

Contribution to the development of a joint public-private roadmap to transition to reduce the use of single-use plastics (SUPs) in Jordan

Sustainable alternative options to transition away from manufacturing and using SUPs are identified (Task 3 - D.3)

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Version	Document Title	Authors	Final review and Clearance
v.1	Sustainable alternative	Pedro Fernández	Anis ISMAIL
	options to transition away	Abdullah Ta'ani	
	from manufacturing and using	Evad Batarseh	
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WATER AND ENVIRONMENT SUPPORT IN THE ENI SOUTHERN NEIGHBOURHOOD REGION

The "Water and Environment Support (WES) in the ENI Neighborhood South Region" project is a regional technical support project funded by the European Neighborhood Instrument (ENI South). WES aims to protect the natural resources in the Mediterranean context and to improve the management of scarce water resources in the region. WES mainly aims to solve the problems linked to the pollution prevention and the rational use of water.

WES builds on previous similar regional projects funded by the European Union (Horizon 2020 CB/MEP, SWIM SM, SWIM-H2020 SM) and strives to create a supportive environment and increase capacity all stakeholders in the partner countries (PCs).

The WES Project Countries are Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Libya, Palestine, Syria and Tunisia. However, in order to ensure the coherence and effectiveness of EU funding or to promote regional cooperation, the eligibility of specific actions can be extended to neighboring countries in the Southern Neighborhood region.

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TABLE OF CONTENTS

1	INTR	ODUCTION	5
	1.1	THE WES PROJECT AND THE NATIONAL ACTIVITY ON SUPS IN JORDAN	5
	1.2	OBJECTIVES OF THE REPORT	5
	1.3	METHODOLOGY AND LIMITATIONS	6
2	OVE	RVIEW OF SELECTED SUPS IN JORDAN	7
3	ALTE	RNATIVES TO SELECTED SUPS	8
	3.1	Possible alternatives to SUPs	8
	3.2	SITUATION IN THE COUNTRY IN RELATION TO THOSE ALTERNATIVES	10
	3.3	WASTE MANAGEMENT PRACTICES IN RELATION TO ALTERNATIVES	10
	3.4	COMPARING ENVIRONMENTAL EFFECTS OF SUPS AND ALTERNATIVES	11
	3.5	Key take-away messages for the promotion of alternatives in Jordan	12
4	POT	ENTIAL MEASURES TO TACKLE SUPS	. 13
	4.1	LONGLIST OF MEASURES	. 13
	4.2	STAKEHOLDERS VIEWS ON POLICY MEASURES	15
5	CON	CLUSIONS AND WAY FORWARD	. 18

LIST OF TABLES

Table 1 List of interviewed stakeholders	6
Table 2 Selected SUPs	7
Table 3 Alternatives to selected SUPs	8
Table 4 Matrix SUPs and potential measures	15





ABBREVIATIONS

EPR	Extended Producer Responsibility	
DOS	Department of Statistics	
GAM	Greater Amman Municipality	
JIEC	Jordan Industrial Estates Company	
HDPE	High Density Polyethylene	
LDPE	Low Density Polyethylene	
MoENV	Ministry of Environment	
MoLA	Ministry of Local Administration	
MU	Multi-use products	
NGO	Non-Governmental Organization	
PE	Polyethylene	
PP	Polypropylene	
PET	Polyethylene terephthalate	
RSS	Royal Scientific Society	
SUPs	Single Use Plastics	
SUNPs	Single-use non platic products	
SWM	Solid Waste Management	
WES	Water and Environment Support	





1 INTRODUCTION

1.1 THE WES PROJECT AND THE NATIONAL ACTIVITY ON SUPS IN JORDAN

The "Water and Environment Support (WES) in the ENI Neighborhood South Region" project is a regional technical support project funded by the European Neighbourhood Instrument (ENI South). WES aims to protect the natural resources in the Mediterranean context and to improve the management of scarce water resources in the region. WES mainly aims to solve the problems linked to environmental pollution and the unsustainable use of water.

The WES Partner Countries are Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Libya, Palestine, Syria and Tunisia. However, in order to ensure the coherence and effectiveness of EU funding or to promote regional cooperation, the eligibility of specific actions can be extended to neighbouring countries in the Southern Neighborhood region.

