01711786	38181	4581,72	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870190	1	0	0	0	6	Vehicles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870190	1	0	0	0	6	Vehicles	N/A	N/A	N/A	N/A	#VALUE!	0	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870210	5	870	8950655	1331637428	6	Vehicles	10288,1092	10288,1092	0,00672154	0,00672154	8950655	1074078,6	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870210	5	618	6906385	177330792	6	Vehicles	11175,3803	11175,3803	0,03894634	0,03894634	6906385	828766,2	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870290	5	9	45600	3701708	6	Vehicles	5066,66667	5066,66667	0,01231864	0,01231864	45600	5472	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870290	5	0	0	0	6	Vehicles	N/A	N/A	N/A	N/A	0,01231864	0	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870310	5	5738	1559956	469420104	6	Cars	271,864064	271,864064	0,00323216	0,00323216	1559956	187194,72	Unknown	Application	Cars	Automotive-other	Cars Unknown	
2	870310	5	30	6602	1451204	6	Cars	220,066667	220,066667	0,00454933	0,00454933	6602	792,24	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870321	5	12735	8420805	1139114107	6	Cars	661,233216	661,233216	0,00739242	0,00739242	8420805	1010496,6	Unknown	Application	Cars	Automotive-other	Cars Unknown	
2	870321	5	95	88573	6493770	6	Cars	932,347368	932,347368	0,01363969	0,01363969	88573	10628,76	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870322	5	14721	18638802	2257707104	6	Cars	1266,13695	1266,13695	0,00825563	0,00825563	18638802	2236656,24	Unknown	Application	Cars	Automotive-other	Cars Unknown	
2	870322	5	329	424342	13217114	6	Cars	1289,79331	1289,79331	0,0321055	0,0321055	424342	50921,04	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870323	5	20611	33219855	5566298813	6	Cars	1611,75368	1611,75368	0,00596803	0,00596803	33219855	3986382,6	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870323	5	1549	2452432	77857009	6	Cars	1583,23564	1583,23564	0,03149918	0,03149918	2452432	294291,84	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870324	5	2240	4160271	1040493812	6	Cars	1857,26384	1857,26384	0,00399836	0,00399836	4160271	499232,52	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870324	5	142	271116	75328502	6	Cars	1909,26761	1909,26761	0,00359912	0,00359912	271116	32533,92	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870331	5	849	1154803	107674872	6	Cars	1360,19199	1360,19199	0,01072491	0,01072491	1154803	138576,36	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870331	5	677	1155693	9122174	6	Cars	1707,07976	1707,07976	0,12669052	0,12669052	1155693	138683,16	Unknown	Application	Cars	Automotive-other	Cars Unknown	
2	870332	5	35724	66116195	9864722725	6	Cars	1850,75006	1850,75006	0,00670229	0,00670229	66116195	7933943,4	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870332	5	2266	3882284	98082722	6	Cars	1713,27626	1713,27626	0,03958173	0,03958173	3882284	465874,08	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870333	5	2313	5647579	1136840356	6	Cars	2441,6684	2441,6684	0,00496779	0,00496779	5647579	677709,48	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870333	5	149	481037	27939658	6	Cars	3228,43624	3228,43624	0,017217	0,017217	481037	57724,44	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870390	5	57	106552	29449000	6	Cars	1869,33333	1869,33333	0,00361819	0,00361819	106552	12786,24	Unknown	Application	Cars	Automotive-other	Cars Unknown	
1	870390	5	0	0	0	6	Cars	N/A	N/A	N/A	N/A	0	0	Unknown	Application	Cars	Automotive-other	Cars Unknown	
2	870410	5	353	3988042	365423071	6	Vehicles	11297,5694	11297,5694	0,01091349	0,01091349	3988042	478565,04	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870410	5	209	5553754	297023350	6	Vehicles	26572,9856	26572,9856	0,01869804	0,01869804	5553754	666450,48	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870421	5	28476	52318956	6145146651	6	Vehicles	1837,30004	1837,30004	0,00851387	0,00851387	52318956	6278274,72	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870421	5	813	1659022	25171874	6	Vehicles	2040,61747	2040,61747	0,06590777	0,06590777	1659022	199082,64	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870422	5	1606	12974950	1258265469	6	Vehicles	8079,04732	8079,04732	