

PRIORITY AREAS OF INTERVENTION TO CURB MARINE LITTER FROM FOOD AND BEVERAGE PLASTIC PACKAGING IN ALBANIA, BOSNIA AND HERZEGOVINA AND MONTENEGRO

Phase 1 Findings
Executive Summary



About

This publication was developed by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC), based on the findings of the material flow and policy gap analyses commissioned to national consultants in three Adriatic countries.

SCP/RAC has an official mandate from the Contracting Parties to the Barcelona Convention to engage in international cooperation with Mediterranean countries on the prevention of plastic pollution, including marine litter and in the development and innovation in the business sector.

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October 2019

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List of abbreviations

ANN

Artificial neural networks

BDBiH

Brcko District of Bosnia and Herzegovina

BiH

Bosnia and Herzegovina

DCM

Decision of the Council of Ministers (Albania)

DRS

Deposit return system

EBRD

European Bank for Reconstruction and Development

EPR

Extended producer responsibility

EU

European Union

FB

Food and beverage

FBiH

Federation of Bosnia and Herzegovina

FBPP

Food and beverage plastic packaging

FDI

Foreign direct investment

GDP

Gross domestic product

GIZ

Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH

GPP

Green public procurement

IMAP

Integrated monitoring and assessment programme

IMELS

Italian Ministry of Environment and Land and Sea Protection

IRS

Informal recycler system

IWF

In the waste flow

LGU

Local government unit

MFA

Material flow analysis

MSW

Municipal solid waste

OECD

Organisation for Economic Co-operation and Development

POM

Put on the market

PP

Plastic packaging

PRO

Producer responsibility organization

R&D

Research and development

RS

Republika Srpska

SCP/RAC

Regional Activity Centre for Sustainable Consumption and Production

SIDA

Swedish International Development Cooperation Agency

SME

Small and medium enterprise

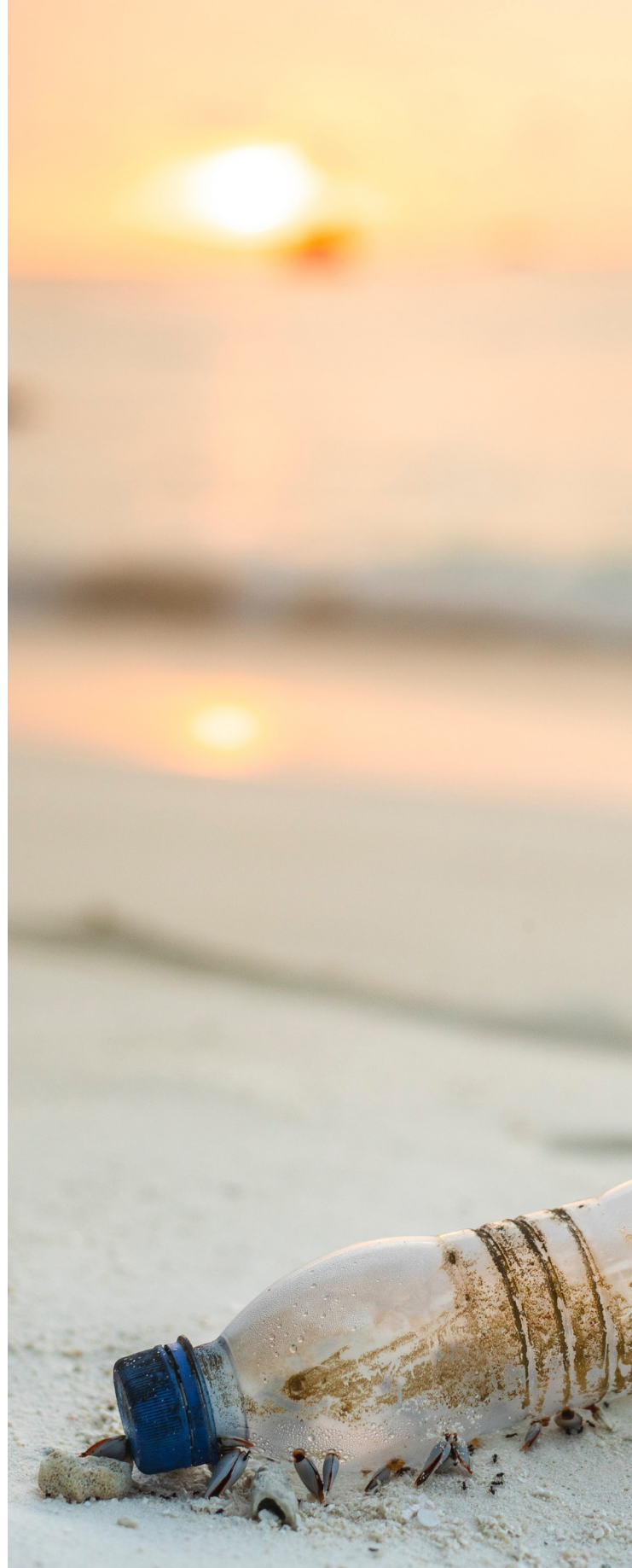
UN Environment/MAP

United Nations Environment Programme – Mediterranean Action Plan

Plastic packaging, particularly from the food and beverage (FB) sector, represents the largest fraction of marine litter to be found on the beaches, the seafloor and in the water column in the Ionian and Adriatic seas¹. The majority of these plastics come from land-based mismanaged waste, mainly from households and food services, often related to tourism and recreational activities.

According to UN Environment², the **soft drinks sector is among the most intensive users of single-use plastic packaging. The retail and food services sectors use the most plastic per \$1m revenue in their supply chains**, most likely due to their relative position down the supply chain. Companies in the food and soft drinks sectors are therefore more likely to **face reputational and legislative risks from their association with the environmental impacts of plastic, especially litter from packaging**. These risks, or missing related opportunities, could extract significant value from these businesses if they had to internalise the full cost of their plastic use impacts.

Within its responsibilities towards the achievement of the UN Environment/MAP Programme of Work³ and the Regional Plan on Marine Litter Management in the Mediterranean, the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) is committed **to provide technical and financial support to Albania, Bosnia and Herzegovina (BiH) and Montenegro to improve the policy framework and engage the local FB industry in an effort to reduce and prevent plastic packaging waste generation.**



1. Vlachogianni, Th., Anastasopoulou, A., Fortibuoni, T., Ronchi, F., Zeri, Ch., (2017) Marine Litter Assessment in the Adriatic and Ionian Seas. IPA-Adriatic DeFishGear Project, MIO-ECSDE, HCMR and ISPRA. pp. 168 (ISBN: 978-960-6793-25-7).

2. UNEP (2014) Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry.

3. Activity 2.1.1.2 "to promote the use of relevant instruments and incentives to reduce/forbid the single use of plastics, reduce the use of plastic bottles etc."

To this end, SPC/RAC commissioned the following sets of baseline analyses in the three countries:

» **Material Flow Analyses (MFAs)** to have a preliminary understanding of the amounts of food and beverage plastic packaging (FBPP) being placed on the market (POM) and in the waste flow (IWF), as well as recommendations to enhance this knowledge –this work is supported by the Italian Ministry of Environment and Land and Sea Protection (IMELS);

» **Policy Gap Analyses** to identify the main policy gaps and bottlenecks to applying the principles of circularity to plastic packaging in the FB industry, from the public and private sector perspectives –this work is supported by the European Bank for Reconstruction and Development (EBRD).



The main outcomes of these preliminary studies are summarized in the following chapters:

Chapter 1 builds on the findings of the material flow and policy gap analyses to briefly introduce the FB sector in the countries and its relative contribution to the generation of mismanaged plastic packaging waste. It highlights major progresses achieved and common challenges faced by the three countries in aligning their legal and policy frameworks to the plastic packaging-related Barcelona Convention provisions and European Union (EU) acquis and in moving forward in the transition to a circular economy based plastic packaging system. It finally suggests a set of priority areas of intervention toward those goals, particularly from the public policy perspective. The areas of intervention will be complemented in later stages, by a set of activities targeting the private sector and business support organisations.

Chapter 2 details the outcomes of the MFAs and Policy Gap Analyses for Albania, Bosnia and Herzegovina and Montenegro.

Chapter 3 provides a summary table with findings of the policy gap analysis for each project country.

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CHAPTER 1

WORKING WITH THE FOOD AND BEVERAGE SECTOR TO COMBAT MARINE LITTER IN THREE ADRIATIC COUNTRIES



1.1. PLASTIC PACKAGING WASTE: PRODUCTION AND MANAGEMENT IN THE COUNTRIES

As assessed by the [OECD/GVH Regional Centre for Competition](#), in Albania, Montenegro and Bosnia and Herzegovina, **primary production of food and beverage is highly fragmented**, and dominated by small firms with limited human, technical and financial capacities. The **food retailing sector**, on the other hand, has become **increasingly concentrated**, shifting from small shops and grocery stores to supermarkets. FB retailers today are characterized by increased concentration and foreign investment: large retailers are taking control over production by preferring consolidated supplier base, which has led to an increased number of imported FB products in the supermarkets.

The bargaining power of small domestic FB producers is steadily eroding. The growth of the FB processing sector in the three countries is further hindered by limited foreign direct investment (FDI), compared to its share in total manufacturing turnover. There is also

limited research in agrofood, with fragmented public research conducted in often obsolete infrastructure, as well as weak industry-science linkages, and very low overall R&D expenditures within the companies.

To boost the FB sector's competitiveness, policy reforms should aim at creating an enabling business environment, build skills and capacity, and improve the overall governance. **Moving towards plastic-free productions might indeed provide the opportunity to local FB businesses to improve their competitive advantage with respect to imported FB products.**

According to the findings of the Material Flow Analyses (MFAs), Albania, Montenegro and Bosnia and Herzegovina generate **approximately 45 kg, 34 kg and 31 kg of FBPP waste⁵ per person per year respectively**, despite their relatively small populations and economies.

Material Flow Analysis (MFA)

A Material Flow Analysis (MFA) approach was used to assess the flows and stocks of food and beverage plastic packaging (FBPP) in Bosnia and Herzegovina, Montenegro and Albania with the aim to understand and quantify sources, pathways and sinks of the material in question and inform the following stages of the project.

For the three countries, the spatial system boundary of the MFA coincided with their politically defined region (intended as administrative regions such as states). To outweigh momentary unsteadiness of flows, the temporal system boundary was defined as a baseline year: 2107 for BiH, 2018 for Albania and Montenegro. Where the baseline data were not available the most recent available data was used. The following

stages were considered within the three systems: production, processing and agriculture processes, consumption process and waste management processes.

The amounts of FBPP throughout the three systems were calculated by using two methodologies - a bottom up approach employed to correlate data and estimate quantities of FBPP in accordance with **EU Waste Framework Directive** and the artificial neural networks (ANN)⁶ based methodology, for cross checking. Quantities obtained through the application of the ANN based model were adopted in all three MFAs, as the resulting estimates have a relatively lower level of uncertainty. All reports highlight the fact that estimated quantities should be used mainly as means of establishing potential

Considering that in 2012, **according to Mergers–Alliances**, 51% of the plastic packaging waste in EU derived from the food sector and 18% from the beverage sector, we can estimate that in 2015, Croatia generated 8 kg of FBPP waste per person per year, Ireland 41 kg/person/year and the EU countries on average 21 kg/person/year⁷. To compare, the estimated amount of FBPP waste generated by Albania, Montenegro and BiH per person per year is analogous to the amount generated in Ireland, and up to five times those generated in Croatia, both countries comparable in population to Albania and BiH, but with **much larger economies**.

5. That is the total amount of Food and Beverage plastic packaging (FBPP) put on the Market (POM), which is in part collected and entering the Waste Flow (IWF) and in part littered or ending in dumpsites.