The objective of this activity is to provide technical assistance to the Ministry of Environment of Jordan to address Single-Use Plastics (SUPs). Worldwide, the generation rate of Solid Waste (SW) is rising, due to a linear economic system. This poses a problem to decision-makers on the national, regional, and local level. SUPs by design has a very short life span and are immediately discarded into the waste stream after one use. Accordingly, the raise in the use of SUPs causes a raise in Solid Waste Management (SWM) burden. Mismanaged SW has negative impacts on the human health as well as on the environment.

In the meantime, the SWM sector of the Hashemite Kingdom of Jordan finds itself in a phase of transformation, ignited by the endorsement of the National Municipal Solid Waste Management Strategy (NMSWMS) in 2015 and the surge in external funds by international donors and financial institutions. Currently, the waste management sector is being reconsidered and new plans are being prepared on the local municipal level, the regional level, and the national level. In parallel to waste management projects, priority is given to waste minimization efforts particularly for products that have a short life span before being discarded as waste such as SUPs.

The specific objectives of this activity are to:

- Provide information on production and good practices on replacing and/or recycling SUPs.
- Approach policy measures and financial options for curbing SUPs.
- Pave the way for a gradual phase-out of SUPs and provide recommendations for a relevant strategy.

1.2 OBJECTIVES OF THE REPORT

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This report provides an overview of potential alternatives to selected SUPs within this activity. Next, it considers the national situation in terms of availability and demand of those alternatives, along with practices by users. In order to inform about advantages and disadvantages of the different options, a description on environmental is provided. Based on the situation with alternatives in the country, a selection of measures is proposed which shall be consulted with key stakeholders in the next phases of the project.





1.3 METHODOLOGY AND LIMITATIONS

The methodology used for preparation for this report is mostly based in literature review, including:

- 1) Review of potential alternatives
- 2) Review of potential effects
- 3) Review of potential measures

In addition, consultation through interviews took place in order to know about the current situation of the alternatives in the country, as well as the position on the different policy measures.

Entity	Persons interviewed			
Carrefour	Khaled Alali			
Sameh Mall	Kamil Khader			
C- Town	Rasha Hammad			
Careem Hypermarket	Mais Bani Fayyad			
Jabri	Iyad Al Masri			
Pizza Lovers	Ahmad Al Twaiqat			
Hyatt Amman / St. Regis	Nabil Al Mosbah			
Royal Hospital	Amjad Salamah			
Chamber of inductor	Ala'a Abo Khazneh			
	Ma'en Ayasrah			
Ministry of local administration	Jumana Al Abbadi			
	Farah Al Dawoud			
Salim Kittaneh and sons company	Ala'a Kittaneh			
Ministry of Environment	Abdallah Ziyod, Hajjar Majar, Maha Mayta,			
	Hiba Zureikat, Hiba Zabalawi			
Jordan industrial Estate Company	Ala Zurikat			
RSS	Jihan Haddad			

Table 1 List of interviewed stakeholders





2 OVERVIEW OF SELECTED SUPS IN JORDAN

In the previous task, 4 categories of SUPs were selected in agreement with the MoENV, as it follows:

Table 2 Selected SUPs

Group of SUPs	SUP items	Definition			
Packaging	Plastic bags	Shopping bags are medium-sized bags, typically around 10-20 litres in volume (though much larger versions exist, especially for non-grocery shopping), that are used by shoppers to carry home their purchases. Shopping bags can be made with a variety of plastics. Small plastic bags refer to small-sized bags such as freezer bags, zip-lock re-sealable food bags, poly bags, etc.			
Food and beverage packaging	Plastic Drink bottles, caps and lids	Plastic bottles and containers used to hold water, juice or other drinks for consumption. Plastic caps and lids from bottles and containers, used to hold water, juice or other drinks for consumption.			
On-the-go food and beverage packaging	Food containers including fast food plastic packaging	Single use food containers are typically bowls, clamshells and trays. They are used in many applications, such as salad boxes, ready meals, take-aways or cereal packs and are commonly made from polypropylene/expanded polystyrene. They are used to package food for final consumption.			
On-the-go food and beverage packaging	Plastic Cutlery, plates and trays	Single-use knives, forks, and spoons. Single-use plates and trays made of artificial polymer material			

As for the policy measures in place tackling these SUPs, the most prominent are Extended Producer Responsibility (EPR) implementation instructions for Packaging waste (2021) and the "Shopping Bags Regulation" (No 45 of 2017).