0,01031177	0,01031177	12974950	1556994	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870422	5	1351	13513327	289092202	6	Vehicles	10002,4626	10002,4626	0,046744	0,046744	13513327	1621599,24	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870423	5	3380	34769106	3676393767	6	Vehicles	10286,7178	10286,7178	0,00945739	0,00945739	34769106	4172292,72	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870423	5	2134	26027886	684765756	6	Vehicles	12196,7601	12196,7601	0,03800991	0,03800991	26027886	3123346,32	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870431	5	454	724053	106706395	6	Vehicles	1594,8304	1594,8304	0,00678547	0,00678547	724053	86886,36	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870431	5	17	41187	515785	6	Vehicles	2422,76471	2422,76471	0,07985304	0,07985304	41187	4942,44	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870432	5	10	108197	7465078	6	Vehicles	10819,7	10819,7	0,01449375	0,01449375	108197	12983,64	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870432	5	53	433726	11618694	6	Vehicles	8183,50943	8183,50943	0,03733001	0,03733001	433726	52047,12	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870490	5	2088	3273761	528650534	6	Vehicles	1567,8932	1567,8932	0,00619268	0,00619268	3273761	392851,32	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870490	5	208	103351	28771315	6	Vehicles	496,879808	496,879808	0,00359215	0,00359215	103351	12402,12	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870510	5	152	4101988	473577442	6	Vehicles	26986,7632	26986,7632	0,0086617	0,0086617	4101988	492238,56	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870510	5	89	2647112	117510903	6	Vehicles	29742,8315	29742,8315	0,02252652	0,02252652	2647112	317653,44	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870520	5	2	15500	2236444	6	Vehicles	7750	7750	0,00693065	0,00693065	15500	1860	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870520	5	3	31000	2591790	6	Vehicles	10333,3333	10333,3333	0,01196085	0,01196085	31000	3720	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870530	5	21	189802	39640846	6	Vehicles	9038,19048	9038,19048	0,00478804	0,00478804	189802	22776,24	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870530	5	27	315420	7839935	6	Vehicles	11682,2222	11682,2222	0,04023248	0,04023248	315420	37850,4	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870540	5	92	1476812	162510296	6	Vehicles	16052,3043	16052,3043	0,0090875	0,0090875	1476812	177217,44	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870540	5	70	1319805	32589760	6	Vehicles	18854,3571	18854,3571	0,04049754	0,04049754	1319805	158376,6	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870590	5	346	3254499	444552304	6	Vehicles	9406,06647	9406,06647	0,00732085	0,00732085	3254499	390539,88	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870590	5	318	5416206	678127870	6	Vehicles	17032,0943	17032,0943	0,007987	0,007987	5416206	649944,72	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870600	5	149	4113	497725	6	Vehicles	27,6040268	27,6040268	0,0082636	0,0082636	4113	493,56	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870600	5	3	1940	102339	6	Vehicles	646,666667	646,666667	0,01895661	0,01895661	1940	232,8	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870710	5	342	32420	3902968	6	Vehicles	94,7953216	94,7953216	0,0083065	0,0083065	32420	3890,4	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870710	5	77	12164	404640	6	Vehicles	157,974026	157,974026	0,03006129	0,03006129	12164	1459,68	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870790	5	3684	452115	78729552	6	Vehicles	122,723941	122,723941	0,00574263	0,00574263	452115	54253,8	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870790	5	32	30379	634015	6	Vehicles	949,34375	949,34375	0,04791527	0,04791527	30379	3645,48	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870911	5	200	223130	21059797	6	Vehicles	1106,55	1106,55	0,01050865	0,01050865	223130	26557,2	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
2	870911	5	23	66201	2058224	6	Vehicles	2878,30435	2878,30435	0,03216414	0,03216414	66201	7944,12	Unknown	Application	Vehicles	Automotive-other	VehiclesUnknown	
1	870919	5	394	2312926	54767416	6	Vehicles</												