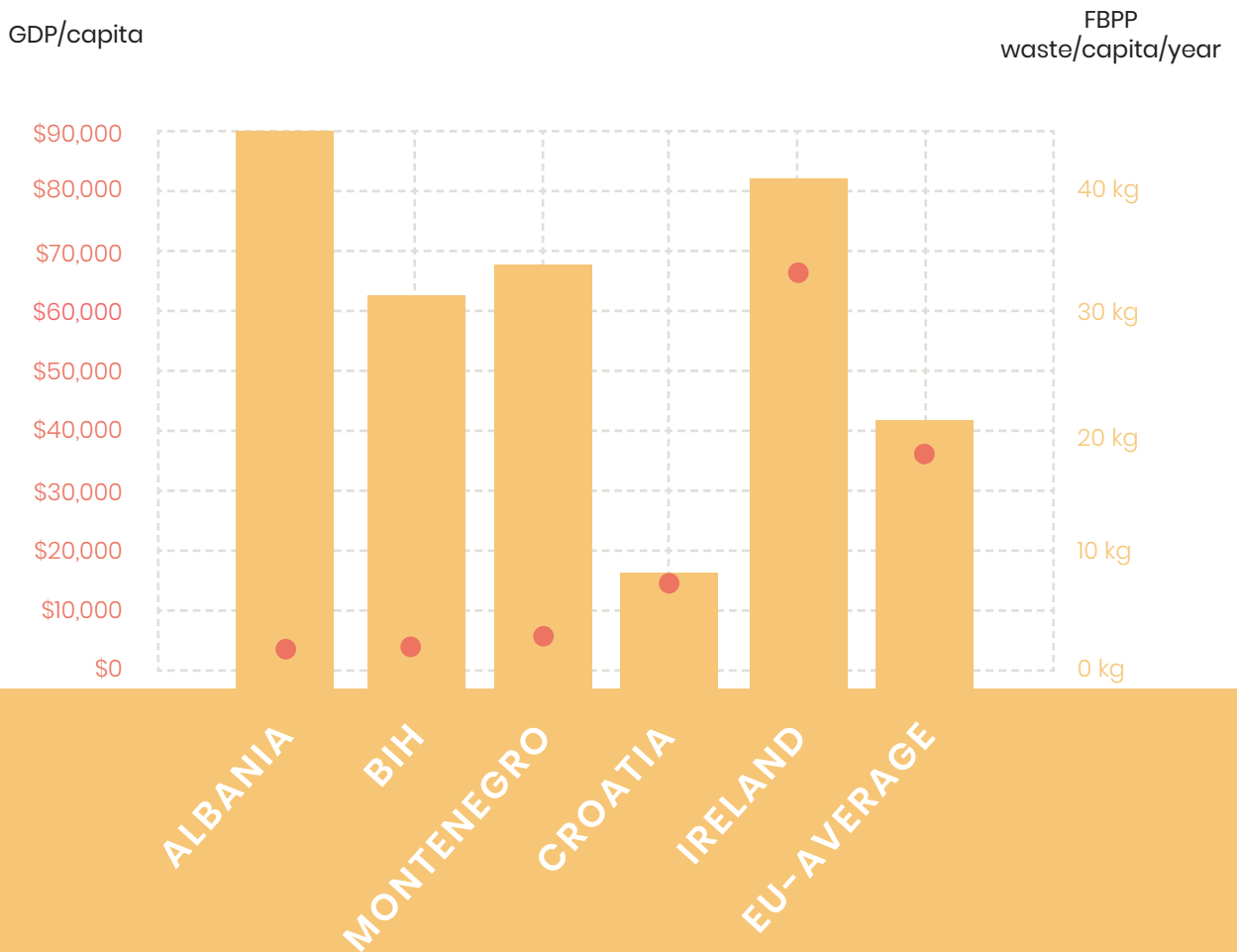
6. As reported by **Panday et al.**, Artificial neural networks (ANN) is “a biologically inspired computational technique that imitates the behaviour learning process of the human brain. [...] ANNs are universal approximators and their predictions are based on prior available data”. ANN based model was used to predict future waste quantity and composition in Serbia in 2011 (**Batinic et al., 2011**).

7. These values correspond to 69% of the total amount of plastic packaging waste (in kg) generated per person per year in Croatia (12 kg/person/year), Ireland (60 kg/person/year) and on average in the EU countries (31 kg/person/year) in 2015. Source: <https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/EDN-20180422-1>

Amount of food and beverage plastic packaging (FBPP) waste generated in kg per person per year in the project countries (bars , Estimates by author), as well as comparison with GDP/capita (dots).

(Baseline data: 2017 for BiH; 2018 for Albania and Montenegro; 2015 for Croatia, Ireland and EU)

| | FBPP waste/capita/year | Population | GDP/capita |
|------------|------------------------|-------------|------------|
| ALBANIA | 45 kg | 2,870,000 | \$4.530 |
| BiH | 31 kg | 3,510,000 | \$4.786 |
| MONTENEGRO | 34 kg | 622,000 | \$6.431 |
| CROATIA | 8 kg | 4,076,246 | \$14.916 |
| IRELAND | 41 kg | 4,853,506 | \$77.449 |
| EU-AVERAGE | 21 kg | 512,600,000 | \$36.676 |

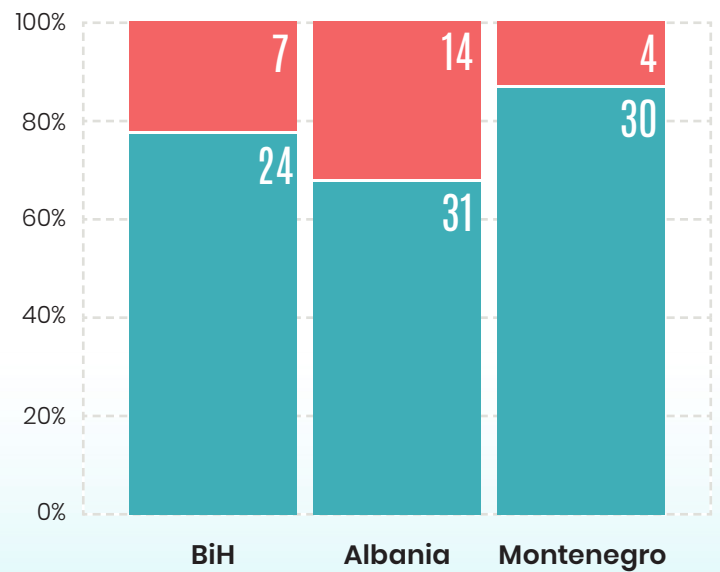


In all countries, **large amounts of FBPP are not captured by existing waste management systems, leading to important amount of plastic packaging leaking into the environment:**

Estimated amounts of FBPP waste collected versus those littered or ending in dumpsites in the project countries (Estimates by author)

(Baseline data: 2017 for BiH; 2018 for Albania and Montenegro)

- FBPP waste littered or in dumpsites (kg per capita per year)
- FBPP waste collected (kg per capita per year)



Approximately 14 kg per person of FBPP have been estimated to end up littered or in dumpsites in Albania each year. That is roughly **the equivalent of more than 2.6 million of 2L coke bottles⁸ ending in the environment each day in Albania!**

In **BiH**, the estimated amount is 7 kg/person/year, **the equivalent of almost 1.6 million of 2L coke bottles littered each day!**

With little less than **4 kg of FBPP waste littered per person per year, Montenegro** seems to be doing better in capturing its plastic packaging waste. This might be due to the high concentration of population in urban areas, where most of the waste collection efforts have been made in recent years.

8. On average, one 2L coke plastic bottle weights 42g. It is estimated therefore that there are 24 2L coke bottles in 1 kg. Source: <https://www.quora.com/How-many-empty-2L-coke-plastic-bottles-is-1kg>.

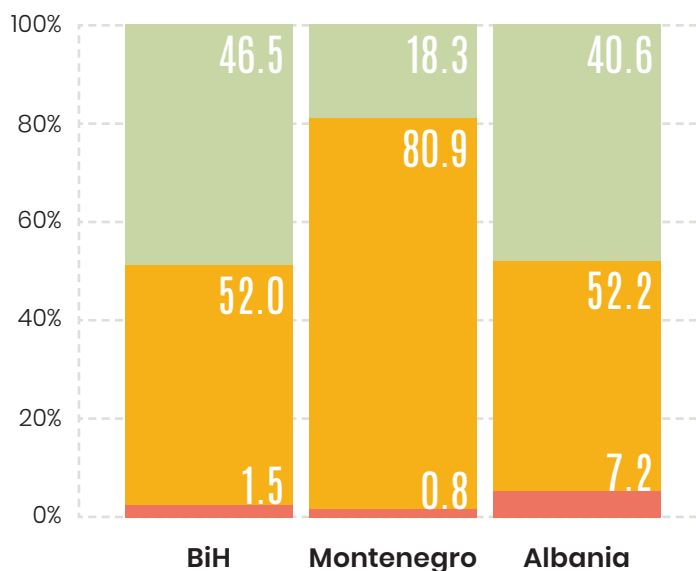


The largest fraction of FBPP waste is generated by households and SMEs and ends up in (often non-compliant) landfills, as mixed municipal solid waste (MSW). Despite increasing awareness and waste management infrastructure, particularly in urban areas, **percentages of FBPP waste separated for recycling are almost negligible in the three countries.** With about 7% of collected FBPP waste recycled, Albania features the highest recycling rate, mainly due to a large Informal Recycler System (IRS).

End-of-life of FBPP waste collected per country (Estimates by author)

(Baseline data: 2017 for BiH; 2018 for Albania and Montenegro)

- Recycled
- Sanitary landfills and incinerators
- Non-compliant landfills



End-of-life options in the three Adriatic countries

- ◇ **Recycled/Recycling:** waste treatment by which material is recovered for use in manufacturing the same or other products. Recycling is the process of converting waste materials into new materials and objects.
- ◇ **Sanitary landfills:** method of waste disposal where the waste is buried either underground or in large piles. This method of waste disposal is controlled and monitored very closely, including measures to treat leachate.
- ◇ **Incinerator:** waste treatment facility that involves the combustion of organic substances contained in waste materials.

Incineration of waste materials converts the waste into ash, flue gas and heat. In some cases, the heat generated by incineration can be used to generate electric power.

- ◇ **Non-compliant landfills:** basic method of waste disposal lacking standards and processes to be considered as a sanitary landfill, including the absence of monitoring, proper sealing and treatment of leachate. They are also referred as “controlled landfills”.
- ◇ **Dumpsites:** sites where waste is disposed with no or minimal management measures. Often these sites are not specifically dedicated to waste disposal, hence they are referred as illegal dumpsites.

Despite the challenges to find reliable and quality statistical data on FBPP productions, trade, and waste management in the three countries⁹, the findings of the MFAs clearly point to **the urgent need for improved waste management systems** at all levels -national/entity/municipal- and business/corporate, to achieve a substantial reduction in the mass of mismanaged FBPP waste likely to end in the river systems and ultimately in the sea. While improving the waste management system, countries and individual companies have the opportunity to establish a **policy framework and adopt practices aimed at preventing plastic packaging marine litter at the source.**

9. It is to be noted that all estimates produced in the framework of the Material Flow Analyses (MFAs) come with various degree of uncertainty. The findings of the MFAs should therefore be used mainly to understand current and future trends.



1.2. PROGRESS IN THE TRANSITION TO A CIRCULAR PLASTIC PACKAGING ECONOMY

As Contracting Parties to the Barcelona Convention, Albania, BiH and Montenegro are committed to adopt preventive measures related to marine litter management, as well as enhancing the overall waste management system. In addition, the accession to the European Union (EU) is a great and complementary driver.

The findings of the Policy Gap Analyses for the three countries show that **legal frameworks have been set up to address waste management, including plastic packaging waste**, yet implementation and enforcement is lagging behind. Relevant instruments, such as incentives for separate collection, taxes and bans, have not yet

been fully integrated in existing regulatory frameworks.

The table below illustrates the current status of adopting and implementing the most common policy and economic measures to prevent FBPP waste generation and move towards a circular economy-based plastic packaging system. More detailed summary tables are available at the country specific sections in [Chapter 3](#).