In relation to the consumption and end-of-life of these SUPs, the following points summarises the situation:

- Data about the amount and types of consumed SUPs are not available in Jordan as the existing monitoring and quantification systems do not separate SUPs from multi use plastics.
- It was reported a consumption of nearly 3 billion plastic bags per year¹, which is about 300 bags per person per year. The regulation has had some effect in reducing plastic bags, especially black bags, but the issue remains through informal market and misconceptions on biodegradability.
- Most plastic drinking bottles are made of clear PET, which is partly collected by the informal sector and exported. No information on the consumption was found.

¹ Balash Kees - Leave the Bag | Environmental Awareness - UNESCO Multimedia Archives





- In relation to food containers, it seems it's a common practice in many food services, including the use problematic polymers such as Styrofoam. This fact has been exacerbated due to the Covid-19 pandemic. However, some international restaurants have opted for alternatives, mostly paper based.
- Plastic cutlery, plates and trays have gained more popularity in the Jordanian society as people tend to use them as a low-cost, convenient option for business or personal use. This has also been exacerbated due to the Covid-19 pandemic.
- Plastic manufacturing in the country is very relevant (import of approx. 200,000 tonnes of raw polymers/year), which indicates an important economic dimension around SUPs in the country.
- Through the efforts of the informal waste sector (pickers and processing facilities), Jordan has a fairly well-developed plastics value chain recycling for all forms of plastic, with the exception of PET. Plastic waste recycling market in Jordan is reported² to process around 4,000-6,000 ton per month of plastic waste which are mostly reused within Jordan industrial sector with some exported.

ALTERNATIVES TO SELECTED SUPS 3

3.1 POSSIBLE ALTERNATIVES TO SUPS

Different types of alternatives are to be considered, ranging from alternative business models, multiuse products (MUs), single use non-plastic alternatives (SUNPs), or different consumer behaviour. Considering potential options widely, different ones are summarized in the following table.³

	171012 0 71102		
SUP	SUNP	MU	Practices avoiding the need
		 Reusable PE bags (often called "bag-for-life", and characterised by a minimum thickness e.g. 50 microns) 	
Plastic bags	 Biodegradable/compostable plastic bags Kraft paper bags 	 Woven and non-woven polypropylene bags (or others such as nylon and polystyrene bags). 	
		 Shopping trolleys 	
		 Cardboard boxes 	
		 Back pack 	
		 Baskets 	

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http://www.cprac.org/sites/default/files/otherfiles/the mediterranean heroes disembark against single use plastics .p df





² USAID Recycling in Jordan Activity, Market System Analysis (2021)

³ To note educational material exist on this issue to promote alternatives, such as "The heroes of the Mediterranean disembark against single-use plastics" (SCP/RAC 2018), available in Arabic as well:

in the ENI Southern Neighborhood region

SUP	SUNP	MU	Practices avoiding the need
Plastic drink bottles, caps and lids	 Metal cans Tetra-bricks Glass bottles 	 Reusable plastic bottles (more robust, and usually made of polypropylene or copolyester Metal bottles Glass bottles Flasks 	 Water fountains Improvement/ supply of tap water quality Soda machines for use with refillables bottles Cap attached to the bottle (reducing the littering potential)
Food containers including fast food plastic packaging	 Cardboard containers without plastic liners Biodegradable bagasse clamshells 	CrockeryTiffins/lunch boxes	 Allowance to bring-your- own container Availability of eat-in space
Plastic Cutlery, plates and trays	 Wood cutlery Biodegradable/compostable plastic items Cardboard items 	 Crockery Metal cutlery Reusable plastic items (more robust) 	 Allowance to bring-your- own Availability of eat-in space

Some important considerations are to be made in relation to alternatives:

