

Guidance Note 1-rev1

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Subject:	Guiding principles for application of the eligibility criteria for EU financing of waste treatment facilities in projects.
Countries:	Greece
Prepared by:	Christopher Edge, Alina Oberdörfer, Glenn Orveillon, Christian Schempp

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1. Background

1.1 Introduction

EU Regulation 2021/1058 on the European Regional Development Fund and the Cohesion Fund (EU Regulation 2021/1058) foresees in Article 7(g) that the following investments are excluded from support:

“investment increasing the capacity of facilities for the treatment of residual waste, except for:

- (i) the outermost regions in duly justified cases only;*
- (ii) investment in technologies to recover materials from residual waste for circular economy purposes”.*

DG REGIO interpretation of Article 7(g) of EU Regulation 2021/1058 (Non-Paper) issued May 2022 considers that support from ERDF and Cohesion Fund may exceptionally be provided for new facilities that would be treating both residual waste and separately collected waste on a pro-rata basis in a very limited number of Member States (MSs). The Non-Paper also stipulates the following:

- The need to establish guiding principles on the practical application of the eligibility criteria and the pro-rata principle.
- JASPERS to support the Commission in setting up the guiding principles.
- JASPERS may support managing authorities in assessing the plausibility of estimations submitted by beneficiaries.

Thus, in July 2022, DG REGIO entrusted JASPERS with a horizontal assignment to *“Support in setting up guiding principles for the implementation of the limited eligibility of solid waste treatment in 2021-2027 Cohesion Policy”*. Within this assignment, JASPERS prepared the following two guidance notes (GNs):

Within GN-1 dated 25 July 2022 titled *‘Methods of pro-rata calculation for eligibility of solid waste treatment infrastructure in 2021-2027’*, JASPERS proposed two methods to calculate the “pro-rata” factor:

- Method A: the ratio of the total quantity of separately collected bio-waste to the total quantity of bio-waste treated in the biological treatment unit of an eligible facility; and
- Method B: the ratio of the total quantity of separately collected waste (recyclable and bio-waste) to the total quantity of waste (i.e., separately collected + residual waste) treated in an eligible facility.

DG REGIO decided on method B as applicable for the calculation of the “pro-rata” being considered more in line with the derogation provided in Art. 7(g)(ii) of EU Regulation 2021/1058.

GN-2 dated 1 August 2023 titled *‘Guiding principles for the implementation of the limited eligibility of solid waste treatment in 2021-2027 Cohesion Policy’* elaborates the general guiding principles for EU support for eligible waste treatment projects in 2021-2027, including defining of newtype Recovery and Recycling Facilities (RRFs). The general guiding principles comprise the following:

- Technical conditions – technical framework conditions and specific conditions
- State aid aspects
- Grant calculation.

The general guiding principles were presented and agreed to by representatives of DG REGIO (Croatia and Romania Unit – REGIO.E.2 and Cyprus and Greece Unit – REGIO.G.3) and DG ENV (From Waste to Resources Unit – ENV.B3 and Green Finance and Investments Unit – ENV.E.1).

It was additionally agreed with DG REGIO for country specific guiding principles to be developed as separate assignments in cooperation with the respective national Managing Authorities of Greece, Romania, and Croatia, based on the agreed general guiding principles and taking into consideration country specific aspects.

The Action Completion Note for the horizontal assignment “*Support in setting up guiding principles for the implementation of the limited eligibility of solid waste treatment in 2021-2027 Cohesion Policy*” was sent to DG REGIO in December 2024.

In April 2023, the Greek Managing Authority (‘the MA’) of the “Environment and Climate Change” 2021-2027 Programme (PEKA) officially requested JASPERS’ support in setting up the country specific guiding principles for solid waste eligibility in the form of Recovery and Recycling Facility (RRF) (horizontal assignment 2023 119 GR SCE HOR). According to the assignment fiche, JASPERS is to provide the MA with:

- 1) Support to develop the conceptual RRF framework including the elaboration of the technical and financial aspects of an RRF project as foreseen in PEKA.
- 2) Drafting guiding principles for the technical conversion of mechanical-biological treatment facilities (MBTs) to RRFs
- 3) in line with the CEP targets and EU cohesion policy 2021-2027 and for the calculation methodology for the related cost.
- 4) Elaborate a methodology for the calculation of the EU grant for the RRFs, calculated ex-ante, for each operation, over the lifecycle of the facility, and support for drafting guiding principles of the methodology to calculate the intervention rate of the 2021-2027 EU funding of new RRFs or phased projects for which the EU ‘FAST-CARE’ Regulation 2022/2039/EC is not applicable.
- 5) Provision of practical examples showing the impact of the guiding principles on the amount of the EU grant.
- 6) Provide guidelines for the organisation and upgrading of collection systems so that they support RRFs and contribute adequately to regional targets.
- 7) Elaborate State aid considerations of the RRF framework (technical and financial aspects). This request is since further broken down into i) State aid compliant scenarios for treatment of separately collected waste streams in RRFs, and ii) Guiding principles for modifying existing SGEIs to include additional investments and services.
- 8) Support for the elaboration of co-funding applicant guide and jointly organise with the Greek Authorities a workshop with all beneficiaries/FOSDA to disseminate information.

JASPERS considers that following agreement of the developed proposals with the MA, the guiding principles are made available for the attention of DG REGIO prior to being annexed to the Applicant Guide for waste management projects to be supported under the PEKA Programme.

1.2 Purpose and scope of the current GN

During meetings concerning the approach and time-plan for the preparation of guiding principles between the representatives of the MA and JASPERS, it was decided that JASPERS is to first focus on preparing the guiding principles for establishing the eligibility of EU financing for *phased projects including RRFs* to be funded under PEKA. The initial guiding principles were elaborated within this assignment and provided with GN1-rev1 dated 4th April 2024. It has since been requested by the Greek

MA that GN1-rev1 to be amended to address both phased and new RRF projects to be funded under PEKA. The revised guiding principles are intended to be annexed to the relative PEKA call for proposals.

The purpose of this GN1-rev1 of the current assignment is therefore to present **proposed guiding principles for establishing the eligibility for both new and phased RRF projects** (according to the provisions of Art. 118 of EU Regulation 1060/2021), **as well as for the case of conversion of mechanical-biological treatment facilities (MBTs) to RRFs.**

The note additionally includes the methodology for the calculation of the EU grant for RRF projects and provides a practical example showing the impact of the guiding principles on the amount of the EU grant.

It is noted that, according to the MA of PEKA, a direct agreement has been reached between the GR authorities and DG REGIO G3, whereby phased projects that include RRFs normally eligible to benefit from the 'FAST-CARE Regulation 2022/2039 derogation, will not in the case of Greece proceed in this manner, but rather in line with a dedicated EU co-funding 'Bonus Scheme'. This scheme is also to apply to new RRF projects, and details of which are to be included in the relative PEKA call for proposals.

The core principle of RRFs can be summarised as facilities having inherent flexibility in treatment of increasing quantities of separately collected waste streams (recyclable waste and bio-waste) and accordingly decreasing quantities of residual wastes over time. RRFs are necessary to be coupled with (existing or planned) effective and efficient separate waste collection systems for the project area ensuring minimum required capture rates to ensure the attainment of respective preparation for recycling targets.

The following aspects are considered in the development of the country specific guiding principles for Greece:

- Relative European and National waste legislation
- Provisions of the National Waste Management Plan (NWMP) and Regional Waste Management Plans (RWMPs), currently under revision / review
- Provisions of the PEKA program
- Provisions contained within existing Greek RRF project documentation intended to be phased from the 2014 – 2021 operational programme to the PEKA program
- GN-1 and GN-2 prepared under the assignment 2022 99 SCE HOR *“Support in setting up guiding principles for the implementation of the limited eligibility of solid waste treatment in 2021-2027 Cohesion Policy”*
- Rationale for and envisaged role of RRFs in municipal waste management
- JASPERS experience in providing support for project preparation.

Further to this current GN1-rev1, JASPERS has provided the following GN's related to this assignment:

- Guidance Note 2-rev1 - State aid compliant scenarios for treatment of separately collected waste streams in Recovery and Recycling Facilities (RRFs) dated 23 December 2024 (initially submitted 4 April 2024)
- GN3 - Guiding principles for modifying existing SGEIs to include additional investments and services dated 3rd June 2024

Final acceptance of both above GN's by the GR State aid authority (EYKE) is expected.

2. Legal framework

2.1 European waste legislation

Municipal waste management is to comply with the requirements of **Waste Framework Directive 2008/98/EC as amended by Directive 2018/851 (WFD)**.

The WFD aims to improve the quantity and the quality of the materials recovered for re-use and recycling by fostering **separate collection of waste**.

Thus, the WFD includes obligations for MSs to set up schemes for separate collection, namely:

- Article 10 (2) – to facilitate or improve preparing for re-use, recycling and other recovery operations, waste shall be subject to separate collection and shall not be mixed with other waste or other materials with different properties.
- Article 10 (3) – derogations for the separate collection obligations can apply under certain conditions.
- Article 11 (1) - separate collection of least paper, metal, plastic, and glass is obligatory as of 2015.
- Article 11 (1) - separate collection of textiles is obligatory as of 1st January 2025.
- Article 20 – separate collection of hazardous waste fractions produced by households is obligatory as of 1st January 2025.
- Article 22 - bio-waste is either separated and recycled at source or is collected separately and is not to be mixed with other types of waste as of 31st December 2023.

Article 3 of the WFD includes the definition of separate collection as *collection where a waste stream is kept separately by type and nature so as to facilitate a specific treatment*. The term ‘waste stream’ is not defined in the WFD.

The “*Guidance for separate collection of municipal waste*”, prepared by the European Commission in April 2020¹ mentions that waste streams can refer to the waste materials (e.g., plastics, metals) or to the products from where the waste originated (e.g., packaging, electronics), and can be linked to the “types of waste” codified according to in the List of Waste (LoW), Decision 2000/532/EC. In accordance with good practices described in this Guidance, the waste types of the LoW can be clustered in order to determine the minimal waste streams that have to be collected separately in order to ‘facilitate a specific treatment’. Thus, the Guidance presents the minimum municipal waste streams to be separately collected to be compliant with the WFD as below.

Table 1 Minimum municipal waste streams to be separately collected.

Focus materials	Waste streams for separate collection	Codes according to LoW
Paper and cardboard	Paper & cardboard	150101, 200101
Plastics	Beverage bottles, other packaging plastics (including beverage cartons), other plastics	150102, 150105, 200139

¹ [Guidance for separate collection of municipal waste \(europa.eu\)](https://ec.europa.eu/eurobarometer/surveys/trends/life/guidance-for-separate-collection-of-municipal-waste)

The motivation to strengthen the obligations around separate collection are illustrated by the recital 41 of Directive 2018/851, which states that *“in order to avoid waste treatment that locks in resources at the lower levels of the waste hierarchy, increased preparing for re-use and recycling rates, enable high-quality recycling and boost the uptake of quality secondary raw materials, Member States should ensure enhanced compliance with the obligation to collect waste separately....”*

Recital 42 of the same Directive foresees that *“Separate collection could be achieved through door-to-door collection, bring and reception systems or other collection arrangements. While the obligation to separately collect waste requires that waste be kept separate by type and nature, it should be possible to collect certain types of waste together provided that this does not impede high-quality recycling or other recovery of waste, in line with the waste hierarchy...”*

Recital 56 states that *“In order to avoid waste treatment which locks in resources at the lower levels of the waste hierarchy, to enable high-quality recycling and to boost the uptake of quality secondary raw materials, MSs should ensure that bio-waste is separately collected and undergoes recycling in a way that fulfils a high level of environmental protection and the output of which meets relevant high-quality standards.”*

The “Guidance for separate collection of municipal waste” additionally mentions that ‘high-quality recycling’ can be understood as a sub-concept of recycling and defines it as the reprocessing of waste into materials which have a similar or higher economic value in comparison to the products or applications from which the waste originates.