Countries' relative progress in adopting and implementing policy instruments to address plastic and plastic packaging production, waste generation and management

- No regulation in place
- Regulations have been adopted but are not fully implemented due to lack of by-laws and other provisions.

| POLICY INSTRUMENTS ADDRESSING FBPP | Albania | Montenegro | Bosnia and Herzegovina | | |
|---|---------|------------|--------------------------------------|------------------|-----------------------|
| | | | Federation of Bosnia and Herzegovina | Republika Srpska | Brcko District of BiH |
| Recycling target | | | | | |
| Waste Management regulations | | | | | |
| Packaging waste management regulations | | | | | |
| Extended producer responsibility (EPR) | | | | | |
| Deposit Return System | | | | | |
| Economic disincentives | | | | | |
| Economic incentives | | | | | |
| Ban on products with negative externalities | | | | | |
| Eco-labels | | | | | |
| Eco innovation and Eco design | | | | | |
| Green Public Procurement (GPP) | | | | | |



1.3. COMMON CHALLENGES AND PRIORITY AREAS OF INTERVENTION

Based on the results of the material flow and policy gap analyses, a preliminary summary of common challenges and priority areas of intervention is presented in the table below. These findings will be complemented in later stages of the project, following stakeholder engagement activities with private businesses and business support organisations.

Common Challenge: Knowledge base and data

Governments lack reliable, quality data on plastic packaging production, trade and waste generation and management to design adequate policies, monitor progress, and inform local industry and the public.

Priority areas of intervention

- ◇ Improve the knowledge base and data availability, accountability and transparency in line with the Integrated Monitoring and Assessment Programme (IMAP)¹⁰ implementation, and align reporting systems to EUROSTAT, building on the experience of EU countries.
- ◇ Build capacity and define clear roles and responsibilities in the institutional frameworks to improve monitoring, strengthen policy implementation, enforcement and compliance.
- ◇ Improve coordination, harmonization and dialogue among relevant authorities and stakeholders (e.g., PP manufacturers, retailers, FB processors, municipalities, Producer Responsibility Organisations (PROs), etc.) to produce quality data and populate publicly available databases.
- ◇ Enhance regional and sub-regional cooperation and share best practices.

10. IMAP is a key achievement in the Barcelona Convention, which will enable for the first time a quantitative, integrated analysis of the state of the marine and coastal environment, covering pollution and marine litter, biodiversity, non-indigenous species, coast, and hydrography, based on common regional indicators, targets and Good Environmental Status descriptions.

Common Challenge: Waste management systems

Existing waste management systems (collection, separation, treatment) are usually faulty, inefficient, leading to low rate of collection, separation and recycling.

Priority areas of intervention

- ◇ Laws to reduce illegal dumping, minimise landfill waste, expand recycling programmes and execute extended producer responsibility (EPR) schemes are steadily being adopted, but they need to be urgently enacted and enforced.
- ◇ Design EPR schemes to encourage prevention or reuse rather than exclusively recycling. EPR schemes might integrate a Deposit Return System (DRS) to increase the separate collection of plastic packaging and the quantity of clean plastic material entering the recycling value chain.
- ◇ Ensure countries have the capacity in place to recycle domestically their plastic waste, hence reducing the import/export of plastic scrap.

Common Challenge: Consumer participation

Consumers' (including households and food services) purchasing, consumption and disposal behaviour have been identified as key pressures that lead to mismanaged plastic packaging waste likely to leak into the marine environment. Consumption behaviour is crucial at all stages of the FBPP product-to-waste chain and is likely to be influenced by knowledge, attitudes, and level of concern about the environmental issue, along with motivation to engage in solutions.

Priority areas of intervention

- ◇ Design and implement FBPP marine litter awareness raising campaigns targeting a specific audience and specific type of marine debris: the more targeted the campaign the easier it is to set out quantifiable objectives which in turn make it easier to directly measure success (e.g., the *Don't be a Tosser* campaign in Australia).
- ◇ Petition government(s) about specific FBPP marine litter to maximise the observable outcomes as any reaction by government is likely to be public in nature.
- ◇ Design and implement environmental education programs to educate local FB producers and food services, who work with plastics on a regular basis, to encourage them to adopt a mindful approach when dealing with plastics in order to avoid unintended leakages into the environment (e.g., *Zero Pellet* initiative in Germany).
- ◇ Promote collaboration among marine litter actors and to establish solid networks dealing with marine litter problems (e.g., the *Global Partnership on Marine Litter*).
- ◇ Promote voluntary in-house zero-plastic waste practices within food services.
- ◇ Introduce Green Public Procurement to provide information and raise awareness on the benefits of greener alternatives and boost their market.

Common Challenge: Business competitiveness

Today consumers are increasingly aware of the environmental impacts of plastic packaging. Reducing their plastic intensity might provide a competitive advantage for local FB businesses in BiH, Albania and Montenegro, which are struggling to compete with imported FB goods. Considering environmental constraints however remains problematical for most SMEs and weak cooperation along the value chain often hampers innovation.

Priority areas of intervention

- ◇ Offer training/vocational opportunities to build the capacities and skills SMEs need to create sustainable products and operate within sustainable industrial systems. Attracting, developing and retaining these capacities is key to achieving organizational growth through innovation.
- ◇ Provide incentives for businesses to invest in and adopt greener technologies and practices – e.g. to use materials and energy more efficiently, for example by:
 - » setting up eco-design or eco-innovation business awards and challenges;
 - » promoting Green Public Procurement to stimulate eco-design and eco-innovation locally;
 - » designing EPR programs to promote eco-innovation upstream;
 - » enhancing public, intermediary and private support systems for entrepreneurship (such as universities, incubators, business development organizations, design service providers, funders and inter-agents);
 - » developing and promoting different financial mechanisms (e.g. grants, loans, vouchers) that cover the entire SME growth cycle and address the needs of all types of SMEs (pre-seed, start-up, mature);
 - » introducing new mechanisms and incentive programmes to promote technology transfer between academia and private sector.
 - » Identify synergies between supply chains and relevant local authorities to encourage the use of by-products (e.g., agricultural waste) as raw materials to be re-processed for innovative green packaging in further supply chains, favouring the transition towards a more sustainable, circular economy and reducing virgin resources usage, carbon emissions and waste production.

Common Challenge: Engaging retailers

At the interface between production and consumption, retailers can play a leading role regarding the promotion of sustainable consumption models.

Priority areas of intervention

- ◇ Engage retailers in voluntary agreements and activities to reduce plastic packaging and move towards a zero-plastic waste business model and provide them with technical support through independent advice and available guidelines.



1.4. SHAPING THE PROJECT ACTIVITIES TO ADDRESS COMMON CHALLENGES

Building on the above considerations, as well as following extensive consultation with governmental bodies in the countries, SCP/RAC has started implementing the following project activities:

A. Green Public Procurement guidelines and pilot project in Montenegro

Regional policy guidelines addressing single-use plastic packaging through public procurement are currently being drafted. These guidelines will be tested through a **pilot project in Montenegro**, where the Ministry of Sustainable Tourism and Environment and the Municipality of Podgorica will implement a set of agreed in-house plastic packaging reduction practices. The outcomes of the pilot project will be used to inform the development of specific plastic packaging criteria to be included in the policy guidelines.

B. Technical assistance, a compendium of best business practices and a

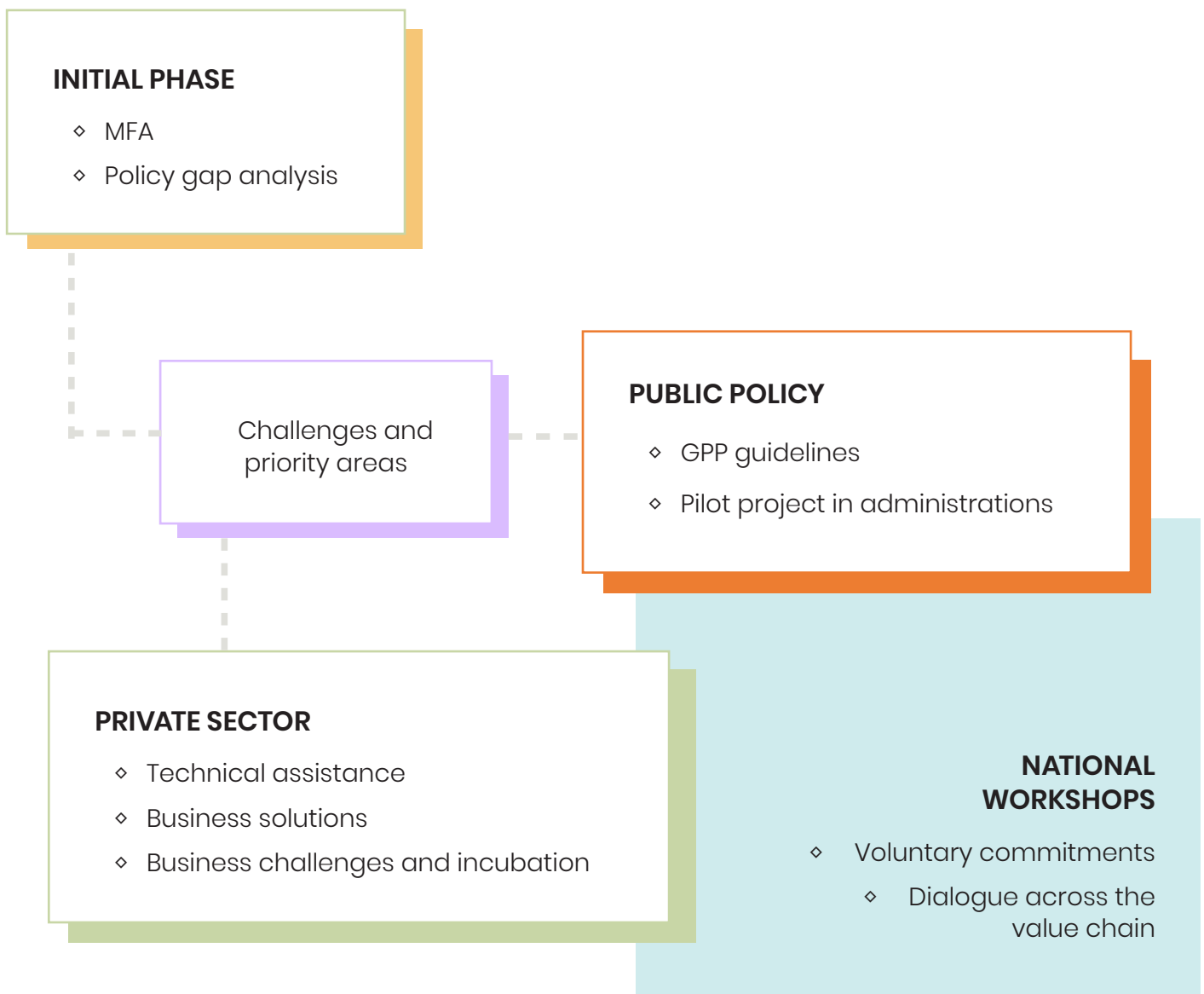
business challenge to support local businesses in their quest to reduce their plastic packaging footprint in the three countries

The project has identified FB processors, retailers and wholesalers, food services and business support organisations as key target groups due to their capacity to trigger changes throughout the plastic packaging product-to-waste chain. Companies have been identified in each country and surveyed to assess their interest in **initiating or participating in voluntary commitments** for the reduction of plastic use in packaging and related waste. The findings of the surveys will inform the technical assistance that the project will deliver to interested

companies to define and pursue their voluntary commitments. The technical support will draw inspiration and guidance also from a selection of **business practices to prevent plastic packaging waste** that is currently under development. Finally, SCP/RAC, in collaboration with InnovationNest, has recently launched the **Unwrap Award, a business challenge** aimed at identifying and commercializing existing and new sustainable solutions to FB packaging in the project countries. The awardee will be granted a 4-month incubation programme, offering tailored support, resources and mentorship.

C. National restitution workshops

A **national workshop** will be organized in each country to present the project progress, further engage local FB businesses in adopting voluntary commitments, and foster dialogue across the FB plastic packaging product-to-waste chain.



