



CONAI Fee eco-modulation

FROM EPR COST COVERAGE
TOWARDS A PREVENTION & INNOVATION TOOL

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CONAI



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EPR FEE

EPR FEE modulation for all packaging put on the Italian market has been **introduced by CONAI – Consorzio Nazionale Imballaggi - since 1997**¹.

The introduction of the FEE modulation has been used by CONAI as a **strategic tool** for:

- a) **promote Eco-design (upstream)**
- b) **developing new Re-cycling streams (downstream)**

FEE4promote Eco-design (upstream)

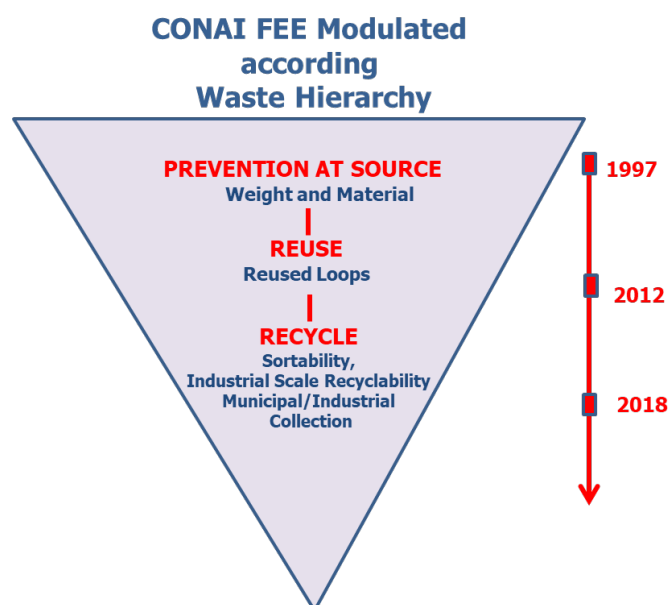
CONAI FEE modulation, accordingly with the EU waste hierarchy, has been introduced as an economic levy to **minimize the environmental impact** of packaging and waste through a modulation based on:

- Reduction at source, by metric fixed on €/ton (less ton less €)²
- Re-usability and Re-cyclability requirements³

Re-usability and Re-cyclability always understood as de facto, i.e. existence of Re-use loops or Re-cycling stream on an industrial scale.

In this way this approach can be translated into:

- **economic benefits** (lower FEE) for **Re-usable packaging** but only if part of accountable and monitored **Re-use** loops;
- **higher FEE values** for more complex packaging to be recycled.



¹ https://www.conai.org/wp-content/uploads/2025/07/Variazioni-CAC-1998-2025_agg.-luglio-2025.pdf

² <https://www.conai.org/en/businesses/environmental-contribution/>

³ <https://www.conai.org/en/businesses/environmental-contribution/special-cases/>

FEE4developing new Recycling Stream (downstream)

Modulation results in high level EPR fees that account to develop new recycling stream for specific packaging when new technologies has been available to move to industrial phase.

In this case FEEs are invested to:

- ensure their collection to dedicated recycling facilities.
- cover the recycling testing cost involving all the players in the specific supply chain (from producers to recyclers).

Key points

High level of transparency is a pre-requisite

To introduce FEE4promote Eco-design & FEE4developing new recycling streams in an effective way, a high level of transparency⁴ from the EPR Scheme is necessary on:

- packaging flows and management streams.
- costs of the entire supply chain (from collection to recycling / energy recovery)
- new and emerging recycling technologies or stream.

CONAI case history and fee modulation in practice

After 15 years of a EPR fee designed as economy levy also to reduce at source packaging material, in 2012 CONAI decided to launch the **first FEE modulation experience to reward Re-usable and Re-used packaging solutions**. The identified goal was to **correlate the FEE values to the useful life of the Re-usable packaging**: the longer the packaging lives over time, the less FEE it will have to pay, in full compliance with the principle of prevention at source. To do this, producers and users of reusable packaging has been involved to **collect data and information** useful for defining the strains at stake.

To date, **reusable packaging has been modulated within a reduced FEE amount from 40% up to 100% (pooling loops and site2site) of the regular FEE**, based on type of packaging/material and loops (open or closed loop). The FEE amounts consider the longer lifetime that incurs before packaging be discarded and then the **real net-cost** of recycling wasted reused packaging.