The **preparation for re-use and recycling targets** put forward by the WFD are ambitious, 55%, 60% and 65% by respectively 2025, 2030 and 2035, respectively; It is noted that the average recycling rate for municipal waste in Greece in 2021 (last year with data) was 17.5%, while in the EU-27 was 49.8%.³

MSs that have the biggest efforts to achieve these targets have the option to postpone the deadline for up to 5 years under the following conditions:

- prepared for re-use and recycled less than 20% or landfilled more than 60% of its municipal waste generated in 2013 as reported under the Joint Questionnaire of the OECD and Eurostat; and
- at the latest 24 months before the respective deadline, notifies the Commission of its intention to postpone the respective deadline and submits an implementation plan in accordance with Annex IV of the WFD.

In the event of postponing the attainment of the targets in accordance with paragraph 3, the MS concerned shall take the necessary measures to increase the preparing for re-use and the recycling of municipal waste to a minimum of 50 % by 2025, 55 % by 2030, and 60 % by 2035 in the event of postponing the deadline for attaining the relative initial WFD target.

Article 4 (3) of the WFD foresees that MSs **shall make use of economic instruments and other measures** to provide incentives for the application of the waste hierarchy. The “Guidance for separate collection of municipal waste” mentions that by setting the right incentives and facilities for separate collection, households will sort at source which is to result in homogeneous streams for re-use and recycling that can be valorised in closed-loop or other high-value applications. The guidance presents five key instruments to increase sorting in Europe as set out in table 2 below.

³ [Statistics | Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&code=sdg-12-6&plugin=1), accessed on 20 January 2025

Table 2 Example policy instruments that give economic incentives for separate collection.

Policy instrument	Target actor	Waste stream	Primary objective	Secondary objective	Priority
Extended Producer Responsibility (EPR)	Producer/consumer	Recyclables/reusables	Cost internalisation Sorting/recycling	Eco-design Waste prevention	High
Pay-As-You-Throw (PAYT)	Consumer	Mixed waste	Sorting/recycling	Cost internalisation	High
Landfill tax	Municipalities and companies	Mixed waste	Sorting/recycling	Cost internalisation	High
Incineration tax	Municipalities and companies	Mixed waste	Sorting/recycling	Cost internalisation	High
Deposit return system (DRS)	Consumer	Beverage packaging or other	Anti-litter Sorting		Medium

Source: "Guidance for separate collection of municipal waste", European Commission, April 2020

Recital 6 of EU Regulation 2021/1058 states that both ERDF and Cohesion Fund should support activities that respect the climate and environmental standards and priorities of the Union and Do No Significant Harm (DNSH) to the environmental objectives within the meaning of Article 17 of Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (**Taxonomy Regulation**) and that ensure the transition towards a low-carbon economy in the pathway to achieve climate neutrality by 2050.

Although there is no condition for investments supported with ERDF and Cohesion Funds to substantially contribute to the EU Taxonomy's environmental objectives, including the transition to a circular economy, the technical screening criteria for both DNSH and substantial contribution may be considered when establishing the technical conditions both for separate collection and for treatment of separately collected waste (recyclable waste and bio-waste).

On 27 June 2023, European Commission adopted the **Environmental Delegated Act** *supplementing EU Regulation 2020/852 by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the sustainable use and protection of water and marine resources, to the transition to a circular economy, to pollution prevention and control, or to the protection and restoration of biodiversity and ecosystems and for determining whether that economic activity causes no significant harm to any of the other environmental objectives and amending Delegated EU Regulation 2021/2178 as regards specific public disclosures for those economic activities*⁴.

Annex II of the Environmental Delegated Act includes activities making substantial contribution to the transition to a circular economy. The activities relevant for the scope of this note (eligible investments financed through PEKA) are the following:

- Collection and transport of non-hazardous and hazardous waste,
- Recovery of bio-waste by anaerobic digestion or composting,
- Sorting and material recovery of non-hazardous waste.

⁴ [EUR-Lex - 32023R2486 - EN - EUR-Lex \(europa.eu\)](#)

Annex 1 presents the relevant criteria under which these activities qualify as contributing substantially to the transitions to a circular economy and do not significantly harm the other environmental objectives.

Summary on the relevant provisions of the European waste legislation

The WFD as amended by Directive 2018/851 aims to improve the quantity and the quality of the resources fit for re-use and recycling by **fostering separate collection of waste**.

Separate collection is currently mandatory for recyclable waste (at least paper and cardboard, metal, plastic, and glass), for bio-waste as of 31 December 2023 and for textiles and hazardous household waste as of 1 January 2025. The paper and cardboard, textiles, bio-waste, wood, glass and hazardous waste streams are to be collected separately and not co-mingled with other waste streams (i.e., in single fractions). For other waste streams (e.g., plastic and metal), collection in co-mingled fractions could take place only where it meets one of the conditions laid down in Article 10 of the WFD.

To ensure a high level of separate collection and low rates of contamination, separate collection should mainly be carried out via door-to-door collection schemes or supervised collection points.

Performing separate collection systems need an integrated approach, that includes economic incentives, legal enforcement, customised separate collection schemes, and engaging communication.

The economic instruments EPR, PAYT, DRS, and taxes on landfilling and incineration have high priority and should desirably become part of every waste management system in Europe.

ERDF and Cohesion Fund support activities that respect the climate and environmental standards and do no significant harm to the environmental objectives.

The technical screening criteria for determining the conditions under which the activities related to municipal waste qualify as contributing substantially to the environmental objectives could be considered when establishing the technical conditions for both separate collection and treatment of separately collected waste (recyclable waste and bio-waste).

2.2 Greek waste legislation

2.2.1 Responsibility for management of municipal solid waste

The responsibility for the management of municipal solid waste is assigned to the first degree of local government (municipalities). This responsibility stems from Article 102(1) of the Constitution of Greece and is in accordance with Article 75(1)(b4) of Law 3463/2006, 'Law/Codex on Municipalities and Local Communities' having been defined over time (e.g., Law 1650/86 concerning general responsibilities for waste management and Joint Ministerial Decision 50910/2727 concerning the responsibilities for the collection and transportation of waste).

According to Article 30 of Law 3536/2007 concerning 'special regulations on migration policy and other issues of the Ministry of Interior, Public Administration and Decentralization' municipalities are to set up Regional Waste Management Associations (RWMAs).

According to Joint Ministerial Decision 2527/2009 on 'Specific issues and topics regarding the operation, exercise of activities and exercise of pricing policy of Solid Waste Management Associations (RWMAs)' where in summary RWMAs:

- Are to develop waste prevention-reduction programmes and promote actions and the implementation of projects contributing to the circular economy.
- Are liable for the temporary storage, transshipment, recovery, and disposal of solid waste.
- As the final beneficiary, are responsible for the preparation of projects and the preparation of the necessary studies, as well as the implementation of actions for the treatment of waste in their area of responsibility in accordance with the RWMP and the submission of applications to operational programmes for funding.
- Are responsible for the operation of existing waste management facilities and for the implementation of the projects or other activities defined by RWMPs in accordance with the specific terms, measures, restrictions and conditions set for them.
- Are responsible to implement the necessary measures for the remediation, restoration and subsequent care of facilities or sites for recovery or disposal of waste following their closure.
- May carry out tasks on behalf of local authorities (including collection and transport of solid waste) provided that such delegation is made via Programming Contracts. They may also carry out the collection and transport of solid waste on behalf of other legal persons.
- May entrust individual waste management services and other operating services to natural or legal persons, in accordance with the relevant provisions of the legislation in force.
- Are responsible for the preparation of operational action plans and the determination of the pricing policy to first-degree local authorities on an annual basis.

Law 4555/2018 'Reform of the institutional framework of the first-level local administration - deepening of democracy - strengthening the participation - improving the economic and development operation of the Local Authorities' ["KLISTHENIS I" Program] incorporates besides others:

- Arrangements for the modernisation of the framework of the RWMA's
- Arrangements for more efficient, faster and uniform exercise of the responsibilities related to the granting of citizenship and naturalisation.

Joint Ministerial Decision YPEN/DDA/53457/780/2023 - 'Regulation on pricing policy of Solid Waste Management Bodies Associations' establishing the regulation on the pricing policy of RWMA's.

JASPERS understands that a number of RWMA's have a low level of capacity, both in administrative and technical terms, thus limiting their ability to effectively assume their responsibilities as prescribed above. **The capacity building and strengthening of the RWMA's is considered critical to enable the implementation of both urgently required physical and economic actions.**

2.2.2 Main legislative framework concerning municipal and packaging wastes

The main general legislative framework concerning municipal and packaging wastes is presented below:

Joint Ministerial Decision YPEN/GGSDA/122331/1612/08.11.2024 – 'Guidelines for the development of a Holistic Separate (Waste) Collection System' for the whole of the Region'.

Law 5151/2024 regarding Adjustments for the modernization of waste management, the improvement of the energy saving framework, the development of energy projects and the resolution of urban planning issues. The purpose of this law is to modernize the waste management framework, improve the energy saving framework and the development of energy projects and resolve spatial and urban planning issues. In particular as concerns solid waste, the existing framework is amended with the aim of increasing the recycling rates through an integrated plan with the active participation of the Ministry

of Environment and Energy, the creation of strong waste management bodies, the simplification of waste management procedures and the resolution of problems in the management of municipal waste.

Law 5037/2023 regarding the Regulatory Authority for Waste, Energy and Water as amended by Law 5043/2023, renamed the Regulatory Authority for Energy as the Regulatory Authority for Waste, Energy and Water (RAAEY) and expanded its scope with responsibilities over water services and municipal waste management. The purpose of the law is the rational regulation of the provision of water services and municipal waste treatment, especially in terms of organization, services provided, their costs and pricing, through the assignment of relevant supervisory and control powers to RAAEY.

The Regulatory Authority is responsible for:

- Checking the application of the costing methodologies and the pricing regulation.
- Checking the compliance of RWMA's regarding their obligation to pay landfill tax and imposes sanctions.
- Checking the integration of the restoration – aftercare cost, in the total cost of waste management services.
- Evaluation of the achievement of the quality criteria of services provided and makes recommendations or imposes sanctions in case of non-achievement.
- Checking the economic efficiency, carrying out comparative evaluations of the cost of corresponding waste management services provided by RWMA's.
- Recommending methods of costing and pricing for the integrated municipal waste management to the Ministry of Environment and Energy.
- Deciding the minimum quality levels for the services provided by RWMA's.
- Making recommendations that include corrective measures, to be implemented within a specific period, if costing and pricing rules by RWMA's are not appropriately applied and imposes sanctions in case of non-compliance. RAAEY may (when well justified) request RWMA's to modify the tariffs, if the appropriate appliance of pricing rules is not ensured.
- Providing direction and instruction on the utilisation of energy produced from waste.
- Carrying out comparative cost evaluations of corresponding waste management services provided by municipalities and formulating proposals for the rationalisation of relevant charges.
- Monitoring the implementation of the PAYT systems by the municipalities (in accordance with Law 4819/2021).
- Evaluation of the performance of municipalities in terms of achieving the goals established in Law 4819/2021.

Law 4819/2021 the 'Integrated framework for waste management' – transposing of EU Directives 2018/851 and 2018/852 on waste and on packaging and packaging waste, setting the organisational framework of the Hellenic Recycling Organization (EOAN), provisions for plastic products, and the protection of the natural environment, spatial planning, energy, and related urgent arrangements. Among others, the law:

- Incorporates the EU targets for the preparation for reuse and recycling of municipal waste as at least 55% in 2025, 60% in 2030 and 65% in 2035, while the recycling of packaging waste, at a rate of at least 65% in 2025 and 70% in 2030.
- Promotes of the separate collection of paper, glass, plastics, metals and biowaste with emphasis is given to plastics (e.g., the introduction of an environmental fee for PVC-labelled plastic bottles, etc.).
- Introduces the mandatory separate collection of paper, glass, plastics, metals, batteries and food waste is introduced in schools, from 1 September 2022.
- Introduces mandatory separate collection of textiles and hazardous household waste by 2024.
- Introduces mandatory separate collection for at least seven new waste streams (agricultural plastics, mattresses, furniture, clothing, toys, medicines, sports equipment) where the producers of these products have both the operational and financial responsibility.