CHAPTER 2
MAJOR FINDINGS
OF THE MATERIAL
FLOW AND POLICY
GAP ANALYSES IN
ALBANIA, BOSNIA AND
HERZEGOVINA AND
MONTENEGRO



2.1. ALBANIA

With more than 3,500 registered FB companies and a turnover of more than 400 million EUR in 2018, Albania features **the largest FB industry among the three project countries**. Despite these numbers, Albania still imports more FB goods than those it exports (the average import/export ratio is 4). Albania has also the **highest number of plastic manufactures and recyclers**, with approximately 200 registered companies in 2018.

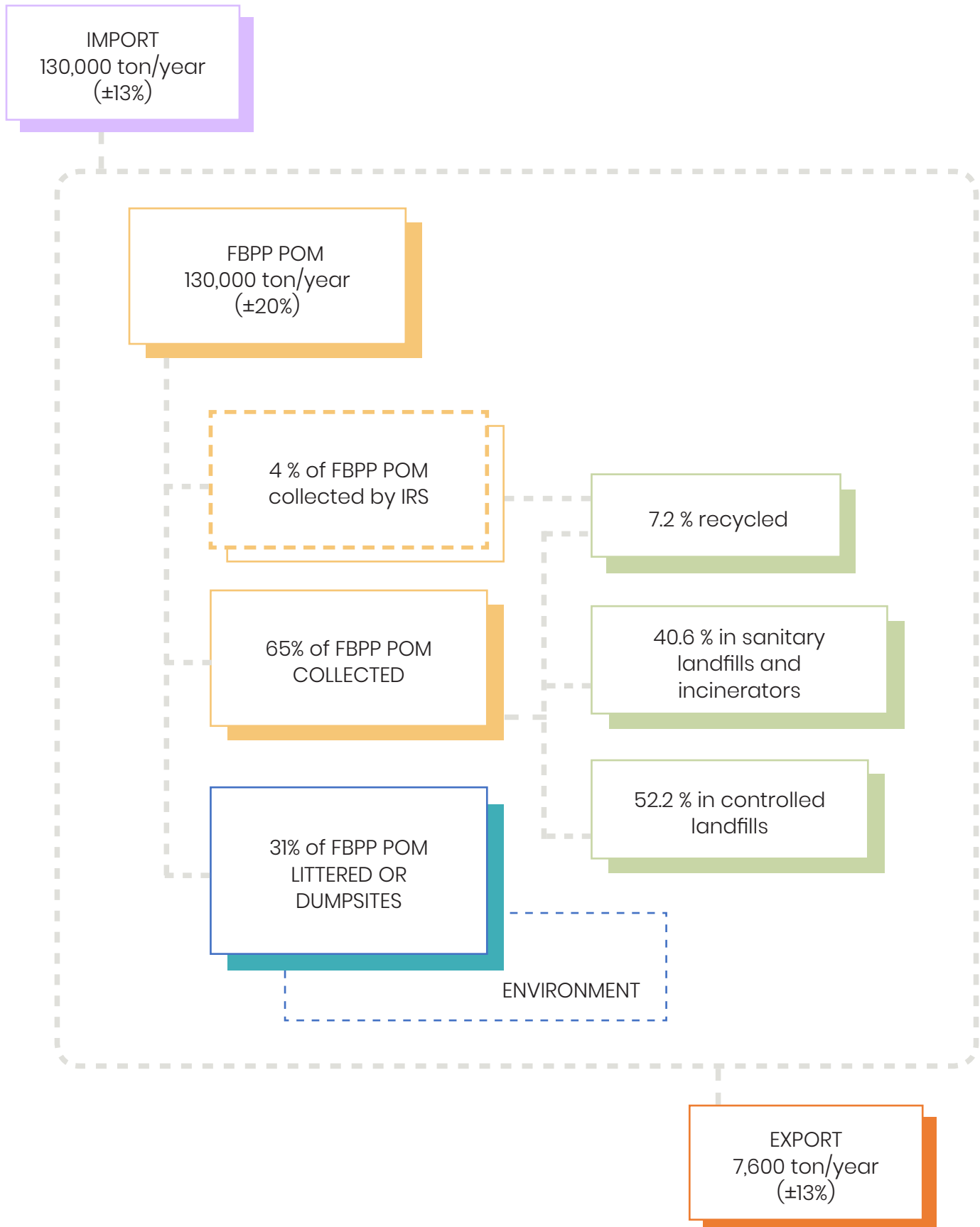
According to the MFA¹¹, 130,000 tons of FBPP are estimated to be put on the market (POM) annually in Albania, 36% of which as imported FB goods (baseline, 2018). **1 every 3 FBPP POM ends up littered in the environment or in a dumpsite, that is approximately 40,000 tons of FBPP POM per year.**

65% of FBPP POM is collected through a system of mixed waste collection and mainly dumped in **controlled or sanitary landfills** without any treatment. Waste collection has improved in most cities and towns over the past decades: illegal dumpsites have been progressively closed down and only certified landfills and one incinerator operate to date.

Despite these progresses, a significant part of rural areas still lacks official waste collection system and no municipality is currently implementing waste separation at source as requested by the legislation in force. Separate collection is mainly performed by the **Informal Recyclers Sector (IRS)**, which in Albania is particularly important as it includes the Roma community with an estimated workforce of 12,000 people. The most valuable fraction of recyclable waste, such as PET bottles, is partly collected by informal pickers and sold to private recyclers at a price often lower than the market price. Some recycling companies have also their own pickers. No official records of the quantities, type and quality of the waste collected further hinders the capacity – already extremely low, of relevant authorities and institutions to establish and enhance an official recycling system.

11. The National Environment Agency (NEA) is currently implementing a project on waste statistics, based on DCM No. 687, dated 10.11.2017, on Waste Statistics, which is expected to accurately measure the amount of packaging waste generated and recycled.

Simplified representation of the results of the Material Flow Analysis in Albania. (Estimates by author. Baseline: 2018)



In Albania, **waste management is currently considered to be the most urgent environmental problem**. The development of the policy framework, policy framework, the establishment of adequate infrastructure and the building of institutional capacity have failed to keep the pace with the economic growth and the urban sprawl experienced by Albania over the past few decades. **Despite the effort of the Albanian Government to transpose 19 EU waste-related directives and regulations, fully or partially, by the end of 2015, the implementation and enforcement of these new laws is largely lagging behind.** The reason mostly lies on a systemic lack of human and financial capacity, the latter stemming from the lack of a comprehensive and evidence-based cost and tariff system. This seriously hinders the political will to further invest in an efficient waste management system. According to the Policy Gap Analysis, Albania has already enough legislative acts in place, such as on extended producer responsibility (EPR) or on waste separation at source, to address FBPP waste management (see detailed summary table in [Chapter 3](#)). These require simply to be enforced. It is thus reckoned that **the implementation of the existing legislation should be the priority, rather than the introduction of new measures.** For this to happen though enough capacity (i.e., skilled personnel, infrastructure and monitoring systems) should be built and actions should be taken to address the high degree of informality that characterizes the Albanian economy, which makes the application of existing measures highly unsuccessful.

A well-designed and adequately enforced national **EPR scheme** has the potential to improve (plastic) packaging waste collection, treatment and management, reducing the amount of packaging landfilled and contributing to the development of a market

for high quality secondary raw material (plastic scrap). For this to happen, all relevant actors, from the producers to the recyclers, should be engaged and collaborate in the design of the EPR scheme. The informal sector should also be actively involved since the very first stages of the scheme implementation, and informal pickers registered, professionalized and engaged in the reporting system.

To drive investments and innovation at business level, the Albania government could adopt **Green Public Procurement** practices and/or help identifying synergies between (private and public) supply chains and relevant local authorities (such as Central Government Departments, Local Authorities and Chambers of Commerce) to encourage the use of by-products (plastic scraps) as raw materials to be re-processed in further supply chains, favouring the transition towards a more sustainable, circular economy and reducing virgin resources usage, carbon emissions and waste production. Local authorities could encourage this transition by improving the economic convenience of these options. Examples of these approaches include the establishment of appropriate **eco-industrial parks** for resource recovery and tax exemption policies for companies involved in reverse supply chain activities.

Finally, to date there are no legal provisions and regulations specifically addressing **R&D and public research on FB packaging**. Albania enjoys extensive financial and technical support from donor organizations, such as the Austrian and Swedish Development Cooperation, the German GIZ and others, which might be directed to boost public-private research and R&D to develop environmentally sound FB packaging alternatives or zero-plastic business practices.





2.2. BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina (BiH) has a relatively **small, domestic-market oriented FB sector**, with 398 registered companies, employing about 5,000 workers mostly in the baking/bakery and confectionery markets. Domestic sales are mainly realised through large chain stores (e.g., Konzum, Mercator, Hoše, Bingo, Amko, Peni, Tropic). **FB goods are mostly imported from neighbouring countries**, while exports are limited by legislative hurdles and low level of competitiveness¹². **FB plastic packaging (FBPP)** is also imported: only 9 local companies produce plastic packaging for the FB products, and they don't use local recyclates, as the only recycling plant in BiH produce plastic recyclates not apt for FB uses.

According to the findings of the MFA, approximately 121,000 tons of FBPP-related plastics (including pellets and recyclables used to produce plastic packaging, FB goods and FBPP) enter BiH on an annual basis, of which approx. 7,600 tons are exported as FB goods and recyclables (a minor fraction), while an estimated 110,000 tons of FBPP are

put on the market (POM) as consumer and non-consumer FBPP annually (baselines, 2017). Approximately 26.000 tons (23% of FBPP POM) ends up directly littering the environment or in dumpsites. While 84,700 tons (77% of FBPP POM) is collected, 98% of this ends up in landfills. It is to be noted that 92% of registered landfills in BiH are non-compliant. Approximately 5% of FBPP waste (MSW stream and separately collected streams) is treated (in 4 operating sorting plants) out of which only a mere 1.18% is recycled (1,300 tons/year), forcing the existing recycling facility (one company registered in BiH) to import plastic waste from neighbouring countries to maintain their operations.

¹² In 2017, the average import/export ratio for BiH was 7, and 66% of FB plastic packaging put on the market came from imported FB goods.

Simplified representation of the results of the Material Flow Analysis in BiH. (Estimates by author. Baseline: 2018)



These results call for policies to be put in place to prevent FBPP waste generation and improve the waste management system at national and entity-level.

Since 2011, Bosnia-Herzegovina has been steadily advancing in the harmonization of its regulatory framework to the EU acquis, with respect to plastic and plastic packaging-related policies and strategies, as shown in the summary table in [Chapter 3](#). However, **a highly decentralized government has hampered policy coordination and reform leaving the plastic packaging public policy framework fragmented and devoid of executive power.** Excessive bureaucracy and a segmented market discourage cooperation amongst stakeholders along the FBPP product-to-waste chain, while little awareness and engagement of consumers (mainly, households and food services) to plastic packaging prevention or reduction on a voluntary basis further deter the needed reforms.

Yet, interesting **opportunities** exist and should be carefully considered by local FB producers to seriously advance towards a more circular, plastic packaging-free FB sector. A strong domestic demand for traditional products, the proximity to local markets, a good understanding of consumers' behaviours make local companies good candidates to become champions in plastic packaging prevention. The development of sustainable alternatives, the adoption of PP preventive measures or resource efficient and cleaner production practices might prompt the competitive advantage of local businesses and open new opportunities at regional and EU level.