- The environmental effects of the different options are discussed at the chapter 3.4. Generally, it is
 noted that a direct switch from SUPs to SUNP items in the absence of any further incentive to
 change consumer behaviour is likely to have little to no impact on the issues of litter and waste
 generation. However, depending on the specific material chosen for a particular application, SUNP
 items may be easier to recycle if collected in formal waste management systems (e.g. packing paper
 for protection in place of polystyrene foam). Similarly, some materials may be associated with fewer
 negative impacts if landfilled or littered.
- A shift from SUPs to MU alternatives will usually involve a change in business models, in particular, to reuse models to enable the uptake of these alternatives, as well as policy measures driving this change. This is described in detail in chapter 4, and includes deposit-refund schemes or charges to avoid free distribution of SUPs.
- As for biodegradable/compostable plastic items, it is noted that "biodegradable" plastic, or "bioplastic" alternatives, including bio-based plastics and compostable plastics are not considered credible alternatives for SUPs at present. This is due to widespread misconceptions regarding the options for their end of life treatment, which in reality, are limited and present no added benefit relative to SUPs, except in very few applications. Important considerations to be made are:
 - Irrespective of the material, these items are single-use which implies impacts in terms of production and littering.
 - Infrastructure to manage bio-waste is needed, including collection and end-of-life treatment (e.g. industrial composting).



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- The legal framework should require these items to be in conformity with biodegradable standards (e.g. EN 13432) to avoid false claims on biodegradability.
- Citizens must be informed and aware to separate these items at source, and yet, differentiation by the appearance is difficult and labels can be ambiguous.

3.2 SITUATION IN THE COUNTRY IN RELATION TO THOSE ALTERNATIVES

In general terms, the development of alternatives in Jordan is low, as well as the business models and policy measures that would drive that shift. The only exception might be the regulation on plastic bags, although it is to be noted the considerations made in the previous chapter on biodegradable items. In order to find out about the alternatives used, practices and perception, some interviews were done with companies in different sectors. Some preliminary conclusions, which could be further developed through a wider consultation, can be drawn from the different sectors:

- Supermarkets:
 - o Cardboard based alternatives for bags, cups and plates
 - Metal based alternatives for plates, cutlery
 - Few other alternatives for cutlery
 - Willingness to have a plastic prevention policy, as long as there is demand
 - Demand for plastic packaging is much higher, though supermarkets would adapt if there is a shift
- Restaurants:
 - Low knowledge on alternatives
 - Some tests were done but they found inconvenience for consumers, problems to keep food quality
 - Price is a main criterion to make decisions
 - Coronavirus as an obstacle for alternatives, even in eat-in conditions
- Hotels:
 - o Some alternatives exist, especially in large hotels: wooden cutlery, paper straws
 - o Coronavirus as an obstacle for water refill stations
- Hospitals:
 - \circ $\;$ There are some alternatives used, but it depends on the patients' conditions

3.3 WASTE MANAGEMENT PRACTICES IN RELATION TO ALTERNATIVES

In order to promote certain SUPs alternatives in Jordan, it is critical to know about the waste management, and particularly end-of-life practices for those alternatives. In fact, if alternatives are not collected and treated, there will not be any added value in promoting them.

There is not information available on concrete practices for the selected SUPs. However, USAID⁴ tackled the performance of different value chains in relation to materials, and this information is interesting for the alternatives. According to that report:

⁴ USAID Recycling in Jordan Activity, Market System Analysis (2021)





- The domestic channel would include **ferrous metals, plastics (except PET), and some cardboard**. These products have advanced processing and manufacturing capability available domestically, and primarily produces for domestic end-user markets. This channel tends to be more quality conscious. Therefore, alternatives made of these materials may be further promoted in the country.
- The export channel would include non-ferrous metals (particularly aluminum and copper),
 PET, and most paper / cardboard. Advanced processing and manufacturing capacity does not exist domestically, so these products undergo minimal value addition (for example, shredding, compacting, bailing, etc.) prior to global export. Thus, these alternatives based on these materials may be less promoted in the country

As for "biodegradable" alternatives, currently there is not management in place i.e. separate collection of organic waste and industrial composting. Hence, these alternatives shall not be promoted in the national context.

3.4 COMPARING ENVIRONMENTAL EFFECTS OF SUPS AND ALTERNATIVES

It is important to take into consideration all environmental aspects with tools such as **life-cycle assessment (LCA)** to determine the impact of each option. Indeed, the negative impact does not only stem from the littered product, but also from production, transport, use etc. However, it is important to note that not all effects of litter, especially marine litter, are considered by LCA (e.g. harm on biota).