- Mandates the organisation and operation of deposit return system for beverage packaging waste for beverages, soft drinks, aluminium beverage and disposable glass, in addition to the corresponding obligation for plastic bottles already established by the law 4736/2020.
- Sets a target for the reduction of food waste by 30% compared to 2022, it being mandatory for companies, such as food processing and processing units, food supermarkets, hotels, large restaurants, catering companies, etc., to observe the waste hierarchy.
- Strengthens the regulatory framework of 'alternative waste management systems' through reducing bureaucracy, enhancing transparency, and increasing accountability.
- Mandates large producers of biowaste (such as waste from gardens, parks and food) to implement separate collection from 1 January 2023.
- Mandates the upgrade of existing separation facilities with the addition of modern equipment and the introduction of the specifications of the recovered materials (up to 2% impurities in recovered materials) and with special emphasis on plastics.
- Introduces the mandatory requirement for implementation of the PAYT economic incentive for municipalities with population over than 100,000 inhabitants from 1 January 2023, and with population of over than 20,000 inhabitants from 1 January 2028.
- Introduces a landfill tax of 20 EUR/t from 1 January 2022, with a gradual increase to 35 EUR/tn from 2025, 45 from 2026, and to 55 EUR/tn from January 1st 2027, the funds to be attributed to EOAN by the RWMAs to be utilised to enhance recycling.

Joint Ministerial Decision YPEN/DDA/90439/1846/2021 on measures and terms for the landfill of waste - compliance with the provisions of Council Directive 99/31/EC "on the landfill of waste", as amended by Directive EU 2018/850.

Law 4736/2020 - "Incorporation of the Directive (EU) 2019/904 on reducing the impact of certain plastic products on the environment and other provisions" - setting different provisions for different categories of plastic products valid from different dates, e.g., some single use plastic products (most commonly polluting and for which alternative products are available) to have been abolished as of 3 July 2021.

Ministerial Decision 56366/4351/2014 on determination of requirements (specifications) for treatment works in the context of mechanical - biological treatment of mixed municipal waste and determination of characteristics of the produced materials according to their uses.

Law 4014/2011 on Environmental licensing of projects and activities - the creation of an environmental balance and other provisions within the competence of the Ministry of Environment

While legally established, as JASPERS understands, the activities of **RAAEY** currently remain in early stages, with the recruitment of the necessary staff (both temporary and permanent), and the development of its monitoring activities still ongoing. It is **recommended this process be accelerated** to enable the critical role of this authority.

Greece adopts the criteria of the EU eco-label of soil improvers for the permitting of compost producing facilities. A joint ministerial decision on compost from separately collected bio-waste where compost and digestate quality specifications and specific provisions for quality management system is outstanding. To facilitate the use of compost and digestate resulting from stand-alone composting or anaerobic digestion plants or RRFs processing separately collected bio-waste, it is **recommended the technical norms for compost be established as soon as possible**.

Greek legislation is currently lacking in establishing minimum performance indicators for all waste management activities, including separate collection of waste streams and the operation of RRFs. JASPERS **recommends the national authorities to amend the legislation to include minimum**

performance indicators prior to implementation of new RRF, where these should consider the recommendations within this note.

3. Main provisions of the Greek waste management policy - strategic planning

MSs are to prepare and adopt waste management plan/plans (covering the entire geographical territory of the MS concerned), in line with the provisions of the WFD. According to the provisions of Article 28 of the WFD, the waste management plans shall include an assessment of the need for additional waste treatment infrastructure. Updated and aligned waste management plans also represent an enabling condition for financing of waste investments in the new programming period.

In Greece, the management of municipal solid waste at national, regional and municipal levels is governed by the National Waste Management Plan ('NWMP', Greek terminology 'ESDA'), the Regional Waste Management Plans ('RWMPs', Greek terminology 'PESDAs'), and the Local Waste Management Plans ('LWMPs', Greek terminology 'TOSDAs') respectively. The plans at all levels, adopt and implement the guidelines as given by national and European Legislation.

NWMP 2020-2030 is the overarching strategic and political national planning for waste management. NWMP sets out the lines of action and the measures to achieve the objectives set by both national and EU waste management legislation, promoting the principles of the Circular Economy. The current version of the NWMP was adopted 31 August 2020 and last amended 19 April 2023 and concerns the planning period 2020-2030. The NWMP only considers the first two targets of the EU CEP concerning preparation for re-use and recycling of municipal waste, namely to a minimum 55% by 2025, and to a minimum 60% by 2030. Of significance from the April 2023 amendment, is the introduction of the concept of RRFs, these facilities also foreseen to be able to take up any required additional capacity in sorting plants (i.e., to operate in place of sorting plants for the treatment of separately collected municipal recyclable and packaging wastes).

The main provisions of the NWMP 2020 – 2030 are the following:

- Preparation for reuse and recycling of generated MSW at least 55% until 2025 and 60% until 2030.
- Increase the recycling of packaging waste to at least 65% by 2025 and 70% by 2030, with specific targets for individual materials in accordance with Directive 2018/852/EU.
- Immediate establishment of mandatory separate collection at least for metals, paper, glass and plastic.
- Mandatory separate collection of bio-waste by 31 December 2022 (one year earlier than the European Directive). Special emphasis is given to large bio-waste producers.
- Establishment of home composting actions.
- Establishment of a separate collection for other waste streams (small amounts of hazardous waste, textiles, expired medicines, mattresses, furniture, plastic beverage bottles up to three litres).
- Less than 10% landfilling rate by 2030 (five years earlier than the European Directive).
- Implementation of a network of waste-to-energy (WtE) plants in which the residues of the waste treatment and possibly any produced waste derived fuel (SRF/RDF) for energy recovery.
- Closure and restoration of all remaining uncontrolled landfills.

The NWMP is rather vague when detailing provisions for implementation of separate collection systems and foreseen required infrastructure for municipal waste treatment, rather leaving these aspects to be developed and presented within the countries 13 RWMPs.

National Waste Prevention Program (NWPP) 2021-2030 - concerns the prevention of waste generation in households and commercial sector and its main goal is the development of a coordinated approach to create the conditions for lower consumption of raw materials and the transformation of consumer standards, with the goal of achieving gradual reduction in waste generation.

The revised Program considers:

- New legislation on single-use plastics.
- National Action Plan for the promotion of Green Public Procurement (2020-2023).
- New action plan of Greece for Circular Economy.

The Program set as priority the prevention of generation of the following waste streams:

- Food waste
- Paper waste
- Packaging Waste
- Special categories of plastics (single-use plastics, plastic carrier bags)
- WEEE
- Textile waste
- Bulky waste (furniture etc).

The basic horizontal measures of the NWPP concern:

- Determination of incentives and disincentives, financial or not, for waste producers, citizens, businesses, and local authorities, such as the landfill tax and the PAYT system.
- Promotion of material reuse centres.
- Promotion and adoption of Green Public Procurement in important sectors of the economy.
- Organising awareness and information campaigns aimed at the public with successful examples of prevention programs (they will be aimed at three main groups of users (consumers / households, trade and industry).

RWMPs specify the directions of the NWMP and the NWPP and indicate the appropriate regional level measures to promote: a) prevention, b) preparation for reuse, c) recycling, d) recovery, including energy recovery, and e) disposal as the last option. RWMPs include information regarding the monitoring of the implementation of actions and measures, including the evaluation of the achievement of their objectives, in accordance with the provisions of the NWMP.

As concerns the RWMPs, it is noted that the currently plans have been adopted in 2016 (with a planning period 2016-2020), and hence do not consider any of the more recent CEP targets, but rather only those of Directive 2008/98/EC, and are considered out of date. All 13 RWMPs covering Greece are currently in the process of being revised, where these are to now be in line with the provisions of the new NWMP, and with the requirements of the Governmental Circular (ΥΠΕΝ/ΔΔΑ/114931/1863, 07/11/2023) titled '*Adaptation of PESDA to the requirements of the legislation, the EU recommendations and the PEKA program 2021-2027*'.

The Governmental Circular provides direction for the adaptation of the **RWMPs to constitute documented, comprehensive, and operational business plans, to meet both the requirements of the WFD and consequential Greek Law 4819 /2021, as well as the conditions for the co-financing of waste management projects in the 2021-2027 programming period.** The main provisions of relevance of the Circular require RWMPs to additionally include:

- Description and evaluation of existing separate collection systems in the region.

- An appropriate and documented assessment (to the level of "preliminary" study) of the required **organization and operation of a holistic separate collection system for the whole Region.**
- Evaluation of measures for the improvement of existing separate collection systems.
- Description and evaluation of existing large recovery and disposal facilities in the region.
- An assessment of the needs for new RRFs and disposal infrastructure, where for projects that are not yet mature, a detailed option technical option analysis should be carried out. Additionally, the needs for modification / upgrading of MBTs to RRFs.
- An investment Plan – Cost Benefit Analysis / Macro Affordability Assessment of the plan.

Following the April 2023 amendment, the **NWMP foresees ‘the creation of an adequate national network of RRFs throughout Greece, including the conversion of existing and/or under procurement MBTs into RRFs in accordance with the relevant RWMPs’**. Provision is additionally made to enable RRFs to also assume the role of sorting plants for treatment of separately collected recyclable and packaging waste should there be capacity need.

All 13 current RWMPs are considered out of date (approved in 2016 with planning period 2016 - 2020). Revised RWMPs addressing the requirements of the CEP (it is noted that according to the RWMPs, the relative CEP targets are to be met at the regional level), incorporating heightened requirements for regional separate collection plans and prescribing the application of new RRFs (and conversion of MBTs to RRFs) are still under development.

Approval of all 13 of the countries RWMPs constitute an enabling condition for the release of EU funds for waste investments in PEKA, where it is estimated these may only now be able to be finalised and adopted by late 2025, i.e., over halfway through the current programming period. This can case a ‘bottleneck’ in the implementation of waste projects under PEKA. JASPERS recommends a common approach be taken in the amendment / approval of the RWMPs where possible in order to expedite implementation of these projects under PEKA.

The RWMAs are responsible for the development of the RWMPs and the then implementation of measures and actions foreseen within these concerning the treatment of municipal waste.

4. Main provisions of the ‘Environment and Climate Change’ programme (PEKA)

In the field of waste management PEKA acknowledges the main challenges facing the country as:

- The development of a holistic approach to waste management **to reverse the mainstream practice which remains sanitary landfilling.**
- Low level of public awareness and information which works as a deterrent in waste prevention, sorting at source, recycling.
- **Insufficient separate collection** networks of distinct waste streams including biowaste.
- **Infrastructure deficiencies** for the proper treatment of waste so that the percentage of waste that goes to landfill is minimised.
- **An absence of financial incentives to promote separate collection, preparation for reuse and recycling** and therefore to divert waste from landfill.
- The absence of a strong central body to supervise the evaluation and coordination of the implementation of regional solid waste management plans.
- The **insufficient administrative and operational capacity of solid waste management authorities**, both at regional and municipal level.

Of the 7 Priority Axes of PEKA adopted 26 August 2022, Priority Axis 4: "Integrated Waste Management - Transition to a Circular Economy" includes the specific objective (RSO), namely "RSO2.6. Promoting the transition to a circular and resource-efficient economy"

The specific objective RSO2.6. is intended to help Greece to address the challenges highlighted above, achieve the objectives of the circular economy, and comply with the targets for preparing for re-use and the recycling of municipal waste (60% in 2030 and 65% in 2035⁵) and diversion from landfill.

PEKA will prioritise financing the implementation of projects initiated under the 2014-2020 programme period (phased projects). The programme comprises of financing of the following types of measures:

1. Development of **Recovery and Recycling Facilities (RRFs)** that are to receive and process primarily separately collected municipal waste, with the aim of recovering materials through mechanical and biological treatment.
2. Development of composting plants that are to receive and process separately collected bio-waste.
3. **Development of systems and equipment for sorting at source and separate collection** of waste as well as other inter-municipal facilities (e.g., Waste Transfer Stations (WTSs), Green Points, etc.).
4. Completion of phased (initiated in the 2014-2020 programming period) **Mechanical Biological Treatment (MBT) with their mandatory conversion into RRFs**.
5. New projects for the **conversion and/or upgrade of existing MBTs to RRFs**.

Although the current version of PEKA does not include sanitary landfills as an eligible investment, for the projects that benefit from the FAST-CARE derogation, this type of investment could be eligible under the condition of amending the programme.

