



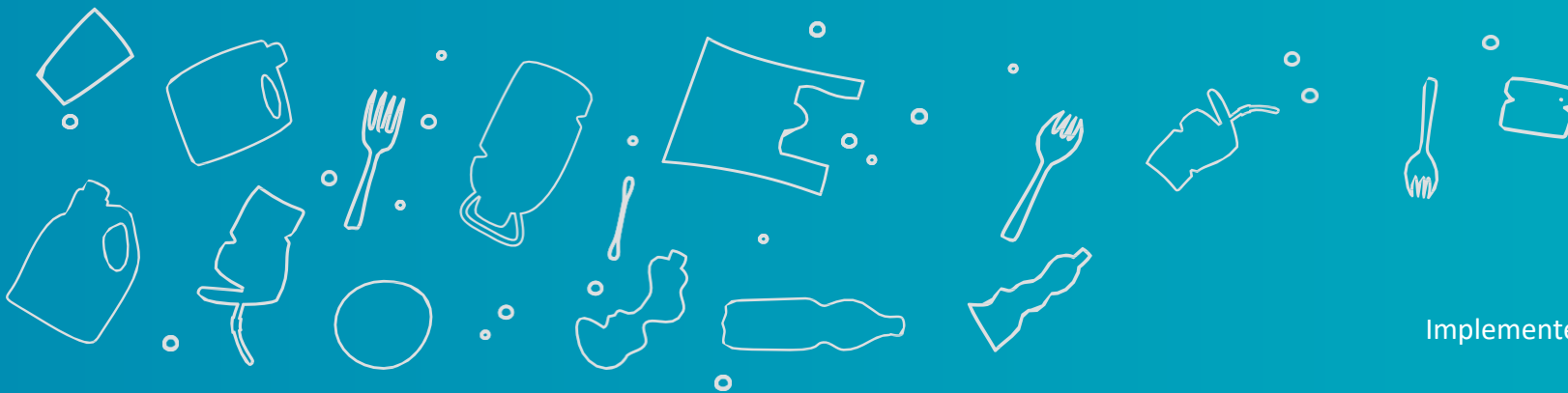
NATIONAL GUIDANCE FOR PLASTIC POLLUTION HOTSPOTTING AND SHAPING ACTION



T1

Inventory of Plastic Flows

September
2020



Implemented with



NATIONAL GUIDANCE FOR PLASTIC POLLUTION HOTSPOTTING AND SHAPING ACTION

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HOW TO READ THIS DOCUMENT



MODULE

Modules are the instruction for the tools. Each module is composed of one or several tools. Technical modules focus on generating hotspot information by the technical team. Strategic modules focus on generating interventions and instruments by involving a wider group of stakeholders.



TECHNICAL MODULE



STRATEGIC MODULE



TOOL REFERENCE

Tools are the building blocks of the guidance. Tools are of three categories: input tools (for data collection), assessment tools (to generate the hotspots, interventions and instruments) and output tools (to provide summarised information and shareable data repository).



INPUT TOOL



ASSESSMENT TOOL



OUTPUT TOOL

White background

WORKFLOW SLIDE

Describes key stages and main actions to run the module and associated tools.

Grey background

SUPPORTING INFORMATION

Provides supporting information, references of background data.

Blue background






DEFINITIONS AND DESCRIPTIONS

Provides key definitions and high level objectives of the modules and tools.