The environmental performance of alternatives in respect to SUPs has raised controversy over the last years. As requested by Member States, UNEP⁵ undertook the full life-cycle environmental impacts of single-use plastic products in comparison with their alternatives. For that, research focused on policy actions that have been informed by life-cycle thinking, as well as the results of eight meta-studies on LCA of single-use plastic products and their alternatives. A critical finding of this work is that "single-use" is more problematic than "plastic". Therefore, countries are encouraged to replace single-use plastic products with reusable products as part of a circular economy approach.

This work also highlights the importance of the geographic context, especially in relation to consumers' behaviour and waste management practices, which will impact greatly the impact of the different options. In fact, some options may be better over others just depending on the context, and not just on the material.

The report summarizes key factors from LCA to consider in understanding the environmental impact of SUPs and their alternatives. For example, in the case plastic bottles, it states:

Concerning the material and weight of a beverage container: The studies show great differences between container materials e.g. single-use glass bottles were found to have a worse environmental performance compared to alternatives for almost all impact categories. There are often trade-offs between impact categories e.g. one study shows 2 litre PET bottles to be environmentally preferable in many impact categories, except for eutrophication, ozone

⁵ United Nations Environment Programme (2021). Addressing Single-use Plastic Products Pollution Using a Life Cycle Approach. Nairobi. https://bit.ly/2NuqwUM





layer depletion and terrestrial ecotoxicity potential, where aluminium cans show better results.

- Concerning the volume of the beverage container: The volume can influence performance e.g. cartons can be the best choice for juice packaging of small volumes, larger PET bottles are environmentally preferable to smaller ones, when delivering a set volume.
- Concerning reuse rate and end-of-life practices: Collection, recycling and reuse rates, as well as to what extent materials are eventually landfilled or incinerated with energy recovery are important factors e.g. glass bottles might need to be reused at least three times to be environmentally comparable with aluminium cans and PET bottles. Increasing the recycling of PET bottles from 24% to 60% can reduce climate impact by 50%. Closed loop systems with high recycling rates of beverage bottles provide important contributions to the circular economy and efficient collection systems.
- Concerning the geographical context: The location where production, use and end-of-life takes place, user behaviour and other parameters, all influence the environmental impact of solutions. Recycling rate of containers, such as PET bottles or aluminium cans, are an example of an important geographically dependent parameter.

3.5 KEY TAKE-AWAY MESSAGES FOR THE PROMOTION OF ALTERNATIVES IN JORDAN

Considering the information above, several key messages can be depicted to promote further the alternatives in the country:

- From the perspective of status of value chains in the country, the best option might be to promote **reuse options based on plastic (except PET) and metals such as stainless steel**. This is relevant for all the selected product categories. This approach would have less economic impact in the country since the value chain already exists, so the adaptation is more feasible.
- Biodegradable plastic items shall not be promoted due to the lack of bio-waste management.
- Raising consumers' awareness is key before promoting the alternatives, particularly in terms of convenience and safety. In relation to the COVID-19 effect, numerous scientific papers deny higher risks posed by reusable options, particularly in the hospitality sector.⁶
- Incentives shall be offered to consumers to promote reusable options. This can be done by private businesses on their own (e.g. rewards associated to a loyalty scheme), or promoted by the government through voluntary agreements or more coercive measures.
- Incentives shall be also provided to the private sector and entrepreneurs to promote/develop further the alternatives. Opportunities and guidance should be given to switch SUPs producers to durable plastic applications or other product materials. Once the priorities have been set to promote sound alternatives to SUPs, options for upgrading their production capacity include: tax rebates, allocation of research and development funds, technology incubation, public-

⁶ Oceanic Global COVID-19 Fact Sheet. https://oceanic.global/wp-content/uploads/2020/08/OG-COVID-FACT-SHEET-UPDATED-3.pdf





private partnerships, and reduction/abolishment of taxes on the import of material used to make alternatives, among others.

- A wide range of policy measures can be applied to promote alternatives (but also reduce consumption in the first place), as described in the following chapter. In fact, in the absence of those policy measures, little switch shall take place if this in only based on offer-demand.