The investments are compatible with the DNSH principle, with their compatibility assessed in accordance with the Common Provision Regulation 2021/1060 (CPR).

In addition to the above listed measures, PEKA foresees **4% of the total Priority Axis 4 budget to be allocated for the implementation of capacity building measures**, specifically targeting the strengthening of the technical and administrative abilities of beneficiaries of municipal waste management projects. JASPERS is furthermore available for provision of assistance for the development of specific guidance, and the development and implementation of projects.

PEKA applies the following conditions on the financing of the above listed measures:

- All actions **must be part of an integrated strategy**, consistent with the relative RWMP and be validated by the RWMA, in line with the RWMP (once updated to align with the objectives with the CEP and Governmental Circular Governmental Circular YΠΕΝ/ΔΔΑ/114931/1863) cost-benefit analysis, option analysis, and sustainability assessment (from collection to treatment and disposal).
- It is **mandatory for RRF and composting project proposals to be accompanied by the parallel development and implementation of separate collection programs**.
- In determining the pricing policy, the actions **must account for the application of the "polluter pays" and "pay as you throw" principles as well as the statutory landfill tax**.
- RRF units are to be **financed on a pro-rata basis**^{Error! Bookmark not defined.}, based on the incoming quantities of separately collected waste to the unit throughout its life cycle. The methodology

⁵ PEKA does not make reference to the CEP target of for preparing for re-use and the recycling of municipal waste, i.e., 55% by 2025.

for calculating the pro-rata funding is developed through the collaboration of the European Commission and JASPERS.

- The capacity of existing waste treatment facilities within the project area (the Region) are to be taken account of when designing RRFs (both new and MBT-RRF upgrades) and composting plants, and always in consideration of the targets set out at regional (RWMP) level.
- Prior to incorporation of any RRF (new or MBT-RRF upgrade) and/or composting plant into the financing program, **program agreements** (to be annexed to the project funding approval decision) **are to be concluded between the relative RWMA and the served Municipalities** concerning agreed incoming quantities per separate waste stream to be delivered to the RRF, and the relative contribution to meeting the recycling targets of the RWMP.

The **total allocation of the programme of EU funds for waste projects** ensuring the transition to the circular economy is approx. **EUR 676 million** this broken down into the following intervention areas:

- 067. Management of household waste: prevention, minimisation, sorting, reuse, recycling measures – approx. EUR 132 million.
- 068. Household waste management: residual waste treatment – approx. EUR 510 million.
- 070. Management of Commercial, industrial waste management: residual and hazardous waste – approx. EUR 8.5 million.
- 071. Promoting the use of recycled materials as raw materials – approx. EUR 26 million

The **programme furthermore indicates an EU co-financing rate of 85%⁶**, therefore national co-financing indicatively equates to approx. EUR 119.3 million (15%), resulting in a total available budget of approx. EUR 795.5 million.

The output and result objectives related to separate collection and treatment of municipal waste are the following:

- Output indicators:
 - RCO34 Additional capacity for waste recycling – 3,226,365 t/year in 2029
- Result indicators:
 - RCR47 Waste recycled – 1,928,526 t/year in 2029.
 - RCR48 Waste used as raw materials – 1,035,731 t/year in 2029.
 - RCR103 Waste collected separately – 1,088,993 t/year in 2029.

Phased RRF projects for completion under PEKA

According to the planning of the MA, JASPERS is aware of 20 projects⁷ intended with the potential to be phased (according to the provisions of Article 118 of EU Regulation 1060/2021) from the 2014 – 2020 OP to PEKA.

⁶ Average percentage over the programme. (to be considered in combination with footnote No. **Error! Bookmark not defined.**)

⁷ As at time of elaboration of this GN

It is understood the MA is committed for all MBT facilities included in projects which are to benefit from funding under PEKA to be implemented as RRF projects as defined within this GN.

The aforementioned 20 projects to be phased in PEKA are not initially developed as RRF projects. In consideration of their programmed phasing as RRFs, the following two types of contractual variations are noted:

- Projects tendered as MBT with standard contract provisions for the possibility of contract modification (extension) to incorporate additional works required to RRF. Contract extension proposal approval by the respective Supervising Authority.
- Projects tendered as MBT with incorporated 'RRF option' for modification to incorporate additional works required to RRF.

It is understood that in both above instances the beneficiaries in question are *to develop related updated project documentation (feasibility studies and CBA, EIA, etc.) which are to substantiate the required facility design criteria and input / output indicators*, always in respect of the existing project area situation, the RWMPs and the RRF technical guiding principles outlined herein.

- JASPERS is aware that the Greek authorities have notified (last from September 2024) of their request for derogation of this target, as also for the 2030 and 2035 targets, to the EU. As of the date of elaboration of this GN, the GR authorities have not received response.
- **RRFs are eligible investments under PEKA, to be financed on a pro-rata basis)⁸. Pro-rata is estimated ex-ante for each project over the entire lifecycle of the installation to be verified ex-post.**
- **All investments including both mechanical and biological treatment processes (both new and phased benefitting from funding under PEKA) are to be implemented as RRF projects.**
- Systems and equipment for **sorting at source and separate collection** of waste (collection equipment, transfer stations, green points) **are mandatory eligible investments** to be implemented as necessary in parallel with the development and implementation of RRFs and/or composting plants.
- The total allocation of the programme of EU funds for waste projects is **approx. EUR 676 million representing an 85% EU co-financing rate. Total therefore allocation of funds (both EU + national co-financing) is approx. EUR 795.5 million.**
- It is noted that a majority share (approx. 75%) of available EU funds are allocated to intervention area 068 'management of residual waste'⁹.

⁸ It is noted that, according to the MA of PEKA, a direct agreement has been reached between the GR authorities and DG REGIO G3, whereby phased projects that include RRFs normally eligible to benefit from the 'FAST-CARE Regulation 2022/2039 derogation, will not in the case of Greece proceed in this manner, but rather in line with a dedicated EU co-funding 'Bonus Scheme'. This scheme is also to apply to new RRF projects, and details of which are to be included in the relative PEKA call for proposals.

⁹ Information concerning the percentage completion/absorption within the first phase (2014 – 2027 programming period) of the already contracted investments was not available, and therefore was not possible for JASPERS to make assumption on the adequacy of the available budget. Due however to the implementation of projects under PEKA to be in line with the RRF concept (i.e., with additional requirement for treatment of separately collected waste streams and accordingly lower requirement for treatment of residual waste), a required adjustment of funds from intervention areas 068 to 067 is likely necessary.

- Although not critical, it is noted the PEKA output and result indicator values for municipal waste management are unrealistically detailed.
- For the approval of phase II of the projects (initiated as MBT in the 2014-2020 programme to be implemented as RRF within PEKA) **well substantiated feasibility studies and revised CBA are considered mandatory.**

5. Role of RRFs in municipal waste management

As mentioned in section 3, in Greece the CEP targets are to be met at regional level. Integrated waste management systems (IWMS) are currently typically characterised by the following basic types of treatment facility:

- Sorting plants for treatment of separately collected recyclable waste,
- Composting plants for treatment of separately collected bio-waste, mainly green waste,
- MBT plants designed for treatment of residual waste, (typically) with aerobic treatment only or combination anaerobic / aerobic biological treatment, and with or without energy recovery and/or production of Refuse Derived Fuels¹⁰ (RDF),
- Landfills.

The poor material recovery efficiency of mechanical sorting processes for residual wastes (“traditional” MBT) is widely recognised, this typically in the range of 6% – 8% of total incoming waste quantities, while the remaining share is landfilled.

Moreover, for bio-waste treatment to count towards the recycling targets, it must result in material recycling. Where the output is used on land, it may only be considered as recycled if resulting in agriculture or ecological improvement. In addition, according to Article 11a of the WFD, **as of 1 January 2027, bio-waste entering aerobic or anaerobic treatment may only be considered as contributing to recycling if it has been separately collected or separated at source.** This all implies that a typical MBTs’ already limited effectiveness and contribution to EU targets is to be further reduced in the near future.

Due to differing national / regional parameters, there is no “one fits all” solution for integrated solid waste systems. The RRF concept however is considered to assist in “closing the loop” for municipal waste treatment at the regional level, significantly contributing to the achievement of the EU targets in an economically viable and environmentally sustainable manner.

RRFs offer efficiencies of scale over decentralised treatment facilities as concerns infrastructure capital expenditure, operating costs, and process output qualities and marketability.

Existing “traditional” MBTs are also considered able to play an enhanced role in the objective of meeting recycling and landfill targets through their conversion to RRFs. With technical upgrades and/or retrofits to improve the treatment of residual waste and/or additionally facilitate efficient and effective treatment of separately collected waste, increased material recovery rates can be achieved whilst building in flexibility for treating reducing quantities of residual waste and increasing quantities of separately collected waste streams over time.

¹⁰ RDF throughout the report is to be understood to include all sub-categories of SRF.

Implementation of RRFs within regional municipal waste frameworks is to be complimentary to existing waste treatment facility capacities (e.g., sorting, and composting plants), these to continue to be exploited in full for their envisaged life span. Due to this, new RRFs or upgrades / retrofits of existing MBT to RRF, are to be dimensioned taking into consideration all existing treatment capacities in the project service area (typically region). Figure 1 below presents the incorporation of RRFs in typical IWMS's.

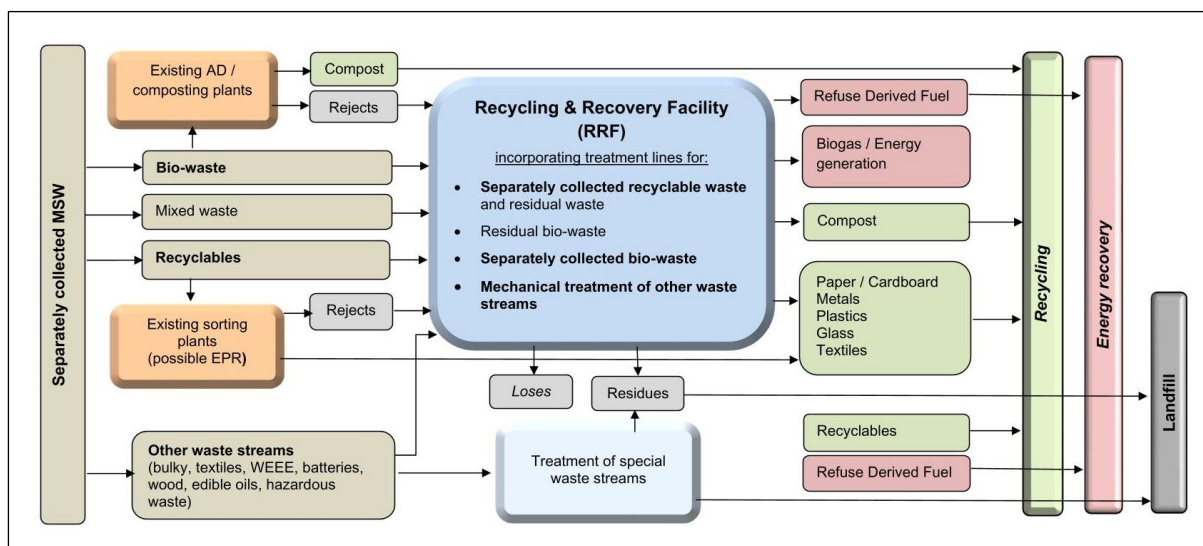


Figure 1 RRFs in IWMS

RRFs are expected to:

- Contribute to fulfilment of the EU preparation for re-use and recycling targets,
- Contribute to landfilling of waste targets,
- Contribute to fulfilment of the Malagrotta ruling (landfilling of treated waste only),
- Be complimentary to existing waste treatment capacities,
- Offer efficiencies of scale – reduced capital expenditure and operating costs and increased output qualities and marketability compared to the option of decentralised facilities.

Sustainable RRF operation, along with the fulfilment of the EU recycling targets, is dependent on effective application of separate waste collection schemes.