Governments at national and entity-level have also the opportunity to strengthen their **policy/legal frameworks** by:

- ◇ aligning the packaging waste databases and reporting/monitoring systems with EUROSTAT, improving coordination among all relevant stakeholders along the packaging product-to-waste chain and making key data publicly available,
- ◇ promoting the establishment of PP producers' association(s), possibly by

building on the existing cluster of plastic producers in BiH, to assist with the monitoring of PP production, demand, trade, recycling and recovery data,

- ◇ defining more ambitious recycling and PP waste prevention targets and eco-design requirements,
- ◇ strengthening the legislative framework regulating EPR schemes, following the examples of more advanced schemes in EU, to increase the collection rates and foster domestic sorting of PP waste at source (particularly of PET to ensure a consistent flow to feed the local recycling plants), as well as to encourage actions related to PP prevention and reuse,
- ◇ expanding, reviewing and improving the plastic bag fee Decree¹³ to ensure positive results at entity/national level. The introduction of fees on plastic bags in 2014 in FBiH did indeed reduce the consumption of the targeted plastic bags (from 9.3 million in 2014 to 3.5 million in 2017), but this positive result was thwarted by an overall increase in plastic bags placed on the market that are not subject to the Decree (from 66.4 million to 69.9 million in 2017),
- ◇ expanding to all suitable FBPP and officialising the Deposit Return System currently used by the private sector for glass bottles, as part or in close coordination with the EPR schemes and with full engagement of the informal sector,
- ◇ providing businesses with education and financial opportunities to improve in-house waste management and develop PP preventive practices, through the active engagement of universities, business support organisations and financial institutions,
- ◇ enhancing enforcement of existing regulations,
- ◇ exploring Green Public Procurement opportunities to curb FBPP waste generation at public institutions (e.g. administration, schools, etc.),
- ◇ sustaining voluntary initiatives to promote alternatives to plastic packaging.

13. Decree on Fees for Plastic Bags with Suspenders (O.G. of Federal Bosnia and Herzegovina, No. 09/14), for which a fee of 0.025 EUR has been levied per piece of plastic bag (up to 20 microns) placed on the market since 2014.



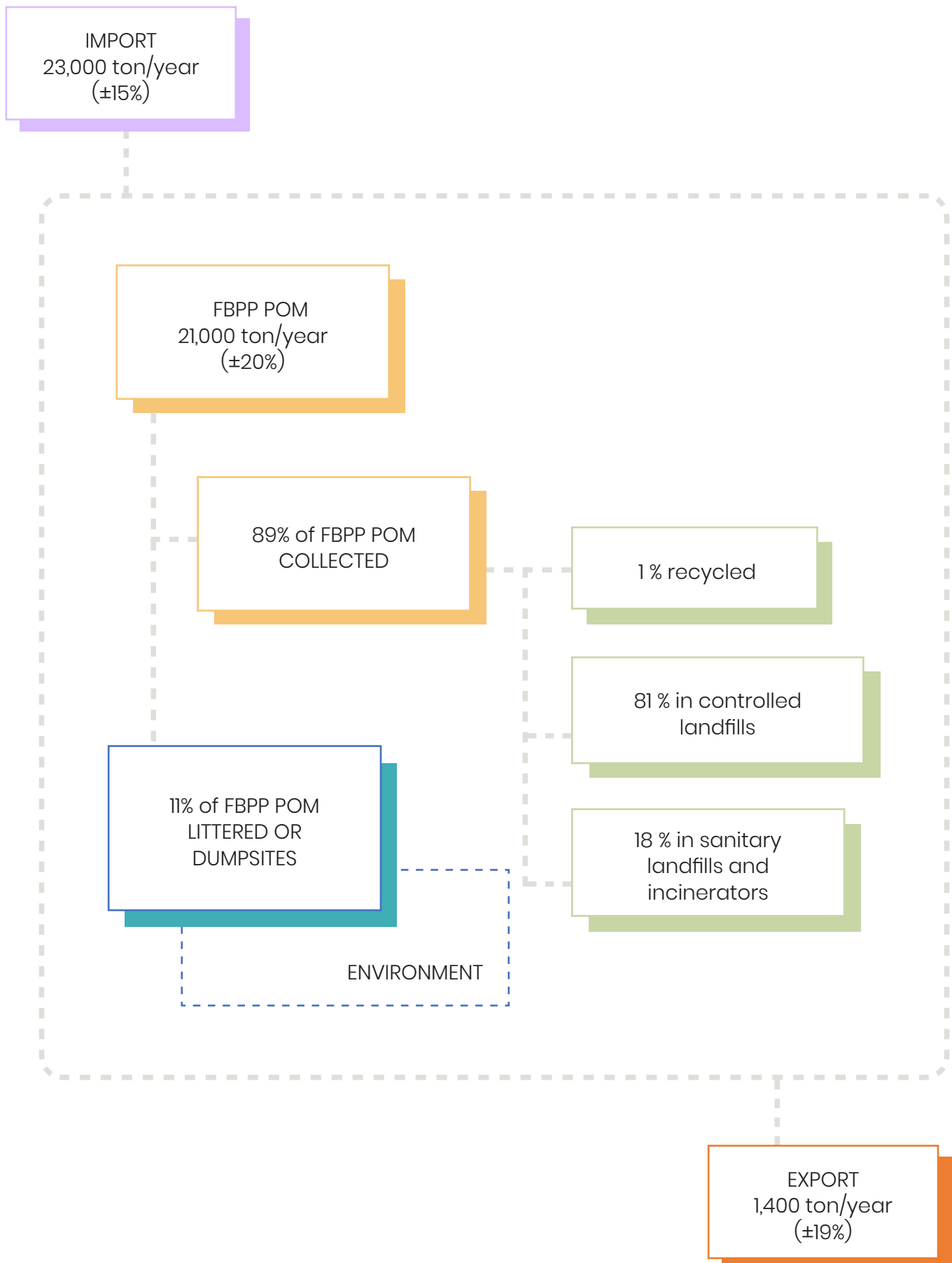
2.3. MONTENEGRO

With a population of about 600,000, Montenegro has a relatively small **FB sector**, producing mainly beer, spirits (grape wine), dairy products and meat. **Most of the FB goods are imported:** in 2017, import of the food and live animals was 16 times higher than export and for beverage and tobacco around 3 times higher. **Few companies are today registered for the production, mostly plastic bags, and distribution of plastic packaging.** In Podgorica, there are five recycling yards and one recycling centre, which have been positively accepted by citizens. Separate collection of waste is thus steadily growing in the capital. Separated waste is currently accepted by local companies, which organize collection, transport, temporary storing and final disposal of all types of hazardous and non-hazardous waste, as well as exports. Despite the limited size of the country, **several associations exist within the Chamber of commerce and provide the ideal platform for dialogue and cooperation among FBPP stakeholders** (i.e., Association for communal economy, Association of agriculture and food industry, Trade Association and Association of Small and Medium Enterprises and Entrepreneurs).

Running a Material Flow Analysis for FBPP in Montenegro proved extremely challenging for **the systemic lack of reliable data on FBPP production, trade and waste management.** A Rulebook on the methodology for determining the composition and quantity of municipal waste in the territory of the local self-government (“Official Gazette of Montenegro”, Nr. 025/18 from 20.04.2018) was published in 2013 and updated in 2018, including a Waste Catalogue in line with EU Waste Catalogue. However, **no adequate waste database exists in Montenegro.** This is recognized by local stakeholders as one of the most important problems when planning for waste management in Montenegro.

According to the findings of the MFA, an estimated 21,000 tons are put on the market (POM) as consumer and non-consumer FBPP annually, 35% of which as imported FB goods. Approximately 2,300 tons (11% of FBPP POM) end up directly littered in the environment or in dumpsites, while the remaining 89% (18,690 ton/year) is collected and ends up primarily in controlled landfills (80% of collected FBPP). Approximately 27% of FBPP POM is mechanically separated, out of which a negligible amount (140 tons/year) is recycled.

Simplified representation of the results of the Material Flow Analysis in Montenegro (Estimates by author. Baseline: 2018)



As Candidate Country to the EU, Montenegro is enduring the effort to align its environmental standards and legal frameworks to the EU environmental acquis as depicted in the summary table in **Chapter 3. The National Strategy with Action plan for transposition, implementation and enforcement of the EU acquis on environment and climate change 2016 – 2020** is the reference document outlining Montenegro's obligations. According to the Strategy, both Directive 2008/89/EU (Waste management directive) and Directive 94/62/EU (Waste packaging and packaging) have been mostly transposed so far. Complete transposition of EU acquis related to waste management, including fulfilment of obligations such as investments in infrastructure, is planned for 2035.

The **urgency in Montenegro is to improve the waste management system**. In this respect, extended producer responsibility (EPR) and Deposit Return System (DRS) are measures that have proved effective in several EU countries. The 2016 Law on waste management (LWM)¹⁴ provides already for the establishment of a national EPR scheme. However, due to the lack of by-laws and inapplicable provisions, the scheme is currently not implemented and enforced. An appropriate regulatory context should be developed and implemented to secure a level-playing field to avoid inefficiencies, overlaps and conflicts of interest. Clear, realistic (recycling) targets should be set, a transparent and accountable monitoring system developed and implemented, and responsibilities clearly allocated between stakeholders. Control and enforcement of EPR obligations should be ensured to avoid free riders (via for example, informal parallel imports). Furthermore, the EPR scheme might function in combination with other measures such as:

- ◇ Pay-as-you-throw schemes, whereby households are charged based on the amount of waste they generate. These schemes can incentivise households to sort their waste for recycling, thereby facilitating separate collection;

- ◇ Market-based instruments, such as taxes, can also be established in combination with /to promote the EPR scheme;
- ◇ A Deposit Return System – following the successful DRS for glass bottles of the Brewery “Trebjesa ad”, might be integrated to the national EPR scheme to secure a stream of clean, quality plastic material for recycling. It is important though that the new stream of plastic waste is met by the capacity to recycle it domestically or to control at least where the resulting plastic scrap is exported to. Today, out of 25% of FBPP waste mechanically separated, only 2% is domestically recycled: there is indeed an urgency to expand the plastic recycling capacity of the country.



14. Law on waste management (LWM) “Official Gazette of Montenegro”, Nr. 064/11 from 29.12.2011 and 039/16 from 29.06.2016

On the **FBPP waste prevention side**, the national EPR scheme could be designed to encourage actions related to prevention or reuse rather than focusing exclusively on waste management and recycling (through eco-modulation of the fees, for example). Moreover, the “Let’s buy domestic” program of the Government in support to domestic FB productions might be re-designed to boost the production of plastic packaging-free local FB goods. With an extremely limited domestic plastic production, the transition to plastic-free packaging might be easier than in other countries. Well-designed Green Public Procurement might further facilitate this transition.

Montenegro can tap on several **EU funding opportunities** (such as the Danube transnational Programme and the Interregional Adriatic Programme) to:

- ◇ incentivise R&D on alternative FB packaging;
- ◇ train and form local FB business resource efficient and cleaner FB production practices;
- ◇ raise awareness of citizens and tourists on the plastic marine litter issue and the need to prevent plastic packaging waste generation;
- ◇ train relevant authorities and institutions responsible for waste management.



CHAPTER 3
POLICY GAP ANALYSIS
SUMMARY FICHES

The following country-fiches depict the main findings from the policy gap analysis. Different policy instruments are described in terms of enacted strategies, laws and by-laws which include a colour code:

- No regulation in place
- Regulations have been adopted but are not fully implemented due to lack of by-laws and other provisions.

For each instrument, progress in implementation as well as challenges and opportunities are described.



Recycling target

Strategies, laws and by-laws ●

NO REGULATIONS

Waste Management regulations

Strategies, laws and by-laws ●

Law no. 10463, "On the integrated waste management" dated 22.09.2011

DCM no.418, dated 25.06.2014 "On waste separation"

DCM. no. 452/2012 on "Waste Landfills"

DCM. No. 178/2012 on "Waste Incineration"

Sub-legal acts for the differentiated collection of waste at source (DCM. 408, 25 June 2008)

National Strategy on Integrated Waste Management (Revised National Waste Management Plan 2018-33)

Regional Waste Management Plans

Status

The legislation for waste collection and disposal as well as for the final treatment of waste is overall in place.