2	871130	5	2022	353612	76046793	6 Motorcycles	174,882295	174,882295	0,00464993	0,00464993	353612	42433,44	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
1	871130	5	59	16554	1527921	6 Motorcycles	280,576271	280,576271	0,01083433	0,01083433	16554	1986,48	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
1	871140	5	2153	428053	95688672	6 Motorcycles	198,817	198,817	0,00447339	0,00447339	428053	51366,36	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
1	871140	5	8	1936	149650	6 Motorcycles	242	242	0,01293685	0,01293685	1936	232,32	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
1	871150	5	4557	1239149	375575321	6 Motorcycles	271,922098	271,922098	0,00329934	0,00329934	1239149	148697,88	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
1	871150	5	53	14057	3420890	6 Motorcycles	265,226415	265,226415	0,00410916	0,00410916	14057	1686,84	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
2	871190	5	0	0	0	6 Motorcycles	N/A	N/A	N/A	0,0040349	0	0	0	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown
1	871190	5	1	185	45850	6 Motorcycles	185	185	0,0040349	0,0040349	185	22,2	Unknown	Application	Motorcycles	Automotive-other	MotorcyclesUnknown	
2	900661	5	3362	5402	7600760	6 Photographic flashlight	1,60678168	1,60678168	0,00071072	0,00071072	5402	1080,4	Unknown	Application	Photographic fla:	Electronics	Photographic flashlightUnknown	
1	900661	5	3234	4194	4795989	6 Photographic flashlight	1,29684601	1,29684601	0,00087448	0,00087448	4194	838,8	Unknown	Application	Photographic fla:	Electronics	Photographic flashlightUnknown	
2	910212	5	47430	9812	10582776	6 Wrist-watches	0,20687329	0,20687329	0,00092717	0,00092717	9812	2158,64	Unknown	Application	Wrist-watches	Electronics	Wrist-watchesUnknown	
1	910212	5	11256	1944	1412125	6 Wrist-watches	0,17270789	0,17270789	0,00137665	0,00137665	1944	427,68	Unknown	Application	Wrist-watches	Electronics	Wrist-watchesUnknown	
2	910219	5	115485	17461	75477877	6 Wrist-watches	0,15119713	0,15119713	0,00023134	0,00023134	17461	3841,42	Unknown	Application	Wrist-watches	Electronics	Wrist-watchesUnknown	
1	910219	5	3627	933	2244714	6 Wrist-watches	0,25723739	0,25723739	0,00041564	0,00041564	933	205,26	Unknown	Application	Wrist-watches	Electronics	Wrist-watchesUnknown	
2	940120	5	66057	523846	73150879	6 Cars seats	7,93021179	7,93021179	0,00716117	0,00716117	523846	62861,52	Unknown	Application	Cars seats	Automotive-other	Cars seatsUnknown	
1	940120	5	5768	106782	21833364	6 Cars seats	18,5128294	18,5128294	0,00489077	0,00489077	106782	12813,84	Unknown	Application	Cars seats	Automotive-other	Cars seatsUnknown	
2	961900	1	0	24090831	921423030	6 Sanitary towels	N/A	N/A	0,02614525	0,02614525	24090831	24090831	Unknown	Application	Sanitary towels	Others	Sanitary towelsUnknown	
1	961900	1	0	17768	1402092	6 Sanitary towels	N/A	N/A	0,01267249	0,01267249	17768	17768	Unknown	Application	Sanitary towels	Others	Sanitary towelsUnknown	