T1

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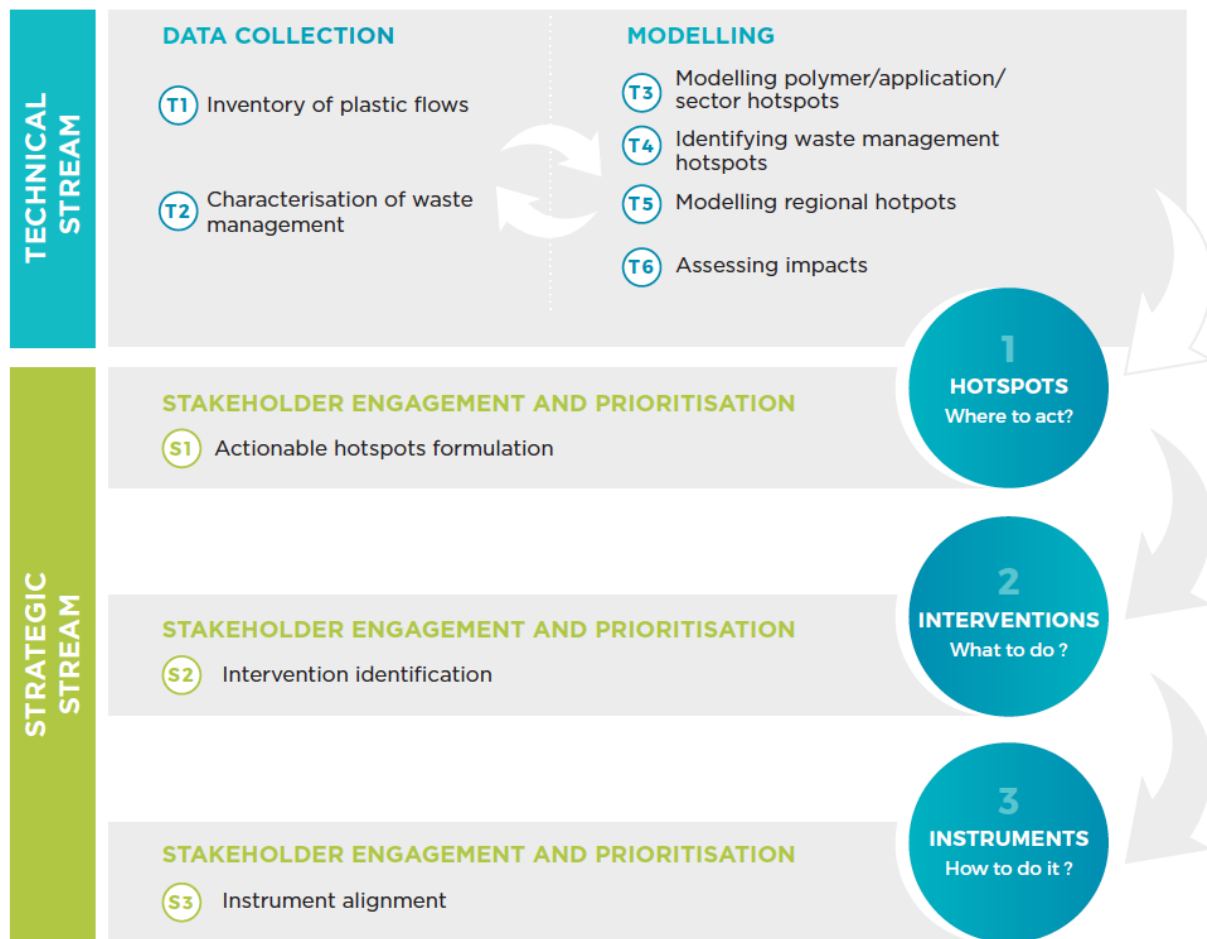


OBJECTIVE OF THE MODULE

This module aims at inventorying data on plastic sources and management from various sources in order to select the most relevant inputs for modules T3, T4 and T6.

Modules T1 and T2 complement each other to provide a comprehensive dataset on plastic flows and plastic waste management practices.

The output of this module is a raw data repository (tool A) with most relevant quantitative values of targeted plastic flows to be used for plastic hotspots identification and impacts assessment in modules T3 to T6.