Like MBT, RRF is a waste treatment facility that combines mechanical treatment with biological treatment. As presented in Figure 2, an IWTF is to typically include the following processes:

- Pre-treatment of each waste stream entering in the facility (separately collected recyclable waste, bio-waste, bulky waste, textile waste, and also residual waste).
- Mechanical treatment of both separately collected recyclable waste and residual waste basically consisting of:
 - Separation of biodegradable waste.
 - Sorting of recyclables.
 - Separation of high calorific fraction for the preparation of RDF/SRF.
- Preparation of RDF which can consist of:
 - Contaminant control (removal of PET and PVC).
 - Particle size control.
 - Humidity control.

- Biological treatment – separate lines/units for biodegradable residual waste and separately collected bio-waste, which can consist of a combination from:
 - Aerobic treatment (composting of separately collected bio-waste and/or aerobic stabilisation or bio-drying of biodegradable residual waste).
 - and/or
 - Anaerobic digestion 'AD' (followed by composting of digestate from separately collected bio-waste and/or aerobic stabilisation or drying of digestate from biodegradable residual waste).

Instances of RRF may also include dedicated processes for the mechanical treatment of paper/carboard, bulky waste and/or textile in order to separate the recyclable fraction and the high calorific fraction, which can be energy recovered.

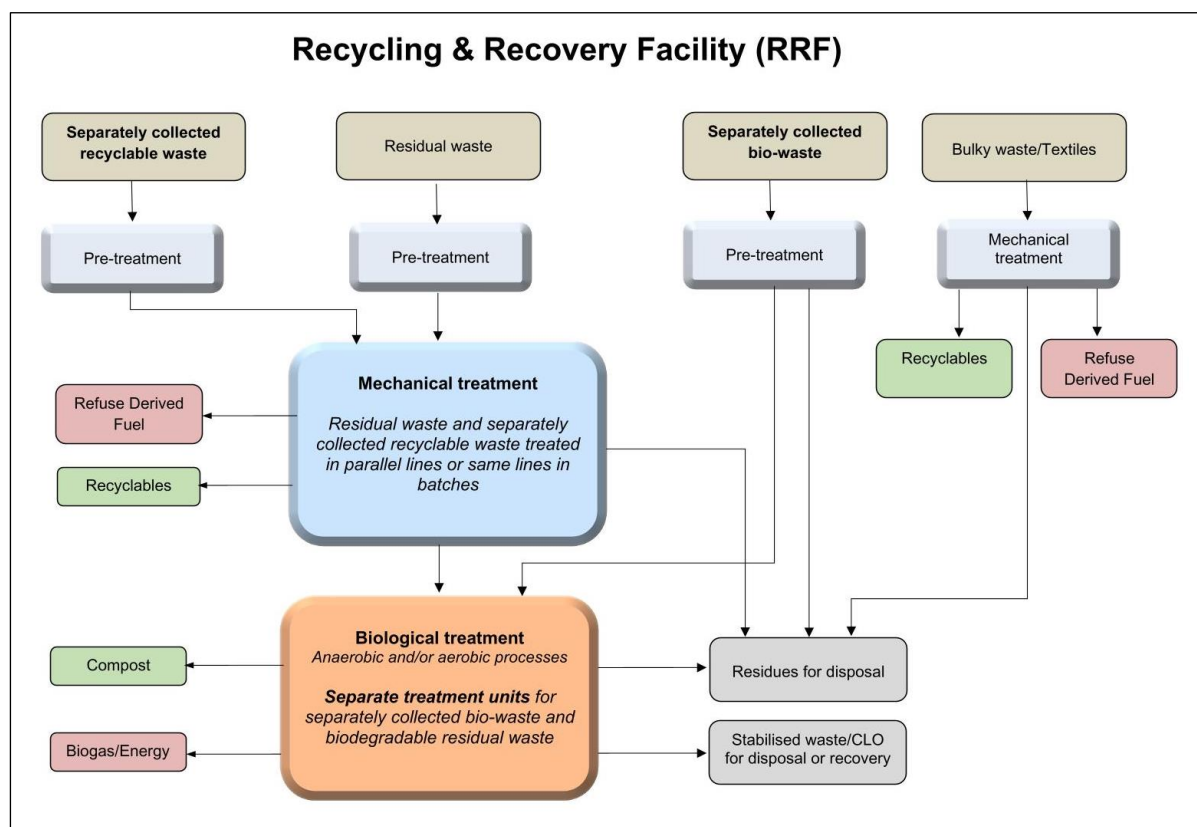


Figure 2 RRF – processes and outputs

RRFs are integrated waste treatment facilities that treat both separately collected (recyclable waste, bio-waste, and potentially also bulky waste and textiles) and residual waste.

The RRF processes consist of:

- pre-treatment of each waste stream.
- mechanical treatment – parallel lines (or batch processing) for separately collected recyclables and residual (mixed) waste.
- biological treatment – separate units for separately collected bio-waste and biodegradable residual waste.

JASPERS considers the following three basic variants of biological treatment within RRFs: (i) aerobic, (ii) anaerobic digestion, or (iii) a combination of both aerobic and anaerobic digestion.

6. Technical guiding principles for RRF projects

RRF: A facility able to treat mainly separately collected municipal waste streams, but also residual waste, to recover maximum quantities of materials through both mechanical and biological treatment for circular economy purposes.

RRFs are to ensure flexibility of the installed capacity to process variable amounts of both separately collected and residual waste streams, with quantities of separately collected recyclable waste and bio-waste to increase over time approximating to the EU recycling targets, while the residual waste stream is accordingly expected to decrease.

RRF projects are mandatory to be accompanied by separate collection plans for the respective project service area, which are to ensure the fulfilment of the relative preparing for re-use and recycling targets. The adopted separated collected plan is to form part of the project documentation.

JASPERS proposed technical guiding principles for RRF projects includes:

- Technical framework conditions
- Specific conditions for RRF.

Both the technical framework conditions and the specific condition for RRF should be included in the description of the **RRF eligibility conditions in the relevant section the intended PEKA MA call for proposals**.

6.1 Technical framework conditions

The proposed technical framework conditions for financing the RRFs relate to:

- Newly adopted RWMPs¹¹, these representing an enabling condition for EU co-funding.
- Preparation and adoption of a separate collection plan in line with the RWMP and correlating with the Feasibility Study (FS) for the investment project.

The RRF, including its capacity, are to be in line with the respective RWMP¹¹ and accordingly aligned with the WFD.

Each RRF is to be accompanied by a **separate collection plan for its project area** (typically the region). The separate collection systems:

- Shall ensure the minimum number of separate waste streams be collected, according to the provisions of Article 10 of the WFD, and the national legislation.
- Are to be based on quantifiable waste flows (per sub-region / municipality) per separate waste stream, in consideration of the gradual increase over time in quantities of separately collected recyclable waste and bio-waste (and accordingly decrease in quantities of residual wastes), according to demand analysis included in the FS of the project.
- Are to be based on a technical option analysis of separate collection system for all waste streams identified above (“door-to-door”, “kerbside and/or bring system”, public amenity centres, etc.) according to the provisions of the RWMP and the FS. In evaluation of the options,

¹¹ Attention is made to the fact that as indicated in Section 3 of this Note, the RWMPs are expected to be adopted late 2025, while it is expected project proposals under PEKA are expected to be readied earlier. JASPERS is aware of an Ad Hoc procedure (pre-approval of RRF projects in absence of finalised RWMPs) under consideration by the MoE, to avoid any resulting bottleneck to project implementation.

substantiated criteria and scoring are to be used. The technical options should additionally consider specialised information systems (e.g., route optimisation, GPS fleet management, in vehicle electronic waste weighing, etc).

- Are to consider any additional relative 'regional' or 'municipal' level investments identified in the RWMP, and specifically to be co-financed with EU and/or national funds (e.g., transfer stations, 'green points', digital collection islands, public amenity centres, etc.)
- Shall be accompanied by the implementation of PAYT economic instrument to boost waste prevention and separate waste collection in accordance with the WFD, national legislation and requirements for RWMPs. To be in place by the time of facility full operation.
- Be accompanied by public awareness campaigns, to boost waste prevention and separate waste collection.

The capture rates of the separately collected household and similar waste streams in the project area, which are to also consider other separate collection systems (e.g., DRS, etc.), are to ensure the fulfilment of the preparing for re-use and recycling targets.

As stated in the EU Early Warning report: Greece 2022¹², the 'capture rate' is a good performance indicator of the effectiveness of the separate collection system; and as also defined in the Governmental Circular on the reform of the RWMPs¹³, **the capture rate of a specific waste stream represents the percentage of that separately collected amount in respect to the total collected amount.** The total collected amount of each waste stream is the multiplication of the total amount of household and similar waste collected by the collection operator (s) (treated in RRF and/or other existing facilities if that be the case) by the relevant proportion of each waste stream according to the waste composition (i.e., the theoretical maximum collected amount).

The separate collection plan, which is to include the minimum information detailed in Table 4, shall be prepared and approved by the RWMA and its provisions are to be reflected accordingly in the Programme Agreements to be drawn up between the RWMA and its member municipalities and in any delegation contracts for separate collection and transport. **The adopted separated collected plan is to form part of the project documentation.**

The separate collection plan is to be updated after maximum one year after the start of the RRF operation and thereafter whenever there are significant changes e.g., legal changes and/or modification of the separate collection system. The first updated plan, adopted by the RWMA and its member municipalities, is to be sent to the MA for updating of the relative project funding agreement file.

The table below presents the minimum information to be included in the separate collection plan for the project.

¹² Early Warning Assessment Related to the 2025 Targets for Municipal and Packaging Waste, Early Warning report: Greece June 2022

¹³ 'Adaptation of PESDA to the requirements of the legislation, the EU recommendations and the PEKA program 2021-2027', ΥΠΕΝ/ΔΔΑ/114931/1863, 07/11/2023

Table 3 Minimum information included in the separate collection plan to accompany RRF projects

Main provisions	Description	Comments
<u>CURRENT SITUATION (Prior to project implementation)</u>		
Household and similar waste composition	The household and similar waste composition is the composition considered in the FS of the project for the demand analysis and calculation of the waste flows and capacities of the new facilities	The household and similar waste composition is to be based on that of updated FS.
Current separate collection system	- Serviced area (geographic coverage) and population. - Description of the organisation of separate collection systems (at least as per RWMP requirements) including the provisions of any existing delegation contract(s) for separate collection. - Description of the implementation of PAYT economic instrument, according to the provisions of the existing delegation contract(s) for separate collection. - Capture rates for each separately collected waste stream. - Established performance indicators and penalties related to the separate collection system. - Implementation of home composting - Qualitative and quantitative deficiencies of the current separate collection system - Fulfilment of performance indicators and applied penalties	The information on the current situation is to be based on data from Municipal services, the provisions of any delegation contract(s) and any data held by RWMA for <u>the year prior</u> to the preparation and adoption of the separate collection plan
Current treatment of separately collected waste streams	- Treatment facility/facilities for each of the waste streams: - Separately collected recyclable waste (paper and cardboard, plastic and metal, glass, etc.). - Separately collected bio-waste, others than the green waste from public parks and gardens. - Separately collected textiles. - Separately collected hazardous household waste. - Separately collected bulky waste. - Short description of each treatment facility (private/public facility, technical description, year of starting operation, foreseen year of decommissioning, design capacity, substantiated current capacity, amount of waste streams treated and outputs in the last 2 years, etc.).	