1: Import
2: Export

0: Not reported
1: No Quantity (all quantities zero, standard if 0-3 digits)
2: Area in square meters
3: Electrical energy in thousands of kilowatt-hours
4: Length in meters
5: Number of items
6: Number of pairs
7: Volume in litres
8: Weight in kilograms
9: Thousands of items
10: Number of packages
11: Dozens of items
12: Volume in cubic meters
13: Weight in carats

Appendix

Table 17 Subtotal on Norwegian application

Application	Import (kt)	Export (kt)	Net inflow (kt)
Bags	52,72	4,25	48,47
New tyres	39,72	0,36	39,36
Other packaging	16,06	0,05	16,00
Boxes, cases, crates	21,72	6,35	15,37
Other bags	11,42	0,10	11,32
Toys	10,13	0,71	9,43
Lids and caps	9,98	1,41	8,58
Monofilament rods, sticks > 1mm	9,31	1,02	8,29
Tubes, pipes, hoses	32,30	24,42	7,88
Fibres	6,23	0,11	6,12
Clothes	15,96	11,26	4,70
Other bottles	30,73	27,36	3,36
Curtains	3,15	0,00	3,15
Vacuum cleaners	1,98	0,23	1,75
Cars	9,74	8,00	1,74
Drinks bottles	7,29	6,48	0,81
Hats	0,69	0,07	0,62
Electro-mechanical domestic appliances	0,62	0,03	0,58
Umbrella	0,47	0,00	0,47
Microwaves	0,44	0,00	0,44
Retreated tyres	0,79	0,38	0,41
Microphones, headphones, loudspeakers	0,81	0,45	0,36
Motorcycles	0,32	0,04	0,28
Mobile phones	0,30	0,04	0,25
Lighting, windscreen wipers, defrosters	0,26	0,01	0,25
Inner tubes	0,15	0,00	0,15
Portable electric lamps	0,13	0,02	0,11
Music players	0,09	0,00	0,09
Shavers	0,06	0,00	0,06
Radio	0,07	0,03	0,04
Sound and video recording apparatus	0,02	0,00	0,02
Telephone sets	0,04	0,02	0,02
Parts of calculating machines	0,00	0,00	0,00
Calculating machines w/ printer	0,00	0,00	0,00
Calculating machines w/o printer	0,00	0,00	0,00
Calculators	0,00	0,00	0,00
Dairy packaging	0,00	0,00	0,00
Data processing machines	0,00	0,00	0,00
Fax machines	0,00	0,00	0,00
Parts of typewriters	0,00	0,00	0,00
Sound recording apparatus	0,00	0,00	0,00
Tarpaulins	0,00	0,00	0,00
Teleprinters	0,00	0,00	0,00
Television	0,00	0,00	0,00

Photographic flashlight	0,00	0,00	0,00
Wrist-watches	0,00	0,01	-0,01
Rugs	0,00	0,01	-0,01
Filaments	0,09	0,11	-0,02
Cars seats	0,01	0,06	-0,05
Gloves	0,01	0,08	-0,07
Swimwear	0,01	0,11	-0,10
Accessories	0,03	0,30	-0,27
Cigarette filters	0,00	0,29	-0,29
Hosiery	0,03	0,40	-0,37
Photographic films	0,01	1,18	-1,17
Fabrics	3,10	4,46	-1,36
Ropes	0,69	2,55	-1,86
Linen	0,48	2,48	-2,00
Fishing nets	3,66	6,15	-2,49
Vehicles	10,65	14,28	-3,63
Household, hygienic or toilet articles	0,22	6,01	-5,79
Tableware and kitchenware	0,14	7,25	-7,11
Footwear	0,20	7,89	-7,69
Floor, wall or ceiling coverings	1,18	19,30	-18,12
Sanitary towels	0,02	24,09	-24,07

Table 18 Subtotal on Norwegian sector

Sector	Import (kt)	Export (kt)	Net inflow (kt)
Packaging	138,50	45,90	92,60
Automotive-tyres	40,66	0,74	39,92
Textile	42,56	29,93	12,63
Electronics	4,56	0,83	3,73
Automotive-other	20,98	22,39	-1,41
Fishing	3,66	6,15	-2,49
Houshold, Leisure, Sport	10,50	15,15	-4,65
Construction	33,48	43,72	-10,24
Others	9,33	25,40	-16,07

Table 19 Most common plastic types and their applications (GESAMP, 2015)

Substance	Common applications	Relative density*
PE	Plastic bags, storage containers, buoys, nets	0,89-0,93
PP	Rope, bottle caps, gear, strapping, buoys, nets	0,88-0,90
PSE	Cool boxes, floats, cups, buoys, nets	0,98-1,02
PS	Containers,	1,01-1,06
PVC	Film, pipe, containers, nets	1,13-1,27
PA	Nets, rope	1,10-1,12
PET	Bottles, strapping	1,31-1,35

*: seawater at 4°C, 1.027 g/cm³

Appendix

Table 20 Estimation of appliance's plastic in Norway(Mepex & HMF, 2020)

