



BeMed Business  
Club

# REMOVE AND REDUCE SINGLE-USE PLASTICS: WHERE TO START?

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*A proposed methodology from a BeMed Business Club  
pilot project  
May 2022*

## Introduction

### Identifying the issue

In 2020 plastic packaging represented **more than a quarter of the plastic put on the market**, and this number is increasing day by day.. According to Surfrider Foundation Europe in "ocean initiatives », packaging and other single-use plastics are the most common waste found on beaches (more details [here](#)). **How to fight against this ubiquitous pollution?**

At the European level, the **Single Use Plastic Directive (Directive (EU) 2019/904)** imposes all member states to ban or reduce the use of certain single-use plastics (SUPs). In France, the **AGEC law (LOI n°2020-105)** raises this objective by aiming to ban SUPs completely from the market by 2040. The whole of society is therefore **urged to rethink its uses and habits**. Within the framework of its Business Club, **BeMed is assisting the InterContinental Marseille - Hotel Dieu in its efforts to move away from SUPs** and to lay the foundations for the subsequent deployment of a sustainable approach.

The first step was to identify all the SUPs present in the hotel, however due to time and resource constraints, not all the SUPs could be considered. With more than 50 SUP items used on a daily basis they found themselves not knowing where to start. The first necessary step was to prioritise and sequence each item. **A prioritization method has therefore been developed** in order to target the products and plastic packaging with the greatest environmental impact. This methodology was developed for a hotel but can easily be transposed to other sectors.

*The method proposed in this document allows to establish priorities during a project with the goal to get rid of single-use plastics. In this specific case, the initial diagnosis revealed that there were too many SUP items and it was therefore necessary to sequence and prioritize them. The ultimate goal is obviously to deal with all of them... but where to start?*

### Guiding principles

Our prioritization methodology is based on the following guiding principles:

- **Take into account local considerations throughout the project** (e.g. local waste management)
- Identify the project leader's specific challenges (e.g. internal organization)
- Be able to prioritize SUPs **quickly and cost-effectively**
- Make sure the alternatives do not cause environmental **impact transfers**

## Overview

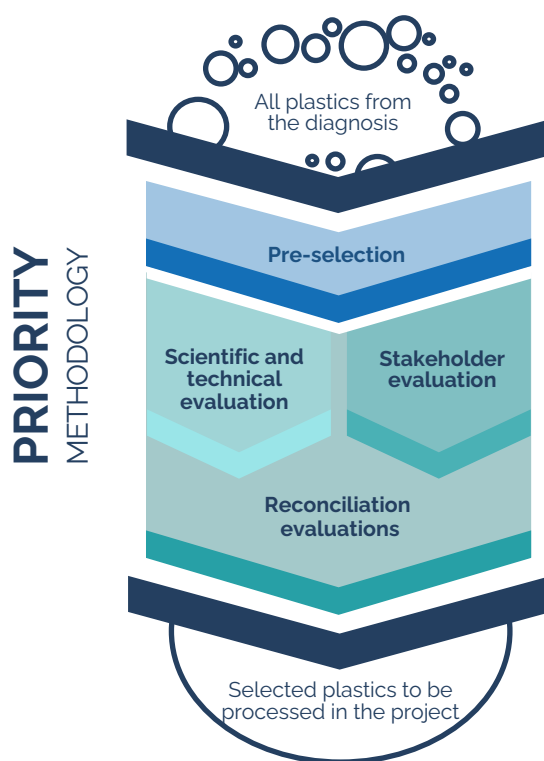
The prioritization methodology is illustrated in the diagram below, and is carried out after the initial SUP diagnosis has been completed (see box).

**First, a pre-selection** is made to exclude certain plastics from the scope of the study based on simple criterias: SUPs that cannot be efficiently recycled or consumed in small quantities.

**Then, a double evaluation** is performed for the remaining plastics:

- **A scientific and technical evaluation** to take into account the environmental impact of the product's lifespan.
- **A "stakeholder" evaluation** to take into account economic, regulatory and social criterias (characteristics specific to the project owner).