RELATIONSHIP OF MODULE T1 WITH OTHER MODULES

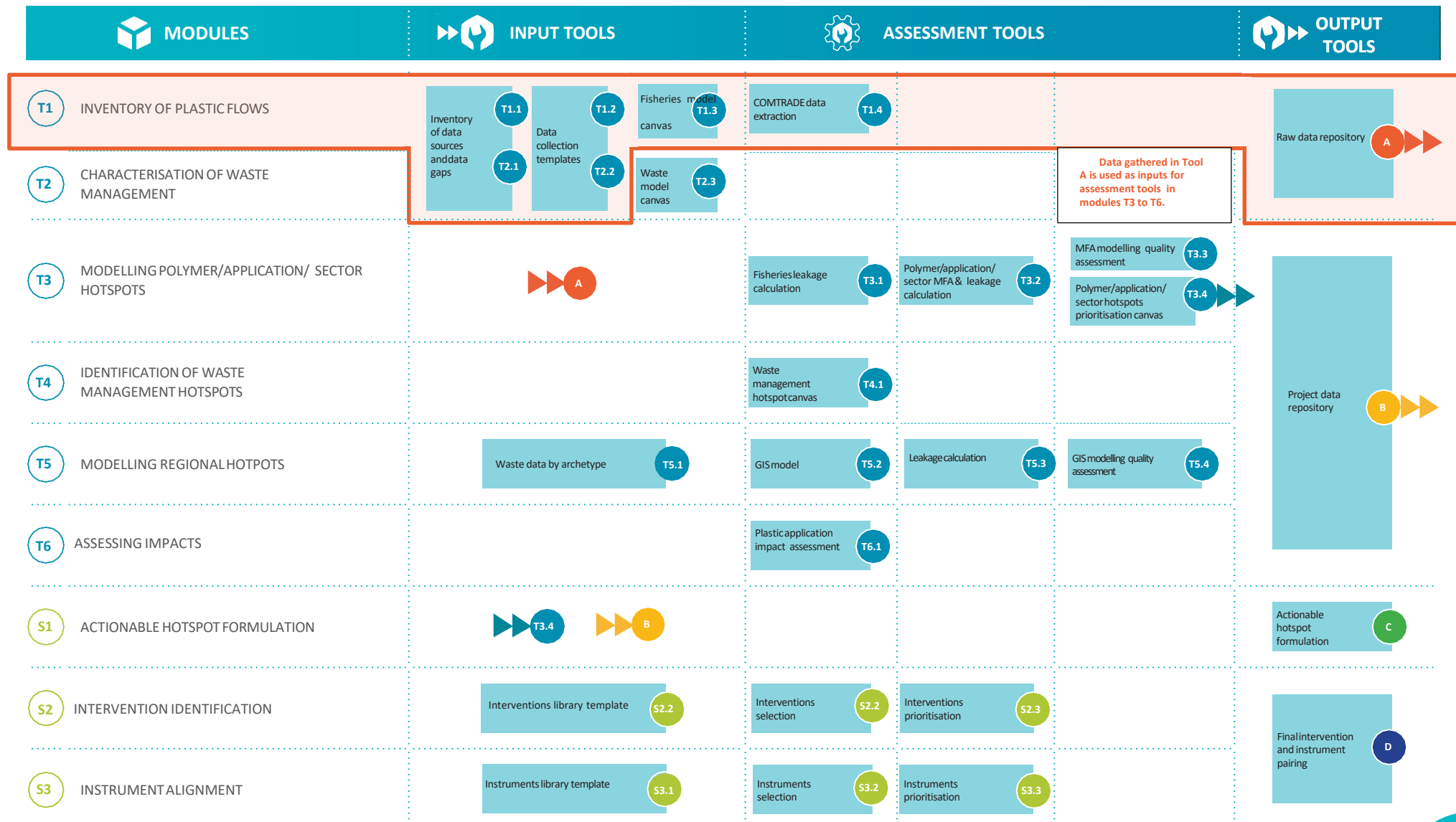
Module T1 is part of the technical work stream. The result of this module is the inventory of the most relevant data sources about plastic flows gathered either from literature or from targeted data collection efforts, in order to prepare inputs for modules T3, T4 and T6.

Module T3 will use data on plastic flows from T1 to calculate leakage from specific polymers, applications and sectors. Module T4 will use some values from T1 to evaluate the contribution of specific elements in the waste management system to overall plastic leakage. Module T6 will rather use data from beach-clean ups compiled in T1 to estimate the impacts of leaking applications on the marine ecosystem.



T1

TOOLS ASSOCIATED WITH MODULE T1



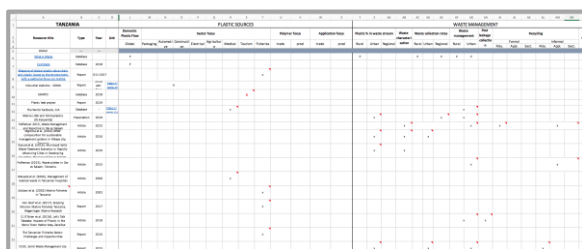


T1

EXCEL TOOLS ASSOCIATED WITH THIS MODULE (1/2)

T1.1

INVENTORY OF DATA SOURCES AND DATA GAPS



TYPE: **INPUT TOOL**

OBJECTIVE:

Allows to inventory relevant data sources to feed data inputs for the modelling modules, and helps identify data gaps.

T1.2

DATA COLLECTION TEMPLATES



TYPE: **INPUT TOOL**

OBJECTIVE:

Provides survey questionnaires to collect data on specific topics such as plastic production or waste management and characterisation.