Product group	Annual consumption kt/ year	Quantity in use kt/ year	Plastic waste kt/ year	Reuse and recycle kt/ year
Packaging *	209	209	209	60
Car tires***	63	200	60	10
Other products	n.a	100	50	n.a
Textiles**	n.a	250	50	15
Construction	n.a	1000	40	8
Household products	n.a	15	30	4
Fisheries/ Aquaculture	n.a	200	30	8
Electronics	n.a	200	25	12
Vehicles	n.a	500	20	3
Agriculture	0,02	50	20	12
Leisure boats	n.a	250	6	5
SUM	n.a	3109	540	132,5

* under 100 L

** calculated at 50% of the amount

*** calculated at 100% even if not everything is

Table 21 Overboard plastic littering by Norweigan fishermen in 2018

Item	Volume	Reference
Number of boats	5295	(Fiskeridirektoratet, 2020)
Number of fishermen	11219	(Statistics Norway, 2021b)
Mean number of fishermen per boat	2.12	
Number of days at sea	130	(Skatteetaten, 2021)
Total population (capita)	5295619	(Statistics Norway, 2021a)
Packaging littered (kt)	35	(Strøm, 2017)
Littering rate (kg/cap/day)	0.0362	
Average plastic waste littered overboard (tonnes)	52.8	

Note:

Finishing net (Item 9 in Tool 6.1 assessment matrix)

= Plastic gears direct leakage calculation + average plastic waste littered overboard

= 380 t (Deshpande et al., 2020) + 52.8 t (Tool 3.1 Sheet 2)

= 432.8 t

Other items in the assessment matrix use coastal cleanup data from Ocean Conservancy(Figure 25), which is attached to the sheet “Ocean_Conservancy_database” in Tool 6.1 excel file.

Data source of Table 21:

Deshpande, P. C., Philis, G., Brattebø, H., & Fet, A. M. (2020). Using Material Flow

Analysis (MFA) to generate the evidence on plastic waste management from commercial fishing gears in Norway. *Resources, Conservation & Recycling: X*, 5, 100024. <https://doi.org/10.1016/j.rcrx.2019.100024>

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Appendix

Figure 25 T6.1 Norwegian environmental impact matrix calculation

TOOL T6.1 MARINE PLASTIC ENVIRONMENTAL IMPACT ASSESSMENT MATRIX

NORWAY

		STEP 1				STEP 2			
		Fate & Exposure				Effect			
		Qualitative assessment of the probability of marine organisms to be in contact (exposure) with the plastic from a given plastic application. Step 1 includes 4 criteria : 1.1 → 1.4 as listed below. Each of these criteria is assessed using a 3 level notation.				Qualitative assessment of the potential effects that the application may have on marine organisms. Includes			
		1.1	1.2	1.3	1.4	2.1			
		Frequency of Occurrence	Initial number of pieces/kg	Buoyancy (g/cm3)	Expected Degradation Rate (year ⁻¹)	Potential impact			
Supporting info if available									
3 Level qualitative notation	High	3	Frequently: Fishing Net	High	≤ 0,9	More than 100 years	Frequently described as frequently causing harm such as suffocation or entanglement		
	Medium (or unknown)	2	Occasionally: Bottle	Medium	≥ 0,9 ≤ 1,1	More than 1 year ; Less than 100 years	Sometimes described as frequently causing harm such as suffocation or entanglement		
	Low	1	Rarely: Tyre Dust	Low	≥ 1,1	Less than 1 year	Never described as frequently causing harm such as suffocation or entanglement		
<i>User Weighting</i>		1	1	1	1	1	Sum		
Application (list to import from T3 and T4)	number of items								
1 Lids and caps	249	2	3	2	2	3	7	not considered	
2 Other packaging	4	1	2	2	2	3	5	not considered	
3 Bags	1209	3	3	3	2	3	9	hotspot	
4 Cigarette filters	531	3	3	1	2	2	6	not considered	
9 Fishing nets	434	2	1	2	2	3	5	not considered	
5 Drinks bottles + Other bottles	2950	3	2	1	2	3	6	not considered	
6 Dairy packaging	219	2	2	2	2	2	5	not considered	
7 Boxes, cases, crates	299	2	3	3	3	2	8	hotspot	
8 Sanitary towels	0	1	3	3	3	1	6	not considered	
9 Baby diapers	0	1	3	3	2	1	5	not considered	

Meeting summary with Environmental Action (2021.April.8th)

On 2021.April.8th, an Environmental Analyst from Environmental Action who worked in the technical team of the Guidance, joined the online meeting on general information of the Guidance. The summary of the meeting minutes is recorded as below.