The goals set in the National Strategy and National Plan on Waste Management are as follows:

- ◇ 85% of households in 2020 will receive a suitable service as far as the waste collection system is concerned, and 90% in 2025;

- ◇ Landfill waste treatment rates should go up to 45% in 2020 and 70% of waste will be recycled by recycling, composting and energy recovery.
- ◇ By 2015 separate collections must be set up for at least paper, metal, plastic and glass;
- ◇ By 2020: stop growth of municipal waste produced;
- ◇ By 2015: achieve 25% recycling and composting rate of municipal waste (by 2020: 55%);
- ◇ Recover energy from 15% of municipal waste;
- ◇ Reduce landfilling of municipal waste from around present 90% to around 30% by when 2025;
- ◇ Provide widespread waste minimization advice to businesses;
- ◇ Develop markets for recycled material;
- ◇ Deal more sustainably with waste and improved resource use.
- ◇ According to the National Strategy:
- ◇ Every region is in charge of drafting its own Regional Waste Management Plan in conformity with the National Waste Management Strategy and Plan.

- ◇ Local Government Units (LGUs) are in charge of organizing waste collection, transport and disposal, and management of contracts with the companies doing the cleaning of the cities, including waste investments at local level.

Challenges and Opportunities

- ◇ Since the law no. 10463 entered in force, progress has been made on waste management. The local authorities are obliged to organize municipal solid waste (MSW) collection and provide data to the relevant bodies

of the Government. Most urban areas now have an MSW collection system, whereas rural areas are not yet covered.

- ◇ Regional Waste Management Plans were developed in some regions, but not approved yet as waiting for the revised Plan on Integrated Waste Management to be approved first.

Packaging waste management regulations

Strategies, laws and by-laws ●

DCM no. 418/2014 “On the separate collection of waste at source”

DCM. no. 177/2012 on “Packing and Waste Disposal”

DCM no. 232, dated 26.4.2018 “For some changes and additions in DCM no. 177, date 6.3.2012, to the council of ministers, “On packaging and packaging waste”.

DCM no. 608, dated 17.09.2014, “On the necessary measures for the collection and treatment of bio waste as well as the criteria and deadlines for their reduction”

Law No. 9863, dated 28.1.08 as amended on 26.03.2013

Status

- ◇ DCM no. 418/2014 determines the measures for waste resource allocation, reduction of waste streams the total amount of waste going to the landfill.

- ◇ DCM no. 177/2012 is in line with the EU waste directive, aiming at recycling more packaging waste.

◇ According to Law no.10463/2011, LGUs are responsible for organizing separate collection of municipal packaging waste. By December 31st of 2020, every LGU should reach the target of:

- ◇ at least 50% of the total weight of organic waste generated in 2014

◇ reused and recycled 60% of Paper/ Cardboard, 50% of Metal, 22.5% of Plastics and 60% of Glass.

◇ DCM no. 232/2018, in addition to defining the rules for the prevention on environmental damages from waste, forces producers to use 55-80% recycled materials in producing packaging and bans the usage of non-biodegradable plastic bags.

◇ Law No. 9863 allows the usage of recycled materials in the F&B industry. Within the F&B industry, producers, importers and sellers of packaged good should recuperate and recycle at least 8% of the quantity of packaging in 2019. The amount shall increase to reach at least 39% by 2033. Municipalities,

on the other hand, are responsible to separately collect urban solid waste and divide it in two streams: recyclable waste and mixed waste. By 2033, Municipalities should recycle up to 50% of urban waste produced.

Challenges and Opportunities

- ◇ Despite the existing legislation, waste separation at source is not yet implemented.
- ◇ Albania has no specific legislation in place for food contact materials. Food safety is addressed in Law no. 9863, dated 28.1.2008, on Food and in DCM.

Extended producer responsibility (EPR)

Strategies, laws and by-laws ●

Law No. 10 463, dated 22.09.2011 on “Integrated Waste Management”

National Strategy on Integrated Waste Management (Revised National Waste Management Plan 2018-33)

Status

Article 16 of the Law no. 10 463 defines that the EPR will be determined by the Council of Ministers on proposal from the Minister of Environment.

According to the National Strategy:

by 2023:

- ◇ A regulatory framework for setting up collection and recycling schemes for packaging should be in place
- ◇ All businesses that import and produce packaging, report the amount of import and production to the relevant authorities and set up special and / or joint schemes in cooperation with local governments and other packaging users to recover packaging.
- ◇ These schemes collect and recycle not less than 8% of the amount of packaging.

by 2028:

- ◇ The Producer of Packaged Goods and the Packaging Producer filling at the

point of sale or third parties operating on their behalf raise and finance the entire integrated collection and handling scheme, either through the schemes of the Producer Responsibility Organizations.

- ◇ These schemes collect and recycle no less than 21% of the amount of packaging.

by 2033:

- ◇ The manufacturer of packaged goods and packaging manufacturer filling at the point of sale or third parties acting on their behalf recovers and recycles 39% of the amount of packaging in the country, either separately or through the Producer Responsibility Organizations (PROs).
- ◇ A tax scheme for plastic and glass packaging is applied (see Law No. 178, dated 28.12.2013 “On some amendments and additions to Law No. 9975, dated 28.7.2008,” On National Taxes”)

Challenges and Opportunities

- ◇ EPR implementation requires the approval of sub-legal acts, as well as the setting and enforcement of clear rules and responsibilities to prevent, reuse, and recycle and recover the packaging waste and take financial liabilities for all these activities. So far, no EPR scheme has been put in place in Albania.
- ◇ There are no packaging collection systems in place for the purpose of implementing environmental protection principles.

Deposit Return System (DRS)

Strategies, laws and by-laws ●

NO REGULATIONS

Economic disincentives

Strategies, laws and by-laws ●

DCM No. 177 dated 06.03.2012

Status

- ◇ DCM No. 177 has introduced tariffs on waste packaging producers and importers.

Challenges and Opportunities

- ◇ The DCM No. 177 might need to be improved by introducing charges to companies.

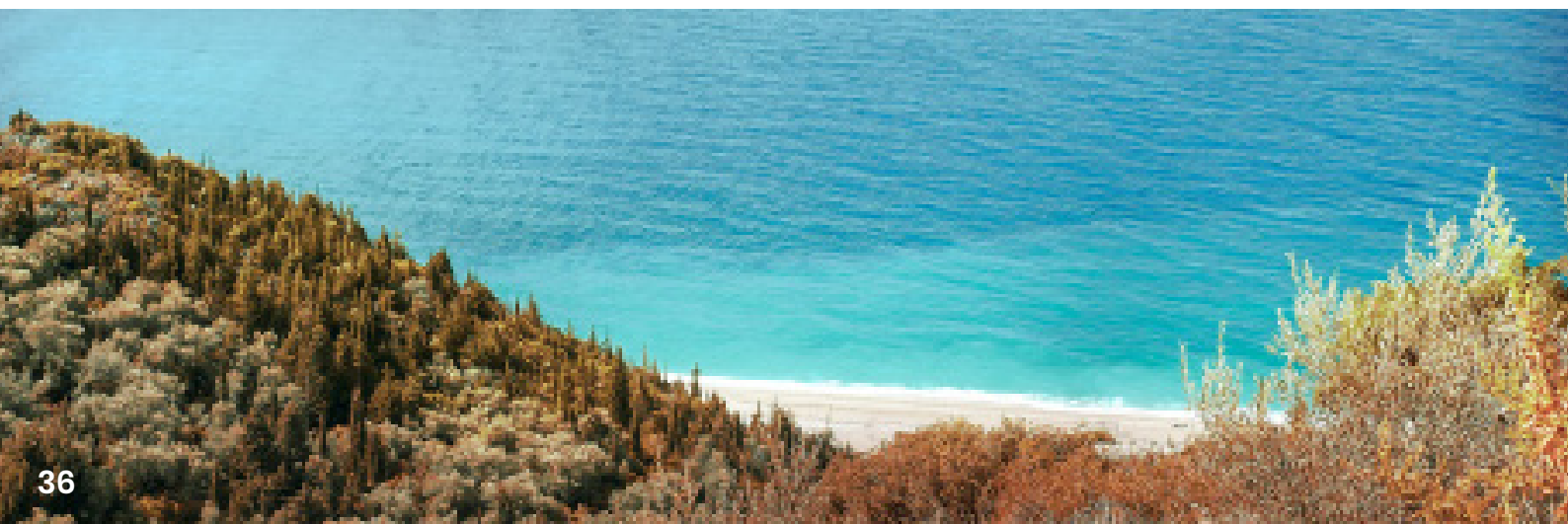
Economic incentives

Strategies, laws and by-laws ●

DCM No. 177 dated 06.03.2012

Challenges and Opportunities

- ◇ The DCM No. 177 might need to be improved by introducing charges to companies that do not use recycled materials in their production process.



Ban on products with negative externalities

Strategies, laws and by-laws ●

DCM No. 232, dated 26.04.2018 banning non-biodegradable plastic bags

Status

◇ DCM no. 232, dated 26.4.2018 "For some changes and additions in DCM no. 177, date 6.3.2012 has banned usage of single use non-biodegradable plastic bags.

Challenges and Opportunities

- ◇ Only non-biodegradable plastic bags have been banned by DCM No. 232, dated 26.04.2018
- ◇ However, misconceptions of plastics biodegradability (including oxo-degradable plastics being considered as biodegradable) might result in misuse of biodegradability labels and lack of differentiated waste treatment.

Eco-labels

Strategies, laws and by-laws ●

DCM no. 177, date 6.3.2012

DCM no. 434, dated 11.07.2018 on "Food Labelling and Consumer Information"

Status

- ◇ DCM no. 434 defines that all food packaging should provide information whether they are recyclable and/or biodegradable.

Eco innovation and Eco design

Strategies, laws and by-laws ●
NO REGULATION

Green Public Procurement (GPP)

Strategies, laws and by-laws ●
NO REGULATION

Challenges and Opportunities

- ◇ For Green Public Procurement to be implemented, the approval of additional legislation is required to define green practices.

3.2. BOSNIA AND HERZEGOVINA

No country-wide policies and regulations related to waste management exist in BiH. Since environmental protection, hence waste management, is under jurisdiction of entities and the district, the entity governments for FBiH and RS and the government for BD are responsible for drafting and adopting their own policies and regulations.

Recycling target

Strategies, laws and by-laws

FEDERATION OF BOSNIA AND HERZEGOVINA ●

*Federal Waste Management strategy (2008-18)*¹⁵

Regulation on the Management of Packaging and Packaging Waste (RMPPW) O.G. of FBiH, No. 88/11, 28/13, 08/16, 54/16, 103/16 and 84/17

Law on Waste Management O.G. of FBiH, No. 33/03, 72/09 and 92/17

REPUBLIKA SRPSKA ●

Waste management strategy defines targets for recovery and recycling of packaging waste, but without segregation per type of packaging waste

Waste Management Law (WML) O.G. of RS, No. 111/13, 106/15 and 16/18

BRCKO DISTRICT OF BIH ●

NO RECYCLING TARGETS

Status

In FBiH:

- ◇ the *Federal Waste Management*

strategy envisaged that by 2018 15% of produced plastic packaging from municipal waste should be collected and recycled.

- ◇ RMPPW stipulates that by 2016, 16% of plastic packaging waste placed on the market had to be recovered or recycled. According to the amendment of the Regulation (O.G. of FBiH, no. 103/16), the targets for 2016 will be applied for the next five years.

In RS,

- ◇ Recycling target for plastic packaging waste is 16% in 2017; 20% in 2018.

Challenges and Opportunities

- ◇ Existing recycling targets are considerably below the levels specified in EU revised legislative framework on waste¹⁶, thus easily attained by existing collection system. Moreover, the targets in FBiH are kept unchanged until 2012, while in RS no clear provision exists on target increase and the period current targets are to be operational. In both cases, an increase on the recycling target would entail the need to upgrade the waste collection infrastructure. Additionally, recycling targets only concern PROs, meaning that the performance of entity Funds or individual companies do not officially contribute in achieving those targets.

15. A new Strategy is planned in 2019 with financial support from SIDA and technical assistance provided by the Swedish Environmental Agency.

16. The revised legislative framework on waste has entered into force in July 2018, sets the following minimum targets by weight: a common EU target for recycling 65% of municipal waste by 2035; a common EU target for recycling 70% of packaging waste by 2030; a specific target for recycling 55% of plastic packaging waste by 2030.