T1.3

FISHERIES MODEL CANVAS



TYPE: **INPUT TOOL**

OBJECTIVE:

Provides a visual canvas to facilitate data collection from stakeholders in the fisheries sector.

These tools are available in the Excel Spreadsheet associated with this module.



T1

EXCEL TOOLS ASSOCIATED WITH THIS MODULE (2/2)

T1.4

COMTRADE DATABASE
EXTRACTION

Line	Code	Product	Material	Unit	Value	Quantity	Country	Year
13	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2018
14	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2019
15	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2020
16	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2021
17	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2022
18	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2023
19	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2024
20	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2025
21	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2026
22	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2027
23	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2028
24	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2029
25	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2030
26	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2031
27	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2032
28	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2033
29	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2034
30	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2035
31	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2036
32	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2037
33	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2038
34	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2039
35	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2040
36	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2041
37	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2042
38	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2043
39	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2044
40	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2045
41	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2046
42	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2047
43	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2048
44	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2049
45	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2050

TYPE:
ASSESSMENT TOOL

OBJECTIVE:

Facilitates the extraction and organisation of import/export data from the online trade database (such as COMTRADE).

A

RAW DATA REPOSITORY



Line	Code	Product	Material	Unit	Value	Quantity	Country	Year
1	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2018
2	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2019
3	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2020
4	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2021
5	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2022
6	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2023
7	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2024
8	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2025
9	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2026
10	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2027
11	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2028
12	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2029
13	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2030
14	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2031
15	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2032
16	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2033
17	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2034
18	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2035
19	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2036
20	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2037
21	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2038
22	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2039
23	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2040
24	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2041
25	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2042
26	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2043
27	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2044
28	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2045
29	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2046
30	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2047
31	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2048
32	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2049
33	3901	Plastic of primary forms	Plastic	kg	1000000	1000000	World	2050

TYPE:
OUTPUT TOOL

OBJECTIVE:

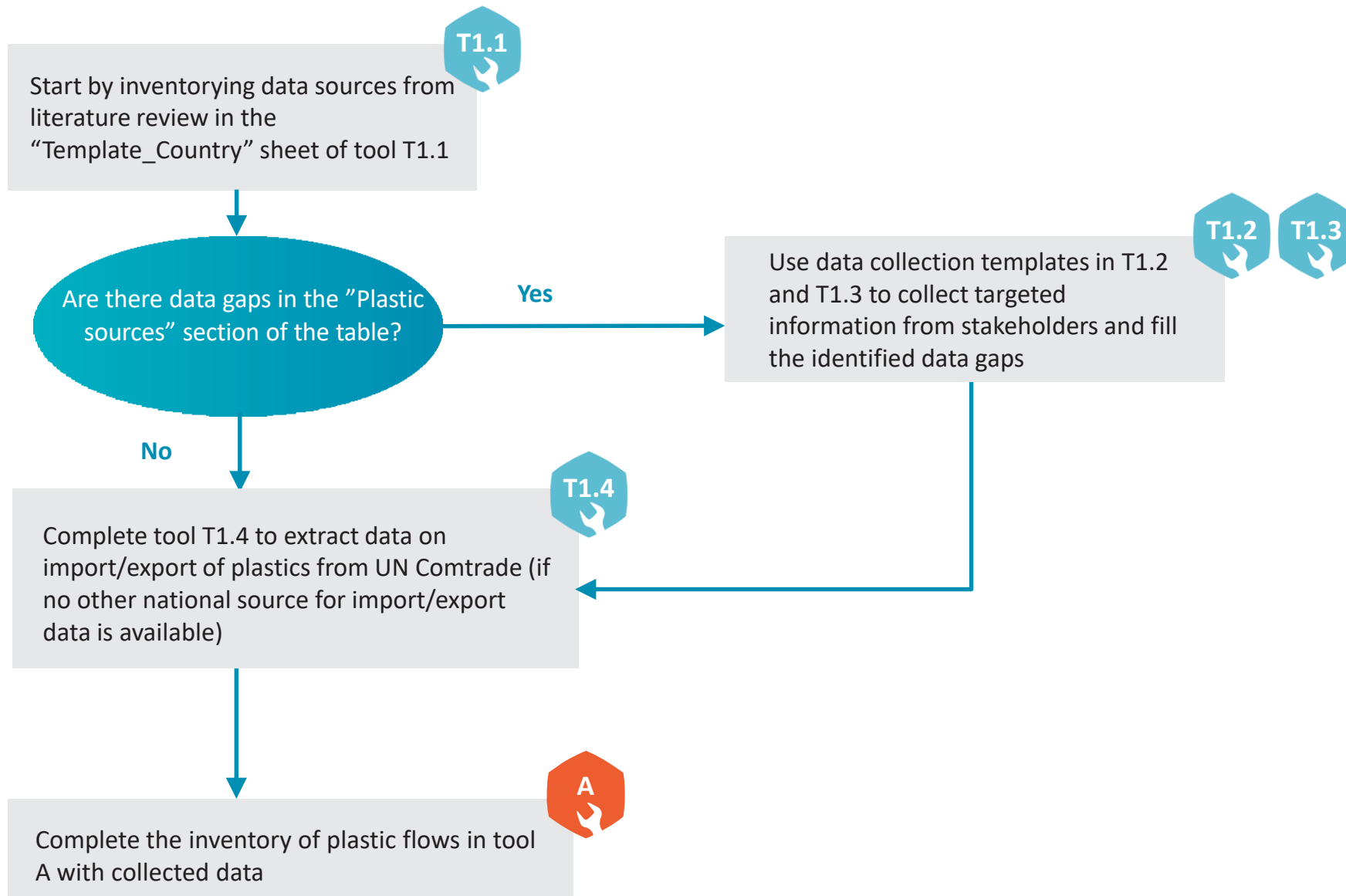
Gathers all necessary values to be transferred to modelling modules T3, T4, T5 and T6.