⁴ <https://www.conai.org/en/about-conai/results/>

LOOP	TYPE OF PACKAGING	% REDUCED FEE amount
Re-used	Wooden pallet	40
Accountable and monitored Re-usable	Wooden pallet	90
	Glass bottle	85
	Plastic crates and basket	93
Pooling	All	100
Site2Site	All	100

FEE values, as well as the % reduced FEE amounts, has been **periodically reviewed**, thanks to sector surveys and cost's analysis of the full recycling chains of the different packaging materials.

After this experience, CONAI, accordingly with the conversations that has been taken in place at European level on recyclable packaging, decided to **extend the FEE modulation to reward recyclable solutions, starting with plastic packaging**, more articulated and heterogeneous for types of packaging and their recyclability.

Since 2018, thanks to an **extraordinary stakeholder engagement**, it has been adopted by CONAI the first approach of FEE modulation based on recyclability for **plastic packaging**⁵ and from 2024 it counts **9 contribution levels that goes from A1.1 to C**. Generally, if the packaging meets the criteria for **sortability and recyclability**, the aspects who determines the related contribution level depends on the predominant waste disposal circuit where the packaging is expected to be fall (HH or C&I).

Packaging designated for the HH circuit is typically gathered through domestic separate collection, meanwhile packaging designated for the C&I circuit mainly are disposed through dedicated circuits.

⁵ <https://www.conai.org/en/businesses/environmental-contribution/contribution-diversification-for-plastic/>

Specifically:

- Packaging primarily intended for the C&I circuit, with a well-established industrial sorting and recycling infrastructure, is categorized as Level A.
- Packaging primarily intended for the household circuit, with a well-established industrial sorting and recycling infrastructure, is categorized as Level B1.
- Packaging from both circuits, where the industrial sorting and recycling infrastructure is in the process of consolidation, is categorized as Level B2."

The list of plastic packaging in the various contribution levels could change according to the level's modifications and CONAI publish a **documentation list**⁶ where to find the specifications for each plastic packaging type.

With the same approach, from 2019 CONAI also introduced the eco-modulation for **paper and cardboard packaging**⁷ and has been gradually grouped according to the different recyclability level. Starting from beverage cartons and from 2020 evolved to all paper packaging other than CPL with fibre content. In this direction, a new categorization took effect from the **1st of January 2022** with paper-based composite packaging, excluding those for liquids, is now classified **into four categories** based on the percentage of paper in the total weight:

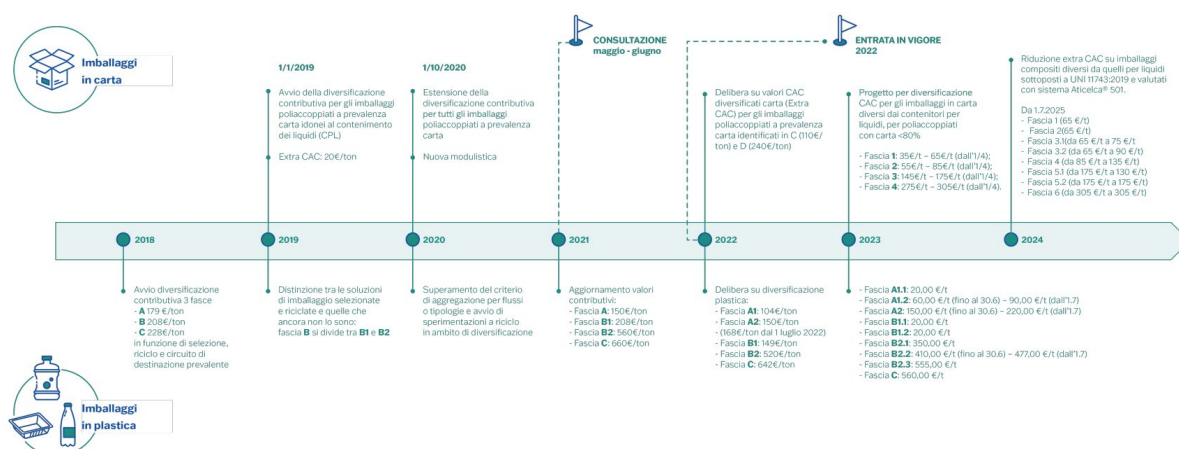
- **Types A and B** have 90% or more and 80% or more paper respectively, and currently do not incur an additional fee.
- **Type C** includes packaging with 60% or more but less than 80% paper. Recycling these packages is challenging and costly: more than 60% of their weight cannot currently be recycled.
- **Type D** covers packages with less than 60% paper. These are not effectively recyclable with paper and cardboard, leading to significant environmental impact. Type D also includes packages where the paper content is unspecified.