- Overview of the Guidance

The Guidance's method was developed at the same time of investigating the first pilot, which took roughly 1.5 years. At now with more focused target and shorter version of report, a pilot's report can be ready within 2 to 3 weeks. By now 10 countries/regions have been implementing the Guidance (including unfulfilled ones), after the long time of developing and practicing, the crucial information the Guidance needs are clear. Now the focus is more on polymer analysis and sectors, while geographical mapping is feasible if required. As for regional and waste management section which is more conceptual hence hard to quantify.

Often the case that governments or organisations track the production of Plastics, on the contrast very rarely the organisation track the all material flows of plastics are traced, and recycling part is often missing. The Guidance tracks the first step of plastic waste, but is unclear about what happened afterwards. For instance, the waste amount in country A is known, but whether if part of waste is imported from other countries B,C,D are unclear, and will these trash stay inside of A or being further exported to E is uncertain. The chain of waste management is long and complex, making it hard to track each step.

- Past

- 1.The challenge of applying this guidance

The biggest challenge is data collection, especially recycling of the polymer type. Often countries will report their recycle rate, but it is not distinguishably stated whether it is overall recycling rate, average recycle rate, and questions also have such like 'recycle rate of what?'. PlasticEurope release reports annually, and in their reports the problem can be spotted very obviously. For the missing data on recycling side, the data are purchased from consultancy companies.

2.The biggest advantage and disadvantage of guidance

Advantage:

It creates a complete overview of the current situation and covers wide aspects, which are cohere to each other: the polymer is cohere to sectors, and applications, and geographical, and waste.

The strongest point is there must be a balance mass between the input and output, so uncollected = input - collected. Discrepancy indicated the mis-managed/uncollected plastic waste that often is hard to estimate since required information is unknown and hard to investigate.

Disadvantage:

The Coherency in Tool 1.4 is helpful to map matrix, the sector is mapped from the polymer by knowing the selector's composition of polymer, like the polymer in which sector is used. However this pattern can be variable by country, and the Guidance only has global allocation rules. It would be more accuracy to use country-specific allocation rule. Moreover, primary plastic pattern can vary from developing country to developed country, which can be hard to remember when the UN Comtrade database is not publicly available.

- Present

1.Guidance's role in an after-Pandemic world

Guidance can be used for a time-series comparison for a certain object. By benchmarking / baselining the case before the pandemic, the pandemic's impact to plastic leakage can be captured: single-use plastic consumption, uncollected plastic waste, shifting between application, sector.....all these results could offer reference to waste policy-makers

2. Medical leakage rased by COVID-19 pandemeic

EA didn't really have specific data on medical waste disposal. Though typical medical plastic is small, easy to be lost, EA didn't know exactly whether the medical waste was redirected to the proper waste management or to the general mixed waste in most of the countries. Medical plastic has higher leakage rate but relative leakage rate is controversial index. Considering the total medical plastic waste amount before the COVID-19 pandemeic, it was not worthy investing too much effort in African and Asisan trying to collect more accurate data on medical waste disposal yet in Cyprus and meronaca, there is records for medical plastic, so EA is aware of its fate.

In EA's field work, syringes floating in the Kenyan canal were observed. Again, using relative leakage rate can be tricky, this may be a point worthy adjust when applying the Guidance in the context of pandemic

- **Future**

An open data sharing platform on plastic waste Plateax (<https://www.plasteax.org/>) is in the process of continued development and improvement, and it would work as a center of the data gathered by EA.

In the May of 2021, a new pilot report of Tanzania will be published.

Master Thesis Agreement

The Working Title for the Thesis:

This is the working title of your thesis. You will be able to set the final title when you submit your Thesis in Inspira Assessment.

National Guidance for Plastic Pollution Hotspotting and Shaping Action:

developing the pilot for Norway

Problem Description:

Problem description for the thesis. The problem description may change as you work on your thesis. This must be done in consultation with your supervisor.