These tools are available in the Excel Spreadsheet associated with this module.



T1

HOW TO USE THIS MODULE?





TOOL

T1.1

Inventory of data sources
and data gaps

HOW TO USE THIS TOOL ?

The excel file T1.1-T2.1 contains two sheets both used for modules T1 and T2. The first sheet “Template_Country” provides an empty table to fill with data for the area of interest, while the second sheet “Example_SouthAfrica” provides a completed table as a reference for the user.

(5)

SOUTH AFRICA				PLASTIC SOURCES												
Resource title (1)	Type (2)	Year (3)	Link (4)	Domestic Plastic Flow	Sector focus								Polymer focus		Application focus	
				Global	Packaging	Automotive	Construction	Electrical	Agriculture	Medical	Tourism	Fisheries	Trade	Prod	Trade	Prod
Global	---	---	---													
What A Waste	Database	~2009	https://openknowledge.org/	x												
Comtrade	Database	2018	https://comtrade.org/			x		x				x	x		x	
ICIS	Database	2017-2019	https://www.dropbox.com/wic.environment.go.v.za/index													
South African Waste Information System (SAWIS)	Database	2004-2019	https://www.dropbox.com/wic.environment.go.v.za/index													
Industrial statistics - VDMA	Report	2018 extr. from 2015	https://www.dropbox.com/wic.environment.go.v.za/index			x										
Mapping of global plastic value chain and plastic losses to the environment: with a particular focus on marine environment	Report	2011-2017	https://www.dropbox.com/wic.environment.go.v.za/index					x								
Plastic leak project	Report	2019														
Plastics material flow and end of life management in South Africa Report	Report	2017	https://www.dropbox.com/wic.environment.go.v.za/index			x							x	x		

For each useful resource, insert the title (1) (descriptive enough to understand what it is), the type of information (2) (report, article, database, website, interview), the year of publication (3) and a link to access the data source (4) (if available). Then, tick the box below metric or topic names for which data has been found in the resource and optionally comment to specify data values or explain where to find information within the document (5).



DESCRIPTION OF THE APPROACH IN TOOL T1.1

- Many data-sources are available but they do not easily fit into a coherent framework
- We propose an economy-wide MFA (material flow analysis) framework for plastic accounting.
- Our intention is not to generate complex material flow analysis but to provide a guidance on how to answer some of the key questions that will be useful to understand the national plastic economy and identify relevant hotspots and interventions.
- We thus also propose a matrix framework, not focussing on building a coherent flow diagram, but mapping these key metrics.
- Depending on the level of information available and effort undertaken, some of these metrics may or may not be compiled.
- The proposed framework offers a global picture and a way to assess situation and level of knowledge related to plastic in the country.



TOOL

T1.2

Data collection templates

HOW TO USE THIS TOOL ?