Main provisions	Description	Comments
FORESEEN SITUATION (During and after project implementation)		
Household and similar waste composition	- The plan is to include the obligation that the RWMA shall conduct a composition study of collected household and similar waste at regional level. In addition to this, it shall be foreseen in the RRF construction and/or operation contract for the contractor to additionally carry out an own study on household and similar waste composition. Results of these two studies shall be considered for the preparation of the <u>detailed design and setting of performance indicators</u> for the new RRF. - It shall be considered within RRF construction and/or operation contract for revised waste composition studies to be conducted at least every 3 years, with incorporated provisions for contract amendment / mitigation measures as necessary.	The first update of the separate collection plan has to include the household and similar waste composition considered for the detailed design of the RRF, that considers the results of the two studies on composition. Thereafter the separate collection plan is to be updated should any revision of the waste composition study indicate significant changes (i.e., affecting the potential to effectively implement the plan)
Upgraded separate collection systems	- Description of the separate collection system according to the provisions of the FS and RWMP which will ensure fulfilment of the preparation for re-use and recycling targets. The updated separate collection system shall consider investments provided through other public investment programmes (to be verified by both the RWMA and the MA). - Description of the implementation of PAYT economic instrument, according to the provisions of the FS - Implementation of home composting	The description of the upgraded separate collection system is to be based on the provisions of the FS and RWMP. Emphasis is to be given to well detailed and substantiated option analyses. Acceptable limits (%) of impurities within separately collected waste streams to be in accordance with national legislation and the assumptions of the project FS. It is noted that as of 01.01.2025, GR Law 4819/2021 sets a limit of 20% impurities for separately collected recyclables. Such limit is not yet established for bio-waste. <u>It is necessary for GR authorities to establish maximum acceptable levels of impurities for bio-waste as soon as possible.</u> The description of the upgraded separate collection system shall be included in the next planned update of the RWMP and reflected in the provisions of any tendered contract (s) for separate collection and transport (including amendment of existing contacts as necessary).

Main provisions	Description	Comments
Capture rates¹⁴ for separately collected waste streams	The separate collection plan shall include the minimum capture rates for each year for the following waste streams: • Separately collected recyclable waste: ○ Urban areas – county capital city ○ Urban areas – other cities and towns ○ Rural areas ○ Similar waste and market waste • Separately collected bio-waste: ○ Urban areas – apartment blocks ○ Urban areas – individual houses ○ Rural areas ○ Similar and market waste • Separately collected green waste from public parks and gardens • Separately collected textiles: ○ Urban areas ○ Rural areas • Separately collected bulky waste: ○ Urban areas ○ Rural areas • Separately collected hazardous household waste: ○ Urban areas ○ Rural areas	The capture rate of each waste stream is the percentage of that separately collected amount in respect to the total collected amount of the waste stream. The capture rates included in the plan shall demonstrate the fulfilment of the relative EU preparation for re-use and recycling targets and be included in the FS of the project and <i>are to be endorsed by the served Municipalities</i>. The first update of the separate collection plan is to include the updated capture rates based on the new composition considered for the design of RRF. The updated capture rates have also to ensure the fulfilment of the EU preparation for re-use and recycling targets. Thereafter the separate collection plan is to be updated should there be any significant revision of the capture rates (i.e., affecting the potential to effectively implement the plan)
Treatment of separately collected waste streams	• Separately collected waste streams to be treated in RRFs. • Separately collected waste streams to be treated in other facilities. • Short description of each treatment facility (private/public facility, technical description, year of starting operation, design capacity, current capacity, amount of waste streams treated and outputs, etc.)	The information on the treatment of separately collected waste streams is to be based on the provisions of updated FS for the project and any delegation contract(s).
Performance indicators and penalties	• The performance indicators for separate collection are the capture rates presented above. • Penalties for not fulfilling the performance indicators for each waste	The performance indicators, their calculation method, and the penalties shall be endorsed by the served municipalities and reflected

¹⁴ Capture rates are to be established based on a function of the specific waste compositions and waste quantities to ensure the regional attainment of the EU preparation for recycling targets and in consideration of the minimum RRF performance indicators as set out in section 6.2.3 herein.

Main provisions	Description	Comments
	stream that is to be collected separately. As the capture rate, the performance indicator for each waste stream is the percentage of that separately collected amount in respect to the total collected amount. The total collected amount of each waste stream is the multiplication of the total amount of household and similar waste collected by the collection operator(s) (and treated in RRF and/or other existing facilities if the case) by the relevant proportion of each waste stream according to the waste composition included in the separate collection plan.	in any delegation contract(s) for separate collection¹⁵. The Municipalities and any delegation contractors are to be obligated to annually report the achieved capture rate for each waste stream collected separately in the previous year to the RWMA. The capture rates are to be calculated according to the methodology described in the separate collection plan, and as endorsed by the Municipalities and reflected in any delegation contract. Data used for the calculation shall be correlated with the amount of the waste stream accepted by all waste treatment facilities for recycling or preparing for recycling.
Public awareness campaigns	Public awareness campaigns organised by the RWMA and collection operator(s), according to the provisions of any delegation contracts.	The obligation of organising public awareness campaigns by both the RWMA and collection operator(s) shall be included in relative legislation.
Monitoring of the effectiveness of the separate collection system and corrective measures	Monitoring of the effectiveness of the separate collection system and establishing corrective measures is in the responsibly of the RWMA. The monitoring measures shall include at least the following: - Annual monitoring of the capture rates based on the data provided by the Municipalities and/or collection operator(s). If capture rates are lower than those included in the plan, additional measures could be required (e.g., carry out additional publicity, education campaigns in schools, adjust the design of the PAYT scheme, adjust collection schedules for residual waste and separately collected waste, penalties for users, etc.). - Annual monitoring of implementation of home composting in rural areas and compare them with the initial	The RWMA is to prepare an annual monitoring report with applied / recommended corrective measures as necessary. The report shall be approved by all Municipalities members of the RWMA. Any required corrective measures should be reflected in any delegation contracts.

¹⁵ To be noted, in reflection of capture rates as performance indicators, other existing separate collection systems (e.g., private sector) contributing to the total rate should be considered.

Main provisions	Description	Comments
	assumptions. The RWMA should assess the impact on operation resulting from variations from the initial assumptions and, if necessary, develop and implement appropriate corrective measures. Annual monitoring of the ratio of quantities of incoming separately collected waste to the total quantities of incoming waste ('pro-rata' ratio) to the RRF, based on the data provided by the RRF operator.	

The RRF project funding application shall be accompanied by a separate collection plan for its project area. The separate collection plan shall be prepared and adopted by the RWMA (having been clearly endorsed by the member Municipalities) and its provisions are to be reflected accordingly in any delegation contracts for separate collection and transport. The adopted separated collected plan is to be part of the project documentation.

It is noted that as of 01.01.2025 GR Law 4819/2021 sets a limit of 20% impurities for separately collected recyclables. It is necessary for GR authorities to additionally establish maximum acceptable percentage limit of impurities for biowaste as soon as possible.

The separate collection plan is to be updated maximum one year after the start of full operation of the RRF and thereafter whenever there are significant changes due to legislative changes and/or changes effecting the effectiveness of the separate collection system. The first updated plan is to be notified to the MA.

JASPERS proposes that the minimum information to be included in the separate collection plan as that as presented in Table 4 of this note, with the note to be annexed to the PEKA MA's relative call for proposals.

JASPERS recommends that the adopted separate collection plan should be submitted by the date of signing financing agreement of the relative RRF project or within a maximum one year from this date, subject to resolution.

6.2 Specific technical conditions

The proposed specific technical conditions for RRFs consist of:

- Input criteria / design capacity
- Main technical conditions for RRFs
- Output criteria.

6.2.1 Input criteria / design criteria

RRFs are to be designed to treat both separately collected (recyclable and bio-waste) and residual (non-separately collected municipal waste - mixed waste and rejects from waste treatment) waste streams

to recover maximum quantities of materials through both mechanical and biological treatment *for circular economy purposes* (according to demand, RRFs may also (mechanically) treat separately collected bulky waste and or textiles to separate the recyclable and energy recoverable fractions).

Quantities of separately collected waste streams for treatment in the RRF are anticipated to increase over the lifetime of the facility, and accordingly the residual waste stream entering the facility to decrease; the design of the RRFs are to have inherent flexibility to accommodate for these changes in operational conditions.

The number, type and capacity of overall waste streams treated in the RRF shall consider:

- The planned waste flows according to the project FS considering the waste prevention measures.
- All preparing for re-use and recycling requirements as well as landfill targets included in the CEP, national legislation and the RWMP.
- The accompanying separate collection plan for the whole project service area.
- The availability of markets for the process output materials.
- Any existing treatment infrastructure in the project area.

The **type and capacity of waste streams treated in the RRF** is to be determined **to accommodate the “demand shortfall” of current waste treatment systems in the project area**, considering the planned end-of-life of currently operational treatment facilities, adopted and/or planned separate collection schemes, and fulfilment of all preparing for re-use and recycling requirements and targets included in the CEP, RWMP, and the updated project FS.

Demand shortfall represents the difference between the required treatment capacity and already existing and planned total treatment capacities, according to the provisions of the RWMP and project FS. The existing capacity is to be considered as the current *real capacity* of the facility rather than any initially stated design / permitted capacity.

Pro-rata calculation

“Pro-rata” for RRF shall be calculated as the ratio of the average quantity of separately collected waste¹⁶ accepted to the average total quantity of waste treated in the facility.

The average quantities shall be calculated over 25 years, according to the demand analysis of the project, starting from the 1st year the facility enters full operation.

6.2.2 Main technical conditions

Technically, there are similarities between the technologies employed within modern MTBs designed for the treatment of residual (mixed) waste and RRFs, with potentially more of preference for the application of AD systems in RRFs for the treatment of separately collected bio-waste (with resulting production of high-quality compost and energy).

RRFs are to be configured with parallel or dual-purpose mechanical state-of-the-art sorting lines/components for the recovery of materials from both separately collected and residual waste, along with lines for the *parallel independent treatment* of both separately collected bio-waste and

¹⁶ Recyclable waste, bio-waste, and potentially bulky waste and/or textile separately collected waste streams

biodegradable residual waste (biodegradable fraction mechanically separated from the residual waste stream). Consideration is always to be given to application of BAT for waste treatment in accordance with ANNEX II '*Technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the transition to a circular economy...*' of the Commission Delegated Regulation (EU) 2023/2486, 27 June 2023 as outlined in Annex 1 of the current GN.

For RRFs the below outlined main provisions are to be adhered to:

- **Incoming waste streams** – RRF designed to accept and treat both separately collected waste and residual waste streams in accordance with the separate collection plan and project demand analysis, with possible combinations of:
 - Separately collected recyclable waste.
 - Separately collected bio-waste (including green waste).
 - Residual waste.
 potential also for
 - Separately collected bulky and/or textile waste.
- **Design of RRF** is to incorporate process flexibility to treat variable quantities of both separately collected and residual waste streams; with expected increasing quantities of separately collected recyclable waste and bio-waste over time, and according decrease in quantities of residual waste as driven by EU requirements and targets.
- **Mechanical treatment** of separately collected recyclable and residual waste streams in a semi-automated state-of-the-art process:
 - Possible **treatment in dedicated parallel process lines or in batch operation** (differing operation times).
 - A number of waste streams may be considered to be sorted in dedicated separation lines e.g., paper/cardboard, bulky waste and/or textiles.
 - *Waste acceptance* – Provision for separate reception/ temporary storage areas for each waste stream (e.g., plastic & metal, paper & cardboard, residual waste, etc.), adequately dimensioned according to the designed operational plan.
 - *Treatment (sorting & refining)* – state-of-the-art sorting equipment to be employed (potentially including NIR (near-infrared), multi-sensor systems, ultrasonic or VIS-camera, magnetic, eddy current, and/or air separation) to ensure recovery / purity rates.
 - *Post-treatment* – quality control / negative selection (automatic or manual).
 - *Output handling* - storage as bales, in containers or loose.
- **Biological treatment** of separately collected bio-waste and biodegradable residual waste (inclusive of the mechanical pre-treatment):
 - **Parallel process lines, from reception to treatment and storage** – To be in accordance with the provisions of EU Regulation 2019/1009 on fertilising products and their marketability, and/or the provisions of national legislation¹⁷. The 'EU fertiliser regulation' foresees *treatment lines for the processing of source separated materials are to be clearly separated from treatment lines for the processing of materials from residual waste*, furthermore *physical contact between input and output materials are to be avoided*, including during storage.
 - Pre-treatment dependent on the selected treatment process - indicatively to include bag opener, drum or disc screens, magnet, eddy current separators, and in the case of AD, consideration of bio-separator to reduce the dragging effect of plastics for maximum organic recovery.

¹⁷ In Greece permits of compost producing facilities currently adopt the criteria of the [EU eco-label of soil improvers](#). A joint ministerial decision on compost from separately collected bio-waste where however compost and digestate quality specifications and specific provisions for quality management system remain outstanding.

- Treatment – Preference to be given to AD¹⁸ (with energy recovery) with composting of the digestate¹⁹.