**Finally, these two assessments are reconciled** to propose a list of SUPs that the project leader can handle in terms of scheduling and means.



### Suggested procedure for the initial diagnosis

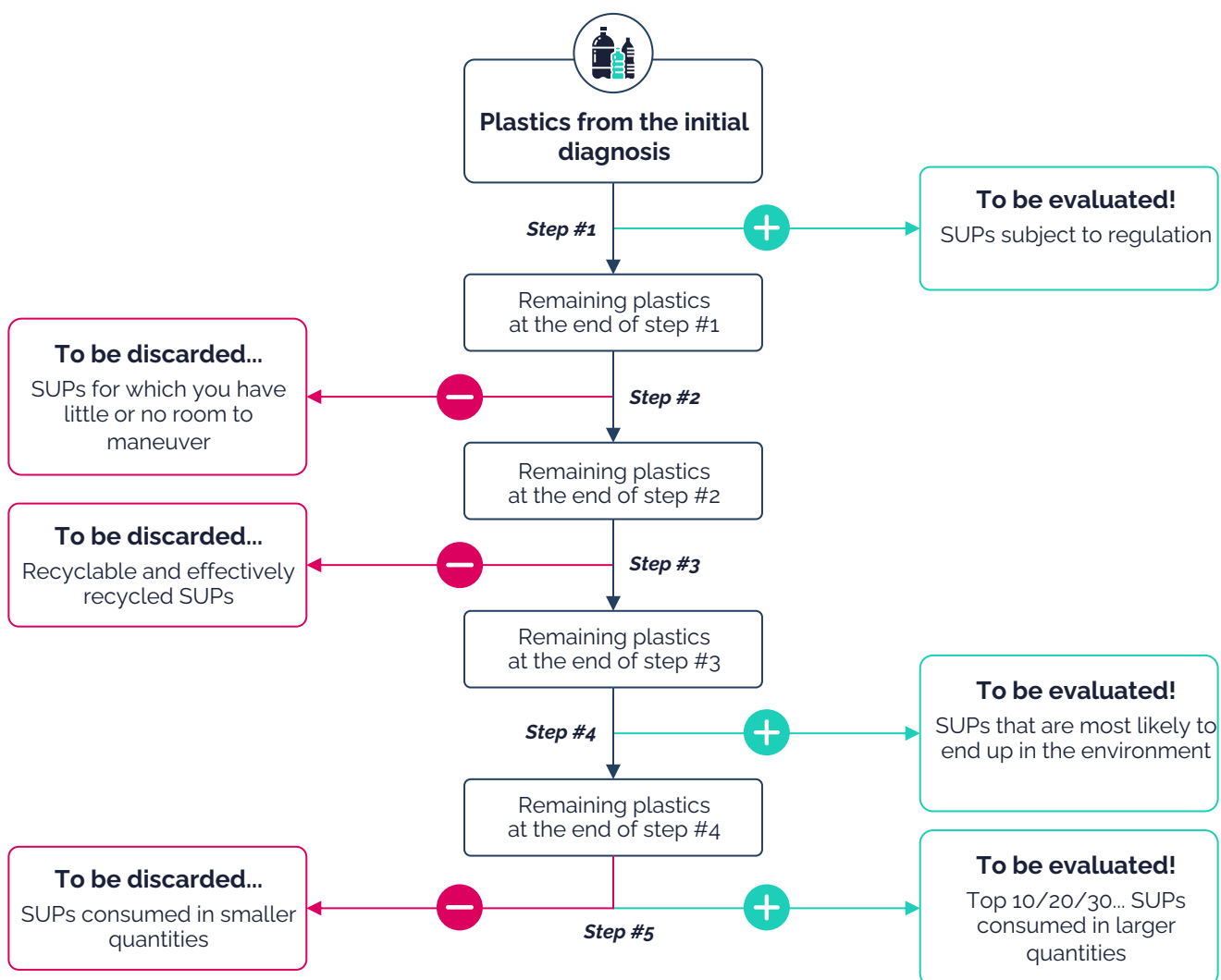
List in a spreadsheet all the SUPs present and the key data for prioritization: the approximate volume consumed over a given period, its life span (is each SUP sorted? collected? recycled?) and its use (what is each SUP used for? for whom?)