- ◇ The recycling rates are calculated as waste sent to recycling, including waste exported for the purpose of recycling, and not on the actual quantities recycled.
- ◇ In both entities, there is lack of public awareness and interest in separate collection and no business case has been made to incentivise separate collection at company level. Currently, separate collection of municipal plastic packaging waste is not an obligation for municipalities and public

utilities.

- ◇ As a result, the manual sorting plants installed in BiH operate in under-capacity due to lack of separately collected MSW fractions.
- ◇ Landfilling taxes are paid only at regional sanitary landfills and are lower than EU average (12 EUR to 22 EUR per ton of waste). Non-compliant municipal landfills do not charge for waste landfilling. This setup does not contribute to the promotion of waste recycling or prevention.

Waste Management regulations

Strategies, laws and by-laws

FEDERATION OF BOSNIA AND HERZEGOVINA ●

Federal Waste Management strategy (2008-18)

Law on Waste Management (LWM) O.G. of FBiH, No. 33/03, 72/09 and 92/17

Regulation on the waste categories with lists O.G. of the FBiH, no 09/05

REPUBLIKA SRPSKA ●

Waste Management Strategy (2017-26)

Waste Management Law (WML) O.G. of RS, No. 111/13, 106/15 and 16/18

Regulation on Categories, Examination and Classification of Waste O.G. of Republika Srpska, No. 19/15 and 79/18

BRCKO DISTRICT OF BIH ●

Law on Waste Management O.G. of BD BiH, no. 25/04, 1/05, 19/07, 2/08 and 9/09

Regulation on the waste categories with lists O.G. of BD BiH, No. 32/06

Status

In FBiH,

- ◇ The LWM covers all waste categories¹⁷ including plastic packaging waste and establishes a general framework for all aspects of waste management in line with EU acquis.

In RS,

- ◇ The WML covers all waste categories including plastic packaging waste and establishes a general framework for all aspects of waste management in line with EU acquis.

In BDBiH,

- ◇ The LWM establishes a general framework for all aspects of solid waste management in line with EU acquis.

All the above cited laws foresee the development of WM plans and Waste Prevention Programmes (the latter only in RS). They should include measures that affect design and manufacturing of product (eco-design, waste prevention techniques), as well as PP consumption and use (economic instruments, eco-labelling promotion, awareness

17. Except radioactive waste, wastewater and gaseous effluents emitted into the air.

campaigns, waste prevention through public procurement).

In two entities and one district, regulations have been adopted to define the categories of waste in line with the EU Waste Catalogue.

Challenges and Opportunities

In FBiH,

- ◇ The Federal Waste Management Plan expired in 2017. It contained information on packaging waste generation

(based on estimations) and proposed organization of packaging waste management system. No specific measures proposed, only targets for recycling of plastic packaging from MSW.

- ◇ A new Strategy is planned in 2019 with financial support from SIDA and technical assistance provided by the Swedish Environmental Agency.

In RS and BDBiH,

- ◇ The Waste management plans have not been drafted and adopted.

Packaging waste management regulations

Strategies, laws and by-laws

FEDERATION OF BOSNIA AND HERZEGOVINA ●

Law on Waste Management (LWM) O.G. of FBiH, No. 33/03, 72/09 and 92/17

Regulation on the Management of Packaging and Packaging Waste (RMPPW) O.G. of FBiH, No. 88/11, 28/13, 08/16, 54/16, 103/16 and 84/17

REPUBLIKA SRPSKA ●

Decree on the Management of Packaging and Packaging Waste (DMPPW) O.G. of RS, No. 58/18

BRCKO DISTRICT OF BIH ●

NO REGULATION

Status

In FBiH,

- ◇ the LWM and RMPPW define requirements regarding manufacturing, design and use that have to be fulfilled

in order to place packaging on the market of FBiH (however, no specific requirements on plastic packaging, but packaging in general).

In RS,

- ◇ the DMPPW lays down the conditions for the design, manufacture and use of packaging, packaging and packaging waste management, special conditions for issuing PRO permits as well as packaging and packaging waste management report forms.

Challenges and Opportunities

In BD BiH,

- ◇ no regulation on packaging waste management has been issued although it is identified as a short-term priority (2-4 years) in the Environmental Approximation Strategy of BD BiH, 2017.

Extended producer responsibility (EPR)

Strategies, laws and by-laws

FEDERATION OF BOSNIA AND HERZEGOVINA ●

Regulation on the Management of Packaging and Packaging Waste (RMPPW) O.G. of FBiH, No. 88/11, 28/13, 08/16, 54/16, 103/16 and 84/17

LWM

REPUBLIKA SRPSKA ●

Decree on the Management of Packaging and Packaging Waste (DMPPW) (O.G. of RS, No. 58/18)

WML

BRCKO DISTRICT OF BIH ●

NO REGULATION

Status

In FBiH,

◇ RMPPW defines the requirements of the packaging waste management system. All major F&B producers and retailer fall within the categories defined for the subjects obliged to join the system. RMPPW allows them to transfer their obligations directly to the operator of the packaging waste management system (PRO - Producer Responsibility Organization). Businesses are excluded from the obligation to join the system if, in a calendar year, the quantity of packaging material used for packaging the goods does not exceed certain fixed amounts per packaging type, however they are obliged to report to the PRO and the Federal Fund for Environmental Protection on the quantities of packaging placed on market as those that are subject to packaging waste management. In case of not transferring the obligations to the PRO, importers,

fillers, packers, distributors and end-suppliers pay the prescribed penalties to the Federal Fund for Environmental Protection. This fee (penalty) for plastic packaging is 105 EUR per tonne of plastic packaging placed on market.

◇ In order for PRO to obtain waste management permit from Federal Ministry it has to have signed contracts with at least 30 entities placing on the market at least 30,000 tons of packaging per year.

In RS,

◇ DMPPW defines the requirements of the packaging waste management system. The producers, importers, fillers, packers, distributors and final suppliers are obliged to join the packaging waste management system and are responsible for achieving prescribed recycling targets. Otherwise prescribed fee is paid to the Fund for Environmental Protection and Energy Efficiency of RS and is considered as penalty for not participating in the EPR. This fee (penalty) for plastic packaging is 165 EUR per tonne of plastic packaging placed on market.

◇ In order for PRO to obtain waste management permit from Ministry it must sign contracts with at least 10 entities placing on the market at least 8,000 tons of packaging per year.

The Trademark Law (O.G. of BiH, No. 25/06) regulates use of the Green Dot on packaging. When the financial contribution for that packaging has been paid to a qualified national PRO, established in accordance with the principles defined in EU Packaging and Packaging Waste Directive and the respective entity law, a Green Dot can be applied to the packaging. The use of the Green Point is regulated by the "placed on market" principle, i.e. according to the place of consumption not production

(currently 7 EUR per tonne of placed plastic packaging on the market).

Challenges and Opportunities

- ◇ Regulatory framework in both entities lays down the possibility to apply EPR schemes in managing packaging including plastic packaging, but it is not obligatory.
- ◇ Current setup of EPR (transfer obligation to PRO or if not pay higher fees to Fund) excludes the possibilities for the obliged companies to organize individually the take back of packaging waste and the achievement of the recycling and recovery objectives.
- ◇ Regulations don't define responsibilities of PP manufacturers, distributors and other stakeholders against a common target of PP waste reduction. The boundaries between collecting and recycling responsibility, funding schemes, setting up and meeting goals, ensuring oversight and consistency, as well as raising awareness raising campaigns are not clearly defined.
- ◇ There is no precise definition of responsibilities for organizing separate collection and recycling in case that more than one PRO operates on the market.
- ◇ There are no clear responsibilities of the Environmental Fund with regard to achievement of the recycling and recovery targets.
- ◇ There are no reliable data on the quantity of packaging placed on the market and the amount of recyclable waste separately collected, recycled or exported. The centralized collection of information and database management is still not in place.
- ◇ At present, there is no effective mechanism in place to control the quantities declared. This limits the resources available in the system and does not allow significant improvements in the waste management practices¹⁸.
- ◇ There is no formal obligation or incentive for the PROs to increase separate collection of household packaging waste that would contribute to increase the recycling rates.

Deposit Return System (DRS)

Strategies, laws and by-laws ●

NO REGULATION

Challenges and Opportunities

- ◇ A DRS is used informally by the private sector for glass bottles.

18. According to unofficial estimates, the total quantities of undeclared packaging exceed 50% and most probably is the result of fewer amounts declared by the companies already contracted by the PROs.

19. The recycling plants in BiH (Natron Maglaj for paper recycling and Omorika Doboj for PET recycling) are not actively involved in the setting of EPR system. They are keeping the existing waste supply routes and do not rely entirely on the

Economic disincentives

Strategies, laws and by-laws

FEDERATION OF BOSNIA AND HERZEGOVINA ●

Decree on Fees for Plastic Bags with Suspenders O.G. of FBiH, No. 09/14

REPUBLIKA SRPSKA ●

NO REGULATION

BRCKO DISTRICT OF BIH ●

NO REGULATION

Status

In FBiH,

- ◇ Difference between scope of the Directive (plastic bags with a wall thickness from 15 to 50 microns) and Decree (up to 20 microns). In 2017, the Federal Fund prepared Draft amendments to the Decree to better align its provisions with the EU Directive (scope from 15 to 50 microns), but it is still pending approval.
- ◇ There is no validation instrument for data accuracy in reporting process. Cases of misreporting from the retailers are hampering the execution of the Decree.
- ◇ The introduction of fees on plastic bags in 2014 in FBiH did reduce the consumption of the targeted plastic bags (from 9.3 million in 2014 to 3.5 million in 2017) but this positive result was thwarted

by an overall increase in plastic bags placed on market that are not subject to the Decree (from 66.4 million to 69.9 million in 2017).

In RS,

- ◇ Authorities have recently prepared an amendment of the Law on waste management (LWM) introducing a plastic bags fees of 0.15 EUR per kg.

Challenges and Opportunities

In FBiH,

- ◇ The Decree on fees for plastic bags with suspenders sets a fee of 0.025 EUR per piece of polyethylene bags, with or without additives for degradation, whose thickness does not exceed 20 microns, and with no specially designed handles but with handles that are an integral part of the plastic bag (Art 2), or 25 EUR per one pack of 1,000 pieces. It is noted that this provision is often bypassed by putting on the market bags above 20 microns.
- ◇ Lightweight plastic bags with handles used for packing fruits and vegetables in bulk are not the subject of the Decree.
- ◇ Fees are collected by the Federal Fund which then allocates 70% of the proceeds to the cantonal budgets.
- ◇ The fees are paid to Federal Fund by all traders (retail shops, stores, supermarkets, bakeries, newsstands, pharmacies, grocery stores, etc.) registered in FBiH which consume plastic bags for their own needs or put them on the market (Art 3).

Economic incentives

Strategies, laws and by-laws ●

NO REGULATIONS

Ban on products with negative externalities

Strategies, laws and by-laws ●

NO REGULATIONS

Eco-labels

Strategies, laws and by-laws

FEDERATION OF BOSNIA AND HERZEGOVINA ●

Regulation 66/2010/EC on the EU Eco-label O.G. of FBiH No. 92/07

REPUBLIKA SRPSKA ●

Regulation 66/2010/EC on the EU Eco-label O.G. of RS No. 108/13

BRCKO DISTRICT OF BIH ●

NO REGULATION

Status

- ◇ Entity regulations for the eco-labelling of FB packaging are in line with EU Regulations.
- ◇ These regulations exclude the

possibility to award an eco-label to food products, but the packaging itself can have an eco-label.

Challenges and Opportunities

- ◇ In 2012, the Federal Ministry awarded 3 companies with the eco-label “Eco-label – Friend of Nature” as part of a public campaign aimed to promote green products. During the campaign Federal Ministry representatives stated that eco-labels will be awarded every year to producers who have the appropriate quality from environmental protection throughout the life cycle of the product standpoint. Since 2012 there have been no publicly available information on awarded companies.
- ◇ No available information if or which companies have been awarded an eco-label in RS so far.