In 2024, effective from **1st July 2025**, a decision was taken to extend the differentiated contribution scheme for paper packaging and, concurrently, to introduce a substantial reduction of the **Extra CAC** for composite packaging other than those intended for liquids, provided that they have undergone laboratory testing in accordance with the UNI 11743:2019 standard and that their recyclability has been assessed under the Aticelca® 501/18 evaluation system. As of 1 July 2025, the CAC structure has been therefore expanded from six to eight contribution bands, some of which will grant benefits to certified packaging.

⁶ https://www.conai.org/wp-content/uploads/2026/02/Lista-lmballaggi_Plastica_Fasce-contributive_1-gennaio-2026.pdf

⁷ <https://www.conai.org/en/businesses/environmental-contribution/contribution-diversification-for-paper/>

The chart below shows the process CONAI has adopted from 2018 to establish eco-modulation and differentiation contribution levels for plastic and paper/cardboard packaging.



CONAI's **specific working group** has been introduced to **develop and verify the implementation** of FEE modulation and for this reason, inside the working groups, producers **and industrial and commercial packaging users** has been equally represented, as well as the technical representatives of the recycling down streams.

Every year CONAI publish the CONAI guidelines⁸ for all obligations, procedures, exemplary diagrams and reference forms which could be consulted by companies. In the table below are represented the EPR fee values⁹ for 2026:

Material/Fee Band		From 1 January 2026	From 1 July 2026
Steel		€5.00/t	€5.00/t
Aluminium		€12.00/t	€12.00/t
Paper ⁽¹⁾	Band 1- Single-material	€45.00/t	€45.00/t
	Band 2- type A composites	€45.00/t	€45.00/t

⁸ <https://www.conai.org/download/guida-al-contributo-ambientale-2026/?tmstv=1770212567>

⁹ <https://www.conai.org/en/businesses/environmental-contribution/>

	Band 3.1- type B1 composites (CERTIFIED)	€55.00/t	€55.00/t
	Band 3.2- type B2 composites (Non-certified)	€70.00/t	€70.00/t
	Band 4 – CPL	€115.00/t	€115.00/t
	Band 5.1 – type C1 composites (CERTIFIED)	€110.00/t	€110.00/t
	Band 5.2 – type C2 composites (Non-certified)	€155.00/t	€155.00/t
	Band 6 – type D composites	€285.00/t	€285.00/t
Wood		€10.00/t	€10.00/t
Plastic ⁽²⁾	Band A1.1	€40.00/t	€40.00/t
	Band A1.2	€87.00/t	€87.00/t
	Band A2	€258.00/t	€258.00/t
	Band B1.1	€219.00/t	€219.00/t

	Band B1.2	€228.00/t	€228.00/t
	Band B2.1	€611.00/t	€611.00/t
	Band B2.2	€724.00/t	€724.00/t
	Band B2.3	€785.00/t	€785.00/t
	Band C	€790.00/t	€790.00/t
Biodegradable and compostable plastic		€130.00/t	€246.00/t
Glass		€40.00/t	€40.00/t