4 POTENTIAL MEASURES TO TACKLE SUPS

4.1 LONGLIST OF MEASURES

This section outlines a range of measures that can cover some or all of the different products, as provided in the *Guidelines to tackle single-use plastic products in the Mediterranean region*.⁷ It is important to note that they could target not only SUPs but generally the single-use of the products, regardless of the material they are made of, and hence avoiding any potential trade-off. Therefore, the approach is to promote reuse or reduce consumption. The measures listed hereunder are the most commonly applied, in increasing order of ambition:⁸

- a. **Information campaigns**. Information campaigns could be targeted at consumers with a range of aims depending upon the nature of the item. For example, campaigns might a) aim to improve consumers' understanding of the impacts of littering with the objective of reducing litter rates, or b) aim to reduce the incidence of sanitary items flushed down toilets and drains, or c) focus on broader impacts of marine plastics, with the aim of encouraging consumers to take up available single-use non-plastic alternatives, or start using multi-use items, instead.
- b. Voluntary agreements, voluntary commitments and pledges. A range of measures which require no specific legal instrument could be taken directly by industry. Voluntary agreements (VAs) are generally those actions taken by industry to bring about changes without the need for changes in regulations. Voluntary commitments and pledges, on the other hand, might be made by individual companies, and are usually made independently.
- c. **Mandatory labelling**. Whilst information campaigns may have a general, population-wide character, mandatory labelling of widely littered items could help deliver messages more directly to consumers. The effectiveness of such a measure depends on how clearly the message is conveyed, and how much of an impact the message has on those who currently litter the labelled items.
- d. **Extended producers responsibility (EPR) systems, including litter clean-up costs coverage.** EPR is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products. Currently there are

⁸ Based on ICF and Eunomia (2018). Assessment of measures to reduce marine litter from single use plastics, Report for DG Environment, May 2018, https://ec.europa.eu/environment/waste/pdf/Study_sups.pdf. The order of the measures also can be read in a decreasing order of stakeholders' acceptability.





⁷ SCP/RAC (2021). Guidelines to tackle single-use plastic products in the Mediterranean region. http://www.cprac.org/sites/default/files/otherfiles/211203 guidelines eng.pdf

very few instances where, under extended producer responsibility, producers pay for the costs of clean-up of litter. Under the principle of EPR, the full costs of managing a product at end of life ought to be covered, and this might be assumed to include the cost of cleaning up any items that are littered on land and on beaches. This measure places that burden upon producers, such that those currently operating street, highway and beach cleansing services are compensated. Likewise, EPR's fees can be modulated in order to account for the differentiated impact of options, including the likelihood to be littered. EPR could also be applied to cover the costs of other measures such as information campaigns.

- e. **Specific requirements on product design**. Product design measures could be taken to reduce the propensity for certain items to be littered. For example, bottle lids could be tethered to bottles. Another potential design change could be to integrate straws into drinks containers, rather than selling such items separately. Evidence suggests that smaller items are less frequently collected in litter clean-up processes than larger items. The aim of any design measures, therefore, is to integrate smaller items with larger items such that littering is reduced.
- f. **Deposit Refund Systems (DRS)**. DRS on one-way beverage containers provides a clear economic incentive for consumers to return their empty containers, including plastic bottles, to return points. Moreover, any bottles that are initially littered have a relatively high economic value, they are therefore picked up by others and returned, and so, ultimately, avoid ending up in the marine environment. In addition, DRS can be applied to on-the-go food containers and cups as well, whether as regulation or business practice.
- g. Sales restrictions / measures for adoption by public authorities, including green public procurement. Public authorities have specific competences and influence that can be brought to bear in order to reduce the flow of SUPs into the marine environment. Some examples include permission to major public events or specific rules/restrictions in particular sites (e.g. beaches, Marine Protected Areas, small islands). In addition, they have significant spending power through their public procurement of goods and services.
- h. **Consumption levies**. 'Levies' are considered to be any economic instrument implemented at the country level that increases the cost of SUP items placed on the market, and incentivise non-use, or substitution by single-use non-plastic and multi-use items. However, it can be also applied to all single-use options to avoid increasing consumptions of other material products.
- i. **Bans**. This measure would see complete market bans on the sale of certain SUP items by a given year. However, as indicated in the measure above, the ban can target single-use items, regardless of the material.

It is to be noted that when considering the potential measures, waste hierarchy and circular economy principles should be followed. Hence, the measures should promote reduction and prevention in the first place, as a best strategy to abate waste and littering, as well as avoiding potential negative trade-offs.