Green Public Procurement (GPP)

Strategies, laws and by-laws ●

NO REGULATIONS

Status

In RS,

- ◇ an amendment to the WML envisages the promotion of waste prevention through public procurement. No

implementation has been recorded so far.

Challenges and Opportunities

- ◇ The Public Procurement Strategy for BiH (2016–2020) states the need to promote green public procurement but its Action Plan does not foresee any specific targets or plans for PP.



Recycling target

Strategies, laws and by-laws ●

Law on waste management (LWM)
“Official Gazette of Montenegro”, Nr. 064/11
from 29.12.2011 and 039/16 from 29.06.2016

50% of the total amount of collected packaging waste (including metal, paper, plastic and glass from households and other sources) should be prepared for reuse and recycling by 2020

Status

◇ Law on waste management defines as a target of at least 50% of collected waste, such as paper, metal, plastic and glass from households and other sources should be prepared for the recycling.

This aim is planned to be achieved by 2020 following these targets:

- 25% to be recycled until 31st of December 2017;
- 35% to be recycled until 31st of December 2018;
- 45% to be recycled until 31st of December 2019;
- 50 % to be recycled until 31st of December 2020.

Challenges and Opportunities

◇ According to the Report on the implementation of the State Waste management plan, only 10% of total collected waste was prepared for reuse and recycling in 23 municipalities in 2017.

Waste Management regulations

Strategies, laws and by-laws ●

Law on waste management (LWM)
“Official Gazette of Montenegro”, Nr. 064/11
from 29.12.2011 and 039/16 from 29.06.2016

Law on communal services “Official Gazette of Montenegro”, Nr. 055/16 from 17.08.2016 and 074/16 from 01.12.2016

Rulebook on the methodology for determining the composition and quantity of municipal waste in the territory of the local self-government
“Official Gazette of Montenegro”, Nr. 025/18 from 20.04.2018

Status

◇ According to LWM, producers are obliged to adopt any technologies/processes to reduce/prevent waste. If they produce more than 200kg or

hazardous waste or 20 tons of non-hazardous waste, they are obliged to prepare a Waste Management Plan.

- ◇ FB packaging is not specially mentioned and recognized in the LWM. Packaging waste is only further detailed as commercial or communal packaging waste.
- ◇ The Rulebook is a by-law act that defines methodology for determining the composition and quantity of municipal waste in the territory of the local self-government units by the Communal Utilities and according to the EU Waste Catalogue.
- ◇ Following the LWM, between 2012-19, 441 permits for waste management plans have been issued.
- ◇ The State Waste management plan 2015-20²⁰ was adopted in July 2015 and amended subsequently²¹. It proposes the creation of four centres for waste management, a “dry” and “wet” waste containers system.

- ◇ In 2018, according to the Report on Implementation of State Waste management plan, 14 Municipalities have prepared and adopted Local Waste management plans.

Challenges and Opportunities

- ◇ A new State Waste Management plan is currently under development and to establish data basis between Agency for Protection of Nature and Environment and MONSTAT related to the waste management; and to enforce capacities of inspections for further work in the waste management.
- ◇ So far, despite the Rulebook, no adequate database on waste composition has been set up.
- ◇ No National Plan for waste prevention exists.

Packaging waste management regulations

Strategies, laws and by-laws ●

Regulation on the method and procedure for the establishment of the system for takeover, collection and processing of waste packaging and the operation of that system “Official Gazette of Montenegro”, Nr. 42/12 from 31.07.2012

National Strategy with Action plan for transposition, implementation

and enforcement of the EU acquis on environment and climate change 2016-20

Local Waste Management Plan for Capital Podgorica for period 2016-20

Status

- ◇ The European Parliament and Council Directive 94/62/EC of 20 December 1994

20. State Waste management plan in Montenegro for the period 2015 - 2020, “Official Gazette of Montenegro”, Nr. 74/15 from 23.12.2015

21. Decision on Amendments for State Management plan for the period 2015 - 2020, “Official Gazette of Montenegro” Nr. 035/18

on packaging and packaging waste has been largely transposed, the existing law has to be revised and by-laws issued.

- ◇ The Regulation defines:
 - methods and procedures for the establishment and operation of a system to collect and process packaging waste. It applies on the packaging which is placed on the market and packaging waste generated within the industry, crafts, trade, services and other activities, as well as on the objects that have characteristics of packaging.
 - Communal Utilities are obliged to provide sufficient number of green islands (places with the containers

for primary waste separation) and recycling yards.

- ◇ A legal entity that processes waste packaging is obliged to keep records on quantity of waste packaging.

Challenges and Opportunities

- ◇ The National Strategy recognises waste management as a national priority and proposes a cooperation between Ministry of sustainable development and MONSTAT to develop by-law that will define the collection and processing of data related to the waste. However, the issuing of laws and by-laws is lagging behind.

Extended producer responsibility (EPR)

Strategies, laws and by-laws ●

Law on waste management (LWM)
“Official Gazette of Montenegro”, Nr. 064/11
from 29.12.2011 and 039/16 from 29.06.2016

Status

- ◇ A national EPR scheme is foreseen within the LWM.
- ◇ A Registry of producers with extended responsibility is managed by Agency for Protection of Nature and Environment.

Challenges and Opportunities

- ◇ Due to lack of by-laws and inapplicable provisions, EPR is not implemented and enforced.
- ◇ Ministry of sustainable development and tourism, Directorate for waste management, plans to propose new Law on waste management to ensure the implementation of the EPR scheme.



Deposit Return System (DRS)

Strategies, laws and by-laws ●

NO REGULATION

Challenges and Opportunities

- ◇ Trebjesa Brewery, the largest Brewery in Montenegro, established unilaterally a DRS for glass bottles which has been extremely successful. This shows that people in Montenegro are ready to accept similar schemes, particularly as they see the economic advantage.
- ◇ A DRS for expandable polystyrene boxes in the fishing sector was planned but not implemented.

Economic disincentives

Strategies, laws and by-laws ●

Law on consumer protection “Official Gazette of Montenegro”, No. 2/2014, 6/2014, 43/2015 and 70/2017

Status

- ◇ The Law on consumer protection defines that the trader is obliged to provide the consumer with appropriate packaging material in accordance with the nature and characteristics of

the goods. Supermarkets can charge for single use carry-on plastic bags. But if the bags carry a logo, sign or a marketing/communication message of the retail, they can be given for free. Bags for carrying products purchased with logo, sign, slogan and/or the name of the manufacturer or trader are considered as a promotional material and should not be charged.

Challenges and Opportunities

- ◇ So far, the system of charge on plastic bags at supermarkets did not have an impact on the n. of bags produced and consumed.

Economic incentives

Strategies, laws and by-laws ●

NO REGULATIONS

Ban on products with negative externalities

Strategies, laws and by-laws ●

NO REGULATIONS

Eco-labels

Strategies, laws and by-laws ●

Environmental Law Zakon o životnoj sredini, "Official Gazette of Montenegro", br 52, od 09. avgusta 2016

State Waste Management Plan 2015–20

EU Ecolabel system

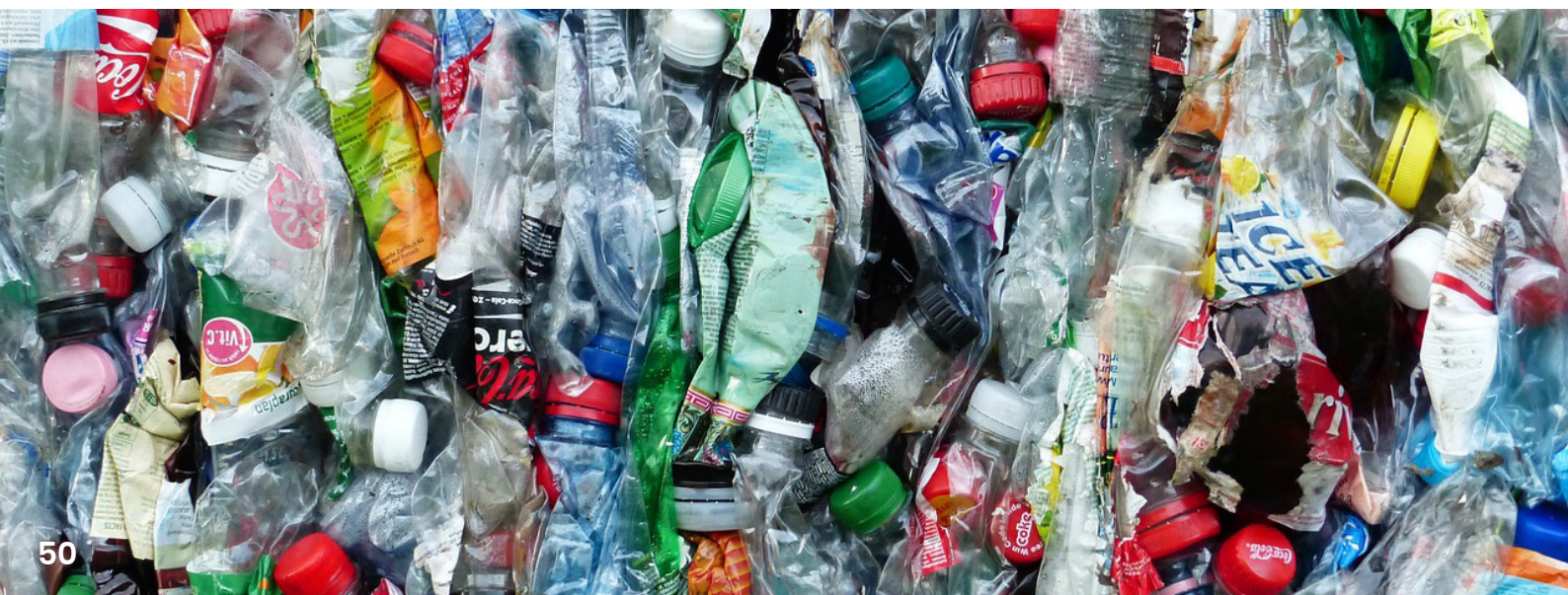
- ◇ The State Waste Management Plan 2015–20 recognizes the need of Montenegro to define certain ecological label or certification to promote circular economy and proposes also an award for citizens who regularly implement waste separation to raise awareness towards higher percentage of recycling.

Status

- ◇ According to the Environmental Law, legal entities or individuals can apply for the ecological label for the products or services that include reduction of energy consumption, of production of harmful and hazardous materials, of waste or of nature resources consumption.
- ◇ The EU ecolabel can be awarded through a licensed auditor of an EU member state. Since 2012, 14 touristic businesses were awarded this label.

Challenges and Opportunities

- ◇ Due to a limited domestic FB production, there has not been an interest for ecological labels in Montenegro. Most of the products that are in daily use in Montenegro are imported and eventually have already an EU ecolabel. Yet, businesses in Montenegro have understood that ecolabel can give them a competitive advantage.



Eco innovation and Eco design

Strategies, laws and by-laws ●

NO REGULATIONS

Challenges and Opportunities

◇ Montenegro has started importing eco designed FBPP, but they are more expensive than the traditional FBPP.

- ◇ No domestic eco innovation or eco designed FBPP production exist yet.
- ◇ Compostable FBPP are imported but provide little benefit as no industrial composting facility exist in Montenegro.

Green Public Procurement (GPP)

Strategies, laws and by-laws ●

Law on public procurement “Official Gazette of Montenegro”, Nr. 042/11 from 15.08.2011, 057/14 from 26.12.2014, 028/15 from 03.06.2015, 042/17 from 30.06.2017

Status

◇ Law on public procurement regulates the conditions, manner and procedures for the procurement of goods, services and delivery of works, and other issues of relevance to public procurement. Main principle and criteria are based on the economic aspect (price).

Challenges and Opportunities

- ◇ No sustainable procurement criteria related to FBPP waste prevention have been used to date in Montenegro. Price remains the most important criterion for public procurement.
- ◇ In 2018, a “Lets buy domestic” program was launched to promote local products: more than 3000 products are now on Montenegrin markets with this label. For example, since early 2019, the Government sources its mineral water exclusively from the local “Rada” mineral water company (which was re-opened expressly).