Exemption Cases

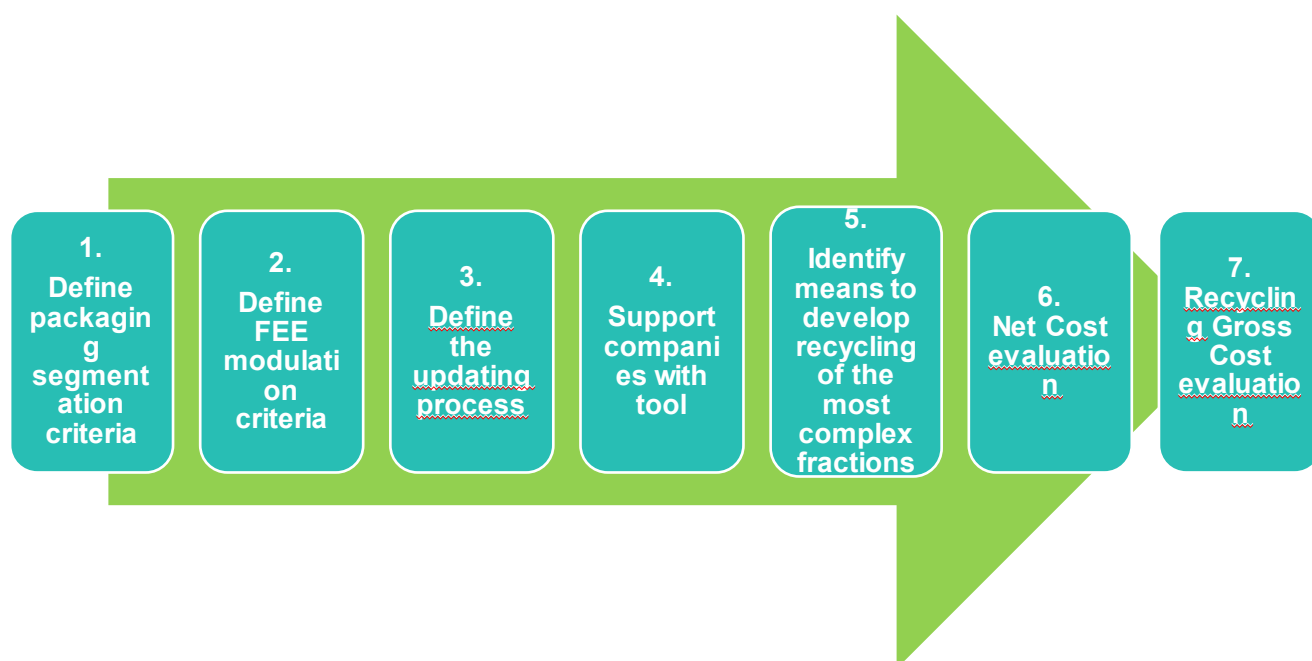
Export

Packaging that is exported and managed abroad is exempt from CONAI's Environmental Contribution, relieving CONAI of responsibility for these materials. For companies involved in both importing and exporting packaging or packaged goods, CONAI provides an alternative import/export compensation procedure which allows businesses to offset their imports against their exports, streamlining the process and potentially reducing overall contributions. These exemption and compensation procedures are designed to accommodate the different businesses' needs, promoting efficient waste management practices while ensuring compliance with environmental regulations. For further details on these procedures and their application, companies should consult the **Guide to CONAI Membership and EPR Fee Application**¹⁰, an important instrument that offers comprehensive information on membership requirements, fee structures, and the specific processes for claiming exemptions or compensations, helping businesses navigate their environmental responsibilities effectively.

¹⁰ <https://www.conai.org/download/guida-al-contributo-ambientale-2026/?tmstv=1770212567>

How to develop the process towards eco-modulation and prevention tools

Down here we have elaborated and made a description of the **7 step** to take in order to define the process:



Step1: Define packaging segmentation criteria

The first step was to define the criteria to segment the different types of plastic packaging. Three criteria have been identified:

- **sortability** in existing plants on a national industrial scale
- **recyclability** in existing (or experimental) plants on an industrial scale
- **packaging waste generation circuit** (municipal / commercial & industrial)

From these criteria descend some packaging lists, expression of packaging different degree of sortability and recyclability to the state of the currently known and relevant technologies, on an industrial scale. To date, in each list there are homogeneous groups of packaging by level of sortability and recyclability. Packaging is defined as a combination of type, polymer and structure.

Step 2: Define FEE modulation criteria

The second step was the definition of the criteria with which to calculate the FEEs for each list.

At the beginning, it was decided to give an evaluation of the FEEs that considered the net management cost of all the different plastic packaging and to use an **LCA approach** to

divide this cost among the lists. Today, it has been decided to increasingly support the logic of the **relative net cost of each list** as determinant for a more equitable allocation.