The excel file T1.2-T2.2 contains several data collection templates both for modules T1 and T2. The first set of sheets provide questionnaires for T1 on plastic flows and specific sectors (*Production, Recycling, Fisheries, Tourism, Road Transport*), while the second set of sheets rather aims at collecting data for T2 on waste management at large (*Waste management, Waste characterisation, Littering management, Waste water management*)

The data collection templates are often organised in three sections:

- Contextualisation of the data provided **(1)** with the name and institution of the contact person, the year of reference and general questions on the topic.
- Key data values or estimates **(2)** (for instance, detailed production quantities for each polymer)
- Qualitative questions **(3)** to better understand the representativeness of the data provided in section 2 (for instance, if data provided is representative of the country average, etc.)

These templates are intended to cover a wide range of data needs for the project, but can be either revised or duplicated to cover other topics when the context of a country calls for it.

(1)
(2)
(3)

Plastic production

WHY WE NEED DATA/INFORMATION
The key questions that we are trying to answer are:
How much plastic is put on the market per polymer type ?
How much plastic is put on the market per application type ?

HOW TO PROVIDE THE DATA/INFORMATION
Any type of quantitative data or qualitative information will be useful. The templates include 3 sections : (i) contextual information, (ii) quantitative data (when available), and (iii) other data/information.

(i) Context of the data/information provided

The context data informs about the scope and boundaries associated with the provided data, so each data can be associated with a given archetype (i.e. a region with a set of homogeneous characteristics)

	Data / Information	Comment
Name of contact / institution		
Year of reference		
Quantity of plastic sold/produced, by weight		
What is your market share in terms of plastic produced/sold by you over the plastic produced/sold in the country? (known or estimated)		

(ii) Key data

The data is can be provided as a % of the waste stream in your area if available or in absolute value (e.g. tonnes). If none of this information is available any sort of qualitative information will be highly appreciated.

	Percentage	Absolute quantity	Qualitative estimate	Price at which you buy it [high/medium/low]
By weight, how much of the plastic you produce/sell is:				
PET				
PCV				
HDPE				
LDPE				
PP				
Polystyrene				
Other.....				
Other.....				

(iii) Qualitative aspects

This last section will help us better the waste management sector in your country

	Comments
Do you think the information you shared with us are representative of the country average? If not, why?	



TOOL

T1.3

Fisheries model canvas

HOW TO USE THIS TOOL ?

The *Fisheries model canvas* (T1.3) is a tool that we advise to use in order to guide interviews with stakeholders belonging to the fisheries sector. It can also be used as a useful mind-map for the user, to better understand the different steps of the components of the fisheries sector, including the number of boats, fishermen and fishing gears.

The input quantities requested in section **(1)** are not only the number of boats but also the number of fishermen. The user can specify if boats belong to artisanal or commercial fisheries and if they are used for lake or open sea fishing. If detailed numbers of fishermen per boat type are not available, the total number of fishermen in the region can be reported in the top right corner (grey background).

The section **(2)** focuses on reporting number of fishing gear in use during the year as well as gear losses at sea (or lake).

In section **(3)**, the user can remind how discarded fishing gears on land are managed in the area of interest (are they brought to a landfill, incinerated, burned or recycled?)

FISHERIES MODEL CANVAS

1
Fleet and fishermen

Large boats

Coastal / Inland

Artisanal / Commercial

Medium size boat

Coastal / Inland

Artisanal / Commercial

Small size boat

Coastal / Inland

Artisanal / Commercial

Unregistered

Coastal / Inland

Artisanal / Commercial

2
Fishing gears

Number of fishing gear by type

Fishing net loss from gear by type (approx.)

3
Fishing gear waste management

Dumpsite + non-sanitary landfills

Sanitary landfills

Incineration

Informal recycling

Formal recycling

Open burning

Year :

Total fishermen :

NATIONAL GUIDANCE FOR PLASTIC POLLUTION HOTSPOTTING AND SHAPING ACTION

T1.3



TOOL

T1.4

COMTRADE data extraction



(1)

The sheet “User guide” provides basic information to find the right datasets on any trade database (1). It includes all useful commodity HS codes as well as reporter and partners country codes (at least for the pilot countries). Other sheets are dedicated to organising extracted data and provide prebuilt tables to summarise information at a higher level (such as in sheet “PolymerFocus” (2)).

We recommend to look for national trade database before deciding upon using the UN Comtrade database.

(2)

(2)



SUPPORTING INFORMATION IN TOOL T1.4

WHAT COMMODITY CODES SHOULD I USE IN A TRADE DATABASE TO FIND MAIN PLASTICS?