For RRFs it is mandatory that separately collected streams shall not be mixed with residual waste or waste fractions separated from residual waste.

6.2.3 Output criteria

The outputs of RRFs are the follows:

- Recyclables sorted from both separately collected recyclable and residual waste streams.
- Quality compost from the treatment of separately collected bio-waste.
- Stabilised waste or CLO from the treatment of biodegradable residual waste.
- Biogas, in the case of AD process.
- Waste derived fuels (RDF) from the mechanical treatment process.
- Residues/inert waste for disposal.

JASPERS proposes the following criteria for the outputs:

- The amount of separately collected recyclable waste sorted and sent to recycling²⁰ shall be minimum 75%²¹ in the first year of operation leading to a projected average of 80% of the total separately collected recyclable waste stream* treated in the facility (average over 25 years).
- The amount of recyclable waste sorted from residual waste and sent to recycling shall be minimum 5 % of the total residual waste stream treated in the facility (annually).
- The amount of compost from the digestate shall be minimum 35% of the total amount (in weight) of separately collected bio-waste* treated in the facility (annually).
- The quality parameters for compost shall be in line with national legislation and/or the provisions Fertilising Product Regulation (EU) 2019/1009, Annex II, CMC 3 and 5 as applicable.
- The quality parameters for stabilised biodegradable waste and/or CLO shall be in line with the provision of the national legislation.

* *non inclusive of impurities*²².

The above established performance indicators are to ensure minimum installed technical capability of RRFs. The RRF operator should also be required to apply an output quality management system to ensure that the output of the waste treatment is in line with applicable quality requirements or standards, using for example existing EN or ISO standards.

These conditions are to be reflected in the RWMP and in the tender documentation for the construction and operation of the RRFs.

¹⁸ ‘[Best Environmental Management Practice for the Waste Management Sector](#)’, JRC Policy Report, 2018.

¹⁹ Dependent on the outcome of the technical optional analysis, a purely aerobic solution can be applicable.

²⁰ Law 4819/2021 sets a maximum allowable 2% impurities on recovered materials from separation lines.

²¹ Performance indicator based on good practice established in similar Member States to ensure both effective separate collection systems (incoming waste stream quality) and minimum levels of installed technical specifications (state-of-the-art).

²² Law 4819/2021 defines impurity as any material contained in the baled or loose load apart from the material of the relative code.

Both **the technical framework conditions** (the RRF in line with the RWMP and separate collection plan for the project service area prepared and adopted by the RWMA) **and the specific technical conditions** (design criteria, main technical conditions, and output criteria) **ought to be included in the description of the RRF eligibility conditions in relevant section of the relative PEKA call for proposals.**

7. Indicators for RRF projects

As mentioned in section 4 of this note, the PEKA includes both output and result indicators, with the RRFs to contribute to the below:

- Output indicator - RCO34 Additional capacity for waste recycling
- Result indicator - RCR47 Waste recycled.

Output indicator - RCO34 Additional capacity for waste recycling

Commission Staff Working Document 198/2021 *Performance, monitoring and evaluation of the European Regional Development Fund, the Cohesion Fund and the Just Transition Fund in 2021-2027* (Commission Staff Working Document 198/2021) defines this indicator as the annual nominal additional capacity for annual waste recycling newly built due to the supported projects. The indicator also covers capacity extensions but not maintenance of existing capacity.

Waste recycling is to be understood as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations (Directive 2008/98/EC).

In respect of the output indicator 'RCO34 Additional capacity for waste recycling', JASPERS recommends that in the case of RRF investments, the **annual nominal additional capacity of waste recycling shall be the average amount of separately collected waste (recyclable waste, bio-waste, and possible bulky waste and/or textiles) entering the facility.** The average shall be calculated over 25 years, where the first year represents the first year of full operation.

Result indicator - RCR47 Waste recycled.

Commission Staff Working Document 198/2021 (Commission Staff Working Document 198/2021) states that the indicator measures additional annual tonnage of waste recycled due to additional capacity created through the supported projects. The waste recycled is to be measured in terms of tonnage at the stage of preparation for recycling. The indicator is measured one year after project implementation.

In respect of the result indicator 'RCR47 Waste recycled', JASPERS recommends that in the case of RRF investments, this shall be the measure of the total amount of waste *sent to recycling* calculated for the first year of full operation comprising the sum of:

- The *amount of recyclable waste sorted from separately collected recyclable waste and sent to recycling.*
- The *amount of recyclable waste sorted from residual waste and sent to recycling.*
- The *amount of separately collected bio-waste that enters anaerobic treatment, excluding all materials, including biodegradable material, which are mechanically removed prior to, during, or after the recycling operation.*

Additional indicators

It is considered that the PEKA call for proposals is to also include additional indicators, which in the case of waste projects are suggested to include:

- Number of pieces of equipment for separate collection of waste (bins and containers)
- Number of investments related to the separate collection infrastructure (collection points).
- Number of transfer stations
- Number of RRFs
- Number of anaerobic digestion and / or composting plants

8. Grant calculation for RRF projects

This section concerns new RRF projects and phased projects (according to the provisions of Article 118 of EU Regulation 1060/2021), to be funded under PEKA.

The DG REGIO Non-Paper concerning the application of article 7 paragraph 1 of Regulation (EU) 2021/1058 states that “*Support from ERDF and Cohesion Fund may exceptionally be provided ... on a **pro-rata basis** ... to the amount of the total eligible cost of the operation concerned... **equal (to) the share of separately collected waste flows of the total waste treated by the facility, calculated ex-ante, for each operation, over the lifecycle of the operation.***”

The approach for establishing the EU grant contribution for eligible operations involving RRF based on pro-rata concept is presented in the current section, this 4-step methodology being developed by JASPERS and endorsed by the EC.

Step 1: Identification of eligible cost in total Project cost, including RRF related cost.

Firstly – From the “Total Project Cost”, identify the eligible and ineligible project cost components as per PEKA. All ineligible cost is financed by the project beneficiary.

Secondly – From the “Total Eligible Cost”, identify the eligible cost related to new RRF infrastructure (“Total Eligible Cost-RRF”) and the cost of other eligible (physical) project components (“Total Eligible Cost-Other”), e.g., if the project were to include transfer stations, waste collection and transport, etc.

➤ **“Total Project Cost” = “Total Eligible Cost-RRF” + “Total Cost-Other” + “Total Ineligible Cost”**

Where:

- **“Total Eligible Cost-RRF” = “Net investment cost-RRF” + relative proportion of shared costs (infrastructure costs + overhead cost + contingencies)**
- **“Total Eligible Cost-Other” = “Net investment cost-Other” + relative proportion of shared costs (infrastructure costs if applicable²³ + overhead cost + contingencies)**
- **Total Ineligible Cost” = “Net ineligible cost” + relative proportion of shared costs (infrastructure costs + overhead cost + contingencies)**

Attention is to be given to 'shared costs'. Where it is not possible to clearly allocate costs directly to individual project components (as those below), these shall be allocated proportionately according to the share of each component to the total net investment cost of the project.

(i) common "infrastructure" (e.g., perimeter fence, access control, weighbridge, service and access roads, utility installations, administration buildings, etc.)

(ii) project "overhead" (e.g., planning and design, technical assistance, supervision, publicity, etc.), and

(iii) project "contingencies"

Step 2: Calculation of the maximum EU grant support to RRF on a pro-rata basis

As previously defined, the **project specific pro-rata rate** is calculated as **the ratio of the average quantity of separately collected waste accepted to the average total amount of waste treated in the facility**, where the average shall be calculated over 25 years starting the 1st year the facility enters full operation.

Therefore, multiplying the "Total Eligible Cost-RRF" identified in Step 1 with the *project specific pro-rata rate* establishes the **maximum amount of EU grant support for the RRF**.

➤ **"Max EU grant to RRF"** = "Total Eligible Cost-RRF" (from Step 1) x "pro-rata rate"

Step 3: Calculation of maximum State aid amount to the Project

The calculation of the maximum State aid amount shall follow the approach and calculation methods defined in the applicable State aid framework (*RRF infrastructure may receive aid under more than one State aid framework as elaborated in the dedicated JASPERS Guidance Note within this assignment*). Special attention is to be paid to *clearly identify the eligible costs* covered by each State aid framework and avoid cumulation of aid for the same project components.

Where the project receives State aid for different project components based on different set of rules, the State aid amounts are added for the whole project:

➤ **"Max State aid amount"** = State aid to project component A under SA framework X + State aid to project component B under SA framework Y + State aid to project component ... under SA framework ...

Step 4: Determination of EU and other national grant amounts

The total amount of grant (EU and National) support is established as below:

The amount of EU grant support to RRF infrastructure is the lowest of the following two thresholds:

- Threshold 1: "Max EU grant to RRF" (calculated in Step 2)
- Threshold 2: "Max State aid amount" (calculated in Step 3) multiplied with the EU co-financing rate defined in the PEKA.

➤ **"EU grant to RRF"** = Threshold 1 (if < Threshold 2) OR Threshold 2 (if < Threshold 1)

Where a project includes other eligible project components besides the RRF ("Total Eligible Cost-Other"), such cost may additionally receive EU grant funding, however the total EU grant to the project is not to exceed the value established by 'Threshold 2'.

- **“Total EU grant”** (to whole Project) = “EU grant to RRF” + the lower of either [“Total Eligible Cost-Other”] OR [Threshold 2 - EU grant to RRF]

The difference between the “Maximum State aid amount” (calculated in step 3) and the EU grant is necessary to be covered by national public grants.

- **“Total National grant”** = “Maximum State aid amount” – “Total EU grant”

Note that where the EU grant to the RRF is established based on Threshold 2, the share of the national public grant is the value defined in the PEKA (= 1 - EU co-financing rate)

Noted: both total EU and National grant are required to be further defined (split) in accordance with the relative applicable forms of State aid.

The above methodology for grant calculation is illustrated via a worked example as presented in Annex 2, representing a project scenario with “RRF with AD & components for separate waste collection and transport”²⁴.

As previously noted within this GN however, according to the MA of PEKA, a direct agreement has been reached between the GR authorities and DG REGIO G3, whereby new and phased projects that include RRFs and which are to be funded under PEKA, are to be subject to a dedicated EU co-financing ‘Bonus Scheme’. JASPERS understands that the agreed ‘Bonus Scheme’ would utilise the above established ‘pro-rata’ method of EU co-financing for RRF infrastructure (Annex 2) to establish the ‘first tier’ co-financing level, thereafter, providing for additional sums of EU co-financing based on set criteria. *Full details of the ‘Bonus Scheme’ are to be included in the relative PEKA call for proposals.*

9. Conclusions and recommendations

9.1 Conclusions

EU Regulation 2021/1058 provides for limited eligibility of solid waste treatment in 2021-2027 Cohesion Policy, where DG REGIO interpretation of Article 7(g) considers that ERDF and Cohesion Funds may exceptionally be provided to new facilities that will be treating both residual waste and separately collected waste (RRFs) on a pro-rata basis in a very limited number of MSs. The Non-Paper furthermore stipulates that JASPERS will support the Commission in setting up guiding principles on the application of the article and the pro-rata calculation of potential EU grant share to eligible projects.

Within the horizontal assignment 2022 99 SCE HOR, JASPERS provided DG REGIO two methods of pro-rata calculation and general guiding principles for the implementation of the limited eligibility of solid waste treatment.

DG REGIO opted that the pro-rata calculation method was to be based on the ratio of quantities of incoming separately collected waste streams to the total quantities of incoming waste to a facility.

In continuation, JASPERS proceeded in elaborating a Guidance Note on 'general guiding principles', these then discussed with the representatives of DG REGIO and DG ENV which commented and agreed with the final proposal. DG REGIO further agreed on the necessity for additional country specific guiding principles for projects including RRFs to be developed as separate assignments with the respective national MAs, based on the agreed general guiding principles.

The present Guidance Note revision 1 represents the deliverable within the horizontal assignment 2023 119 GR SCE HOR '*Solid waste eligibility in Greece in line with 2021-2027 Cohesion Policy - support in setting up guiding principles*'. The purpose of this note is to provide **proposals for technical guiding principles for RRF projects to be financed under PEKA** and additionally the **guiding principles for the grant calculation** for new projects and those phased projects signed after 29th June 2022 (i.e., projects that do not benefit from the 'Fast-Care' derogation)^{Error! Bookmark not defined.}.