Plastic pollution has become one of the most concerning environmental problems on a global scale in the past few decades, which has also received public and academic attention widely. Many studies have proven that plastic pollution is not only damaging the environment, but also posing a threat to human health. In 2010, an estimation of 4.8 to 12.7 tons of plastic had entered the oceans (Lusher et al., 2017); meanwhile the latest study points out that the total yearly microplastic intake of all humans through seafood could reach 53,864 pieces (Danopoulos Evangelos et al., 2020). Numerous facts and studies have shown that plastic pollution is in urgent need of solutions (Fadeeva & Van Berkel, 2021; Gorrasi et al., 2020; Patrício Silva et al., 2021).

As our understanding of plastic pollution gets deepened, identifying and hotspotting of plastic leakage are believed to play important roles in pollution control (Tasseron et al., 2020). In these procedures, an emerging framework is developed by the National Guidance for Plastic Pollution Hotspotting and Shaping Action (the Guidance). As a guidance constructed jointly by the United Nations Environment Programme (UNEP), the International Union for Conservation of Nature (IUCN), and the Life Cycle Initiative, the Guidance provides a wide range of models and tools to identify and hotspot plastic pollution leakages' location and happening reasons, which can be further presented as crucial reference to policy makers (Life Cycle Initiative, 2020).

In this thesis, the Guidance technical stream modules T1 to T6 are studied based on the pilot reports. The applicability of these modules in the Norwegian context is explored. The aim of this master thesis is to investigate the possibility of conducting such a pilot in Norway,

estimate the efforts required to do so, and to take the first steps in initiating such a pilot. Due to time constraints in the master thesis, it will be unrealistic to have a finished pilot project

Research Plan:

The following tasks are to be considered

1. Look at the reports of the completed country pilots:
 - a. How did they carry the pilot project out?
 - b. What data did they collect or estimate (from which sources)?
 - c. What of the presented data or approaches is transferable to Norway?
2. Compare the plastic leakage from the finished country pilots with each other. Are there any lessons learnt that could be used for Norway as well?
3. For Norway specifically
 - a. Investigate the data needs
 - b. Identify available data
 - c. Identify data gaps
4. Start conducting the pilot (modules) for Norway

Task	Start date	End date	Duration	Progress	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15	WEEK 16	WEEK 17	WEEK 18	WEEK 19
					01.02.2021	08.02.2021	15.02.2021 ☆	22.02.2021	01.03.2021	08.03.2021 ☆	15.03.2021	22.03.2021	29.03.2021 ☆	05.04.2021	12.04.2021	19.04.2021 ☆	26.04.2021	03.05.2021	10.05.2021 ☆	17.05.2021	24.05.2021	31.05.2021 ☆	07.06.2021
Phase 1 Completed pilots reports reading	2021-02-01	2021-03-01	4																				
Draw pilot implementation processes	2021-02-01	2021-02-08	1																				
Recognize data sources and categories required	2021-02-01	2021-02-15	2																				
Compare the plastic leakage in pilots' countries	2021-02-08	2021-02-22	2																				
Sort approaches/lessons transferable to Norway	2021-02-15	2021-03-01	2																				
Phase 2 Norwegian context	2021-03-01	2021-05-10	10																				
Investigate the data needs in modules	2021-03-01	2021-03-08	1																				
Collect the available data and identify the data gaps	2021-03-08	2021-04-05	4																				
Conduct the realizable modules	2021-04-05	2021-05-03	4																				
Interpret the results	2021-05-03	2021-05-10	1																				
Phase 3 Thesis Writing	2021-02-15	2021-06-07	16																				
Introduction	2021-02-01	2021-03-01	4																				
Methodology	2021-03-01	2021-03-15	2																				
Results and discussion	2021-03-15	2021-05-03	7																				
Conclusion and limitation, Outlook	2021-05-03	2021-06-07	5																				

Note: ☆ Supervision Meeting

Checkpoint, Thursday before next Tuesday's meeting

Main Supervisor: Francesca Verones

Co-Supervisor: Karl Klingsheim

Master Student: Fei Song

Date: 2021.01.15

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