3902, 3903, 3904, 3905, 3906, 4002, 370110, 370120, 370130, 370191, 370199, 370210, 370220, 370231, 370232, 370239, 370241, 370242, 370243, 370244, 370251, 370252, 370253, 370254, 370255, 370256, 370291, 370292, 370293, 370294, 370295, 390110, 390120, 390130, 390140, 390190, 390710, 390720, 390730, 390740, 390750, 390760, 390761, 390769, 390770, 390791, 390799, 391510, 391520, 391530, 391590, 391610, 391620, 391721, 391722, 391723, 391729, 391731, 391732, 391733, 391739, 391740, 391810, 391910, 391990, 392010, 392020, 392030, 392041, 392042, 392043, 392049, 392051, 392059, 392061, 392062, 392063, 392069, 392111, 392112, 392113, 392119, 392190, 392310, 392321, 392329, 392330, 392340, 392350, 392390, 392410, 392490, 401110, 401120, 401130, 401140, 401150, 401161, 401162, 401163, 401169, 401170, 401180, 401190, 401191, 401192, 401193, 401194, 401199, 401210, 401211, 401212, 401213, 401219, 401310, 401320, 401390, 560811,

847010, 847021, 847029, 847110, 847120, 847191, 847192, 847193, 847199, 847310, 847321, 850811, 850819, 850860, 850870, 850940, 850980, 850990, 851010, 851020, 851030, 851090, 851210, 851220, 851230, 851240, 851290, 851310, 851390, 851650, 851710, 851711, 851712, 851718, 851720, 851721, 851722, 851810, 851821, 851822, 851829, 851830, 851840, 851850, 851890, 851920, 851930, 851950, 851981, 851989, 852010, 852020, 852031, 852033, 852039, 852090, 852210, 852290, 852711, 852719, 852721, 852729, 852731, 852732, 852739, 852790, 852812, 852813, 852821, 852822, 852830, 870110, 870120, 870130, 870190, 870210, 870290, 870310, 870321, 870322, 870323, 870324, 870331, 870332, 870333, 870390, 870410, 870421, 870422, 870423, 870431, 870432, 870490, 870510, 870520, 870530, 870540, 870590, 870600, 870710, 870790, 870911, 870919, 870990, 871110, 871120, 871130, 871140, 871150, 871190, 900661, 910212, 910219, 940120,

3908, 3909, 3910, 3911, 3912, 3914, 391690, 391710, 391890, 392071, 392072, 392073, 392079, 392091, 392092, 392093, 392094, 392099, 392114, 3922, 392510, 392520, 392530, 392590, 392610, 392620, 392630, 392640, 392690

A thorough description of the codes is available in the sheet “SelectedCOMcodes” of tool T1.4.



SUPPORTING INFORMATION IN TOOL T1.4

WHAT ADDITIONAL COMMODITY CODES SHOULD I USE TO BROADEN THE SCOPE OF PRODUCTS EMBEDDING PLASTIC?

TEXTILES

630612, 630533, 630532, 630531, 630392, 630312, 630293, 630253, 630232, 630232, 630222, 630222, 630210, 630140, 621520, 621520, 621143, 621143, 621133, 621133, 621120, 621112, 621111, 620930, 620892, 620892, 620822, 620822, 620811, 620811, 620792, 620792, 620722, 620722, 620719, 620640, 620640, 620530, 620530, 620463, 620453, 620443, 620433, 620423, 620413, 620343, 620333, 620323, 620312, 620293, 620213, 620193, 620113, 611693, 611596, 611593, 611522, 611521, 611512, 611511, 611430, 611241, 611231, 611212, 611130, 611030, 610892, 610832, 610822, 610811, 610792, 610722, 610712, 610620, 610520, 610463, 610453, 610443, 610433, 610423, 610413, 610343, 610333, 610323, 610312, 610230, 610130, 600634, 600633, 600632, 600631, 600590, 600539, 600538, 600537, 600536, 600535, 600534, 600533, 600532, 600531, 600330, 600293, 600243, 600192, 600122, 581092, 580632, 580421, 580137, 580136, 580135, 580134, 580133, 580132, 580131, 560750, 560122, 551599, 551592, 551591, 551449, 551439, 551430