Considering the availability of alternatives and policy measures in place, the adequacy of the different measures can be depicted as it follows (including current status in the country, if any):





	Information campaigns	Voluntary agreements	Mandatory labelling	EPR - including litter clean- up costs coverage	Specific requirements on product design	DRS	Sales restrictions / measures for adoption by public	Consumption levies	Bans
Drink bottles, caps and lids				Set-up ongoing					
Cutlery, plates and trays									
Food containers including fast food packaging									
Bags									Regulation in place, allowing for exceptions

TABLE 4 Matrix SUPs and potential measures

4.2 STAKEHOLDERS VIEWS ON POLICY MEASURES

In order to gage the effectiveness, public acceptance, and best approach in Jordan to implement policy measures aimed at reducing the consumption of SUPs, face to face interviews were conducted with some of the key project stakeholders including the chamber of industry, ministry of environment, Jordan industrial estate cooperation, ministry of local administration, private sector representatives, and RSS. The following policy measures which were included in these discussions were:

- Information campaigns
- Mandatory labelling to discourage littering
- Extended Producer responsibility full cost coverage of litter collections
- Specified sales restrictions
- Measures for adoption by public authorities, including Green Public Procurement (GPP)
- Implement Deposit Refund System for beverage containers
- Consumption levies
- Ban of SUP item





The aim of this discussion with stakeholders was to understand their view on which are the most effective and appropriate measures in Jordan which could have positive outcomes and public acceptance as much as possible. The interviewed stakeholders gave more or less similar responses to the preferred policy measures in Jordan as summarized in the following table.

Stakeholders generally were in favour of implementing a gradual approach to SUPs minimization by starting with information and awareness raising and labelling first, in addition to utilizing voluntary private sector industrial and trade organizations to assist with SUPs minimization and to leave levies and banning to a later stage.

Some of the measures had high potential effectiveness but low public acceptance and some had medium effectiveness but high public acceptance, the recommendation of the stakeholders was to start with the high publicly accepted measures for the first phase and continue with the rest in the following phases.

Nonetheless, the majority of the private sector representatives mentioned there is a lack of consultations with them when making when making decisions, which is reflecting badly on their performance from both environmental and financial aspects. Accordingly, the MoENV views material banning as the last option in order not to pose any socio-economic problems in the country, moreover, if the banning will happen, easily applicable replacements should be clearly defined and discussed with the private sector.

In order to ensure high efficacy for potential measures, legislations need to be fully enforced on the ground, as in many cases awareness raising initiatives were not accompanied by clear legislations, and soon after the end of the awareness campaign, the impact deteriorated significantly.





Proposed policy measure	Efficiency (1 to 5)	Public acceptance (1 to 5)	Comments on best approach for Jordan		
Information campaigns	2 to 3	5	Implement awareness sessions in large malls and		
			supermarkets, in addition to schools and universities		
Mandatory labelling to discourage littering	1 to 2	<u>5</u>	To be stablished in cooperation with industry and trade		
			organizations		
Extended Producer responsibility – full cost	4 to 5	1 to 2	Utilize the existing EPR platform and build on it. Start with		
coverage of litter collections			voluntary and gradually move to obligatory		
Specified sales restrictions	4 to 5	2 to 3	This could work in limited areas / sites which has natural or		
			other sensitivities		
Measures for adoption by public authorities,	4 to 5	4 to 5	It is important to make sure these programs are effective		
including Green Public Procurement (GPP)			and monitored to ensure success		
Implement Deposit Refund System for beverage	4 to 5	2 to 3	Possibly to be implemented through the EPR program		
containers					
Consumption levies	4 to 5	1 to 2	Increased taxes in Jordan is not a favorable alternative and		
			should be avoided if possible		
Ban of SUP item	<u>5</u>	<u>1</u>	This should be kept as a last resort and not recommended in		
			the time being		





5 CONCLUSIONS AND WAY FORWARD

This report has shown the potential alternatives to SUPs that could be put forward in Jordan, considering the national context. The shift shall be backed by policy measures, which should be further discussed with the MOENV and other key stakeholders.

Following the design of the WES activity, next stage is "Drafting of a public-private roadmap to transition towards curbing the use of the selected SUPs in Jordan (Task 4)". This shall be done in close cooperation with the MoENV, to be later presented and discussed at the national consultation workshop, in order to produce a final roadmap (Task 5).