## 1. The pre-selection: to get to the point

*The objective of pre-prioritization is to exclude from the scope of the project certain plastics from the initial diagnosis in order to concentrate on the scientific/technical evaluation and stakeholder's evaluation. This will allow to identify the plastics that should be a priority, or even mandatory.*

The following diagram, and the details of the 5 steps to follow, allow us to separate the SUPs into 2 categories:

- **The SUPs that will need to be evaluated**, the ones you will focus on during the scientific/technical evaluation and the stakeholder's evaluation.
- **Discarded SUPs**, for which you will not pursue the methodology.





**1+**

## Evaluate the SUPs that need an action (mandatory)

Some plastics are subject to current or future regulatory bans. **You can include them in the list of plastics to be evaluated.**

**2-**

## Discarding SUPs for which no action is possible

For some plastics, you have little or no room to maneuver, either because they are imposed by standards (e.g., the star rating of your hotel), or because of prior commitments with your suppliers. **You can discard these plastics from the selection**, but don't forget to re-examine them when a supplier contract ends!

**3-**

## Discarding SUP's for which an action is not a priority

Some plastics are recyclable and actually recycled. These are therefore not a priority. To identify them, you have to ask yourself 2 questions:

- Is this plastic sorted and collected or not?
- Does the recycling chain for this plastic exist or not? In the framework of the BeMed pilot project and for the sake of simplification, the following hypotheses were followed: the channel exists for rigid plastics and does not exist for small plastics (<10cm), plastic films and flexible plastics, plastics containing toxic substances, black plastics.

**You can discard the sorted and collected SUPs for which a recycling system exists.**

**4+**

## Evaluate the SUP's that are the most likely to end up in the environment

In the case of the BeMed pilot project, we identified them through 2 questions:

- Does this plastic have a "nomadic use", i.e. a high probability of "going out" of the hotel based on experience?
- Is there a "proven risk of leakage"? The risk of leakage is proven for the most common plastics found on the beaches (see [Surfrider's list](#)), the detachable plastics, small, light and/or used outdoors.

**You can include in the list of plastics to be evaluated : the SUPs that have a nomadic use and a proven risk of leakage.**

**5+**

## Evaluate the SUPs consumed in larger quantities

Some plastics are consumed in greater quantities than others in your facility. Treating them first will have a greater impact. After ranking the remaining plastics at this stage from "most consumed" to "least consumed," **you can incorporate the top 10/20/30... most consumed plastics - and eliminate the others - depending on your ambition** to reduce plastics and the effort you can deploy.

## 2. The dual evaluation: an in-depth study

The criteria proposed for each of the evaluation techniques below are taken from scientific articles, grey literature, projects already carried out and discussions within the InterContinental Marseille - Hôtel Dieu pilot project working group.

### Scientific and technical evaluation

*This step allows us to evaluate the remaining plastics (at the end of the pre-selection phase) against environmental indicators to identify the actions that will have the greatest impact.*

A final score will be assigned to each plastic. It will be composed of the average score from the indicators listed below, multiplied by the mass of plastics consumed each year:



- **Material' indicators:** type of polymer, additives, use of recycled material, use of biosourced material.
- **Logistics indicators:** type of secondary and tertiary packaging, quantity of secondary and tertiary packaging per unit, proximity to producer, proximity to supplier.
- **The 'use' indicators:** product lifespan, possibility of re-using the item again for the same purpose, or re-using the SUP for a different purpose.
- **End-of-life indicators:** type of end-of-life, treatment channel, recycling rate, biodegradability.
- **Environmental' indicators:** climate change, impact on water depletion, human toxicity, terrestrial and marine ecotoxicity, depletion of fossil resources.