551429, 551419, 551349, 551339, 551329, 551319, 551299, 551291, 551229, 551221, 551219, 551211, 551120, 551110, 550999, 550992, 550991, 550942, 550941, 550932, 550931, 550922, 550921, 550912, 550911, 550810, 550690, 550640, 550630, 550620, 550610, 550510, 550390, 550340, 550330, 550320, 550319, 550311, 550310, 550190, 550140, 550130, 550120, 550110, 540794, 540793, 540792, 540791, 540784, 540783, 540782, 540781, 540774, 540773, 540772, 540771, 540730, 540720, 540610, 540500, 540490, 540410, 540269, 540263, 540262, 540261, 540259, 540253, 540252, 540251, 540249, 540248, 540247, 540246, 540245, 540244, 540243, 540242, 540241, 540239, 540234, 540233, 540232, 540231, 540220, 540219, 540211, 540210, 540110, 521159, 521152, 521151, 521149, 521143, 521142, 521141, 521139, 521132, 521131, 521129, 521122, 521121, 521120, 521119, 521112, 521111, 521059, 521052, 521051, 521049, 521042, 521041, 521039, 521032, 521031, 521029, 521022, 521021, 521019, 521012, 521011, 6601, 6507, 6506, 6505, 6504, 6503, 6502, 6501, 6406, 6405, 6404, 6403, 6402, 6401, 6310, 6309, 6308, 6307, 6217, 6216, 6214, 6212, 6210, 5211, 5210

OTHER PRODUCTS

220900, 220600, 220430, 220410, 220300, 220299, 220291, 220290, 220210, 220190, 220110, 210310, 200990, 200989, 200981, 200980, 200979, 200971, 200970, 200969, 200961, 200960, 200950, 200949, 200941, 200940, 200939, 200931, 200930, 200929, 200921, 200920, 200919, 200912, 200911, 330520, 330510, 40299, 40291, 40229, 40221, 40210, 40150, 40140, 40130, 40120, 40110, 3401, 3304, 3303, 961900, 240220, 9503, 9502, 9501

A thorough description of the codes is available in the sheet “SelectedCOMcodes” of tool T1.4.



A

Raw data repository

HOW TO USE THIS TOOL ?

The output tool A is an aggregator of all already existing data on plastic production, consumption, and waste management, structured in a coherent and functional way so that they can be used as an input for the modelling modules.

Tool A gathers output from both modules T1 and T2. The output sheets “T1_Polymer_Input_for_T3.2” **(1)**, “T1_Application_Input_for_T3.2” and “T1_Sector_Input_for_T3.2” require the user to summarise the data gathered in module 1 within the designated cells in order to feed the model in module T3 with necessary inputs. Data requirements are organised by themes such as plastic production, recycling or waste trade by polymer. The sheet entitled ” T1-T2_Input_for_T4.1” **(2)** requires specific values from both modules T1 and T2 in order to provide necessary inputs about waste management to tool T4.1.

(1)

PRODUCTION		Data Sources:
Input:		
Chosen approach: Take the maximum between ICI production and VPA production data		
Polymer Type	Production 2018	
PET		
PVC		
LDPE		
HDPE		
PP		
PS		
Polyester		
Other		
Synthetic Rubber		
RECYCLING		Data Sources:
Input:		
Polymer	Domestic recycling of collected for recycling	Domestic recycling of imported
PET		
HDPE		
PVC		
LDPE		
PP		
PS		
Other		
Polyester		
Synthetic Rubber		

Quantitative values and benchmarks for waste management hotspotting (T4)					Sources:
potential hotspot	unit	quantitative value	chosen benchmark	suggested benchmark	quantitative value chosen benchmark
plastic waste import	%			15%	
plastic waste generation	kg/cap/year			53	
Share of plastic in the waste stream	%			see WaW2 values in T4.1	
Collection of municipal waste	%			see WaW2 values in T4.1	
Collection of industrial waste	%			see WaW2 values in T4.1	
Share of plastic waste littered	%			2%	
Frequency of fly-tipping	%			see WaW2 values in T4.1	
Frequency of illegal burning	%			see WaW2 values in T4.1	
Share of waste ending up in unsanitary landfills	%			see WaW2 values in T4.1	
Share of waste ending up in dumpsites	%			see WaW2 values in T4.1	
Recycling capacity (compared to waste generated)	%			10%	
Collection of waste water	%			See WWTP values in T4.1	
Waste water treatment efficiency	%			See WWTP values in T4.1	

(2)



Life Cycle Initiative

Implemented with



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