It is established that the RRF concept is well developed in Greek legislation and has accordingly been reflected in the National Waste Management Plans, as also in recently issued Governmental requirements for the updating of the Regional Waste Management Plans. RRFs are established as eligible investments under PEKA, to be financed on a pro-rata basis (for investments where "Fast Care" Regulation is not applicable). **All investments including both mechanical and biological treatment processes eligible for phased funding in PEKA are agreed to be implemented as RRF projects.**

The core technical guiding principles of RRFs are set out and include:

- Technical framework conditions:
 - The RRF, including its capacity, must be in line with RWMPs, these in the process of being updated.
 - The **RRF shall be accompanied by a separate collection plan** for the project area, based on detailed information contained in a relative Feasibility Study. The separate collection plan shall be prepared and adopted by the RWMA, and its provisions are to be endorsed by all Municipalities members of the relative RWMA and be reflected in any delegation contracts for separate collection and transport. The adopted separate collected plan is to be part of the RRF project documentation.
- Specific technical conditions:

- Input criteria/design criteria - the core technical principle of RRF can be summarised as having inherent flexibility in treatment of increasing quantities of separately collected waste streams (recyclables and bio-waste) and accordingly decreasing quantities of residual (mixed) wastes over time. In consideration of the treatment of organic wastes, the necessity of separate processing lines for separately collected bio-waste and biodegradable residual waste is noted.
- Output criteria – performance indicators for the RRF are defined regarding the amount of recyclable waste sorted from separately collected waste and sent to recycling, the amount of recycling waste sorted from residual waste and sent to recycling, the amount of compost from digestate.

Finally, JASPERS proposed methodology for the grant calculation of eligible operations involving new build RRF infrastructure has been elaborated by the following 4 steps, with a worked practical example being provided in Annex 2:

- Step 1: Identification of eligible cost in the total Project cost, including RRF related cost.
- Step 2: Calculation of the maximum EU grant support to RRF on a pro-rata basis.
- Step 3: Calculation of (maximum) State aid amount to the project.
- Step 4: Determination of grant amounts.

9.2 Recommendations

In agreement with the Managing Authority of PEKA, the final version of these guiding principles (technical conditions and grant calculation) for projects including RRF shall be annexed to the relative PEKA call for proposals for RRF projects.

The technical conditions are also to be endorsed by the responsible authorities within the Ministry of Environment and Energy also recommend by the relative Regional Waste Management Associations responsible for project implementation and accordingly included in the tender documentation for the construction and operation of RRFs.

To ensure a proper implementation and operation of the projects including RRFs, JASPERS recommends the national authorities:

- Establish and adopt quality parameters for compost and CLO in national legislation.
- Roll out the implementation of the PAYT polluter pays economic instrument.
- Elaborate regional level separate collection plans, and implement foreseen measures without delay, and at least in parallel with the development / implementation of regional RRF projects. An approved separate collection plan should be submitted by the date of signing financing contract or within a maximum one year from this date.
- Establish and adopt limits for impurities in separately collected biowaste in national legislation.
- Legally establish minimum performance indicators for Municipal separate waste collection services considering the recommendations within this Guidance Note. The minimum performance indicators for separate collection shall consider all separately waste streams (recyclable waste, bio-waste, green waste from public parks and gardens, textiles, bulky waste, hazardous household waste) thus ensuring the fulfilment of the preparation for re-use and recycling targets.
- Consider the recommendations of this note, especially those related to separate collection plans for the regulation of municipal services and any delegation contracts.
- Legally establish minimum performance indicators for operation of RRF projects considering the recommendations within this Guidance Note. Performance indicators are to ensure minimum levels of installed facility technical capability, and to be established for, the 'amount

of recyclable waste sorted and sent to recycling', the 'amount of recyclable waste sorted from residual waste and sent to recycling' and the 'amount of compost from separately collected bio-waste'.

- Amending the provisions on the calculation of tariffs/taxes paid by the users to be in line with CBA principles. The tariffs/taxes paid by the household users shall be capped at the affordability limit, while the tariffs set for the non-household users shall be maintained at the level which ensures the 'full cost recovery'. Third party revenues (e.g., from the sale of non-packaging recyclable waste, net costs paid by the PROs) ought to be used to reduce the tariffs/taxes paid by all users of Municipal waste management services (both household and non-household users).

ANNEXES

Annex 1 Relevant technical screening criteria for the municipal waste activities

Activity/description	Criteria for substantial contribution to the transition to a circular economy	DNSH criteria for the other environmental objectives
Collection and transport of non-hazardous and hazardous waste Separate collection and transport of non-hazardous and hazardous waste aimed at preparing for re-use or recycling, including the construction, operation and upgrade of facilities involved in the collection and transport of such waste, such as civic amenity centres and waste transfer stations, as a means for material recovery.	- All separately collected and transported waste that is segregated at source is intended for preparation for reuse or recycling operations. <u>Source segregated waste consisting of (i) paper and cardboard, (ii) textiles, (iii) bio-waste, (iv) wood, (v) glass, (vi) waste from electrical and electronic equipment (WEEE) or (vii) any type of hazardous waste is collected separately (i.e., in single fractions) and not commingled with other waste streams. For source segregated non-hazardous waste other than the fractions mentioned above, collection in co-mingled fractions takes place only where it meets one of the conditions laid down in Article 10, paragraph 3, indents (a), (b) or (c) of WFD.</u> - For municipal waste streams, the activity complies with one of the following criteria: <u>the activity carries out municipal solid waste collection mainly via door-to-door collection schemes or supervised collection points</u> to ensure a high level of separate collection and low rates of contamination; - the activity carries out separate waste collection within publicly organised waste management systems where waste producers are charged based on a <u>PAYT mechanism, at least for the residual waste stream</u> or there are other types of economic instruments in place that incentivize waste segregation at source; - the activity carries out separate waste collection outside of publicly organised waste management systems that apply <u>deposit and refund systems or other types of economic</u>	<u>Pollution prevention and control</u> - The activity utilises waste collection vehicles which conform to at least EURO V standards. - A management system is set up by the collection and logistics operator to manage environmental, health and safety risks.

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	<u>instruments</u> that directly incentivize waste segregation at source. - The activity continuously monitors and assesses the quantity and quality of wastes collected based on predefined <u>Key Performance Indicators (KPIs)</u> to comply with all of the following criteria: - fulfilling reporting obligations vis-a-vis relevant stakeholders, such as public authorities, EPR schemes; - periodically communicating relevant information to waste producers and the public in general, in cooperation with relevant stakeholders, such as public authorities, EPR schemes; - identifying needs for and <u>undertaking corrective action where the KPIs deviate from applicable targets or benchmarks</u>, in cooperation with relevant stakeholders, such as public authorities, EPR schemes, value chain partners.	
Recovery of bio-waste by anaerobic digestion or composting Construction and operation of facilities for the treatment of separately collected bio-waste through anaerobic digestion or composting with the resulting production and utilisation of biogas, biomethane, digestate, compost or chemicals.	- The bio-waste that is used for anaerobic digestion or composting is source segregated and collected separately. Where bio-waste is collected in biodegradable bags, the bags have the appropriate compostable certification standard EN 13432:200058. - In these <u>anaerobic digestion plants, source segregated bio-waste from separate collection constitutes at least 70% of the input feedstock</u>, measured in weight, as an annual average. - The activity produces <u>compost or digestate complying with Regulation (EU) 2019/1009</u>, in particular with requirements of Annex II on the Component Material Categories (CMC), referring specifically to CMC 3 (Compost) and CMC 5 (Digestate other than fresh crop digestate) or with national rules on fertilisers or soil improvers, with equal or stricter requirements compared to those of Regulation 2019/1009; <u>Compost and digestate complying with Regulation (EU) 2019/1009</u> or equivalent national rules is not landfilled.	<u>Climate change mitigation</u> - A monitoring and contingency plan is in place to minimise methane leakage at the facility. <u>Pollution prevention and control</u> - For anaerobic digestion plants treating over 100 tonnes per day and for composting plants treating over 75 tonnes per day, the activity complies with best available techniques (BAT) conclusions for waste treatment or equal or stricter national regulation, in order to reduce emissions to air and to improve the overall environmental performance as well as to select the waste input and to monitor or control the key waste and process parameters. - Emissions to air and water are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set for, respectively,

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	The <u>digestate is preferably composted after anaerobic digestion</u> to maximise benefits to the soil it is applied to afterwards and minimises some potential agro-environmental issues such as release of ammonia and nitrates. Where anaerobic digestion is installed, <u>the produced biogas is used directly</u> for the generation of electricity or heat, upgraded to bio-methane for use as a fuel, directly injected in the gas grid and further used for energy purposes by replacing natural gas, used as industry feedstock to produce other chemicals or converted into hydrogen for use as a fuel.	anaerobic and aerobic treatment of waste in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for waste treatment. For anaerobic digestion, the nitrogen content of the digestate used as fertilisers or soil improver is communicated to the buyer or the entity in charge of taking off the digestate, either in compliance with Regulation (EU) 2019/1009, or with tolerance level $\pm 25\%$.
Sorting and material recovery of non-hazardous waste Construction, upgrade, and operation of facilities for the sorting or recovery of non-hazardous waste streams into high quality secondary raw materials using a mechanical transformation process. The economic activity does not include sorting and recovery of combustible fractions from mixed residual waste for the production of refuse derived fuel, such as in mechanical and biological treatment plants.	- Origin of the feedstock material - the non-hazardous waste feedstock originates from one or multiple of the following sources: - separately collected and transported waste, including in co-mingled fractions; - non-hazardous waste fractions originating from sorting of mixed waste intended for recycling where the facility meets a defined quality criteria of performance and the waste is coming from areas complying with separate collection obligations laid out in Directive 2008/98/EC. - Material recovery - the activity attains or exceeds existing plant-specific material recovery rates by competent authorities set in applicable waste management plans, permits or contracts or by EPR schemes. <u>The facility implements internally defined KPIs to track performance or attainment of applicable recovery rates.</u> For materials for which separate collection is mandatory, the activity converts at least 50 %, in terms of weight, of the processed separately collected non-hazardous waste into secondary raw materials that are suitable for the substitution of primary raw materials in production processes.	<u>Pollution prevention and control</u> For activities falling under the scope of the best available techniques (BAT) conclusions for waste treatment⁷³, the activity implements the relevant techniques for pollution prevention and control and meets the relevant associated emission limits (BAT-AELs). Plastics recycling facilities have filtration installed prior to wash discharge that is capable of removing at least 75% of microplastics >5µm.

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	• Proper management of waste - the facility recovering non-hazardous waste has implemented Best Available Techniques (BAT) based on BAT 2²⁵ on improving overall environmental performance of the plant set out in the BAT conclusions for waste treatment including: ◦ a waste characterisation procedure and a strict waste acceptance procedure regarding the quality of incoming waste; ◦ a tracking system and inventory aiming to track the location and quantity of waste in the plant; ◦ an output quality management system to ensure that the output of the waste treatment is in line with applicable quality requirements or standards, using for example existing EN or ISO standards; ◦ the relevant waste segregation measures or procedures to ensure that waste, after separation, is kept separated depending on its properties in order to enable easier and environmentally safer storage and treatment; ◦ the relevant measures to ensure waste compatibility prior to mixing or blending of waste; ◦ the facility has installed the sorting and material recovery technology and processes to meet relevant technical specifications, quality standards or end-of-waste criteria. <u>The activity uses state-of-the-art technologies suited to the waste fractions processed including optical separation by near-infrared spectroscopy or X-ray systems, density separation, magnetic separation or size separation.</u>	

Source: Environmental Delegated Act

²⁵ [Commission Implementing Decision \(EU\) 2018/1147](#)

Annex 2 EU grant calculation - Working examples.

JASPERS' applied methodology for the calculation of the grant amounts for RRF based projects is illustrated by a theoretical project example.

The example is presented in the attached Excel file: ***2023 119 GR SCE HOR GUIDNOTE 1_Example of JASPERS pro-rata grant calculation_250121***