Obtaining the data needed for the calculations from suppliers can be difficult, due to missing data and approximations of the life cycle analysis databases.

The evaluation thus carried out will also be used later **to compare the evaluated SUPs with their alternatives**, and thus avoid any impact transfers. This evaluation requires the intervention of a consultant in order to carry out a simplified life cycle analyses (LCA).

## Stakeholder evaluation

*Stakeholder evaluation allows the group concerned by the project to be involved in the prioritization process, by considering criteria for which the group's (heterogeneous) opinion is relevant.*

It is important to ensure that all the stakeholders that are involved and affected by the project are represented to ensure that all points of views are taken into account in order to reach effective results.

The criteria considered in this evaluation are:

- **Economic' indicators:** price of the product or its alternative, cost of the change of investment, cost of the change of operation
- **Customer' indicators:** customer perception of the product, acceptability of the alternative by the customer (advice: don't put up barriers! A test phase of the alternatives will allow to confirm the acceptability and to find logistic solutions to implement them efficiently).
- **Internal organization' indicators:** practicality for the staff, simplicity of protocols
- The potential to find **relevant alternatives**



### Suggested operating procedure

Within the framework of the pilot project at the InterContinental Marseille - Hotel Dieu, the evaluation took the form of a 2-hour workshop, divided into 3 parts:

- **Prioritize:** Evaluation of the SUPs divided into two lists, according to the four criterias mentioned above. Each list is evaluated by two groups in parallel for a more complete evaluation.
- **Pooling:** comparison and compilation between groups that examined the same list, with the possibility of using totems and vetoes to "prioritize at all costs" one or two plastics and "discard at all costs" one or two plastics.
- **Restitute and synthesize:** presentation of the prioritization for both lists.



## Cross-referencing of evaluations and final ranking of plastics

*You now have the list of plastics prioritized according to their environmental impacts and the list of plastics prioritized according to the stakeholder assessment. The last step of this prioritization consists in combining these two assessments while ensuring (i) the willingness of the project leader and the actors involved to deal with these products or packaging and (ii) the overall consistency.*

To do this, simply select :

- Priority plastics common to both evaluations
- The priority plastics on each list

This list is then submitted to the project leader and to the people who will be involved so that they can give their opinion and veto certain plastics for which they are not ready to forgo. Thus, some plastics will not be taken into account, even if their environmental impact is strong, because they are subject to regulatory constraints, contracts with suppliers, or the staff is simply not able to give them up. Indeed, **if we have to take into account the environmental impacts, we must not forget that the solutions must be able to be implemented on site.**

Finally, it is wise to **check the overall coherence** of the products or packaging selected: in the case of the hotel, it would have been a shame to consider only certain elements of the bathroom kit, as the clientele could have been surprised by the lack of harmonization. In the same way, food products contained in plastic pods are part of a category that must be taken as a whole to remain consistent (e.g. different types of sugar, sauces, etc.).



## Annexes

### Contact

If you have any questions or require additional information, please do not hesitate to contact us. We will be happy to share our experiences and to help you go through proposed methodology!

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### Sources

- 1 The new plastics economy, WEF, 2016
- 2 2018 Ocean Initiatives Environmental Report Card, SFE, 2018
- 3 The methodology was co-constructed by Jean-Marc Meurville (professor at ENSAM) and the ConsultantSeas team, with the support of BeMed, in close collaboration with Florent Kohler (InterContinental), and with the support of Dimitri De Andolenko (Société des Bains de Mer de Monaco) and Rémi Bondu (Vacances Léo Lagrange).
- 4 Evaluation by the actors, taking into account their expertise and field experience.

### Special contributions

Formalization of the methodology and drafting of the form by [ConsultantSeas on](#) behalf of the BeMed Business club, with the scientific support of ENSAM.