Step 3: Define the updating process

The third step was to structure a process for periodically updating the FEE lists and values, according to the evolution of packaging solutions and sorting and recycling technologies and the related net costs.

The chosen approach foresees the **maintenance of the FEE Modulation working group and periodic meetings** with the different stakeholders of the supply chain (packaging producers, packaging users, recyclers, etc.). The lists of packaging solutions are constantly updated, and, on demand, each packaging solution can be industrially tested for recycling to verify the appropriate group/level of FEE.

The **modulation has been fine-tuned over times**: it was starting with 3 categories and in 2023 turned to be 9.

Step 4: Support companies with tool and examples

The fourth step was to support companies in design for recycling with guidelines for designers able to:

- describe the recycling chain,
- represent the fundamental points,
- bring out the design choices for recycling,
- make available self-assessment checklists.

All this thanks to a stakeholder engagement and parallel research work.

Step 5: Identify means to develop recycling of the more complex fractions

The fifth step was to identify means to develop the recycling of the more complex fractions. The chosen approach was to develop specific recycling experiments supported by the EPR consortia on specific flows, using a distinct FEE, as for **plastic** and **carton** packaging.

Step 6: Net cost evaluation

The CAC finances the costs incurred by supply chain consortia for the **comprehensive management** following the **net cost approach** of packaging waste. This includes separate waste collection, which ensures that materials are properly sorted at the source to optimize recycling efficiency. It also covers transportation, facilitating the transfer of collected waste to specialized sorting and recycling facilities. It also supports sorting operations, where materials are categorized based on their composition (e.g., plastic, glass, paper) to prepare them for processing. The contribution further funds processing

activities, such as cleaning, shredding, melting, or reconstituting materials into secondary raw materials, enabling their reintegration into the production cycle.

Step 7: Recycling gross cost evaluation

As a last step resulted by the economic market fluctuations over the last few years, those values are determined based on the break-even point between the management costs of collection and recycling activities and any potential revenues from recycling. If the break-even CAC values are near zero or even negative, a minimum CAC, aligned with system costs, is applied (especially for the plastic's fraction).

Lesson learned

To successfully implement fee modulation based on material and packaging neutrality, achieving a high level of transparency is crucial. This necessitates robust accountability mechanisms for material flows and associated costs.

After more than a decade of experience with fee modulation, several valuable lessons have been learned:

1. **Flexibility in the method application and gradual introduction of new fee Criteria:** Introducing new fee criteria gradually allows stakeholders to adjust progressively, minimizing disruption and optimizing effectiveness over time.
2. **Close Monitoring and Adaptive Implementation:** Fee modulation is an iterative process of trial and learning. Continuous monitoring of outcomes and impacts is essential to refine strategies and ensure alignment with overarching goals.
3. **Structured Stakeholder Engagement:** Effective fee modulation requires continuous engagement with stakeholders across the supply chain. This engagement should be structured and inclusive, incorporating feedback from upstream suppliers to downstream recyclers and waste managers.
4. **Establishment of a Fee Modulation EPR Working Group:** To enhance collaboration and leverage collective expertise, establishing a Fee Modulation Extended Producer Responsibility (EPR) working group is recommended. This group serves as a platform for stakeholders to share best practices, address challenges, and develop innovative solutions.
5. **Development of Design-for-Recycling Tools:** Supporting companies in reducing fees involves developing and promoting design-for-recycling principles and tools. These resources assist businesses in optimizing packaging and product designs for improved recyclability, thereby lowering overall fees.
6. **Regular Updates of Recycling Technologies:** Given the dynamic nature of recycling technologies, maintaining a regularly updated map of promising recycling technologies is essential. This ensures stakeholders have access to the latest innovations and can make informed decisions regarding material and packaging choices.
7. **Major investments on recycling processes:** Developing better recycling solutions at infrastructure level nationwide

By implementing these strategies, jurisdictions can enhance the effectiveness and fairness of the eco-modulation. This approach promotes sustainable practices, reduce environmental impacts, and foster a circular economy approach to material and packaging management. This version maintains clarity while providing expanded details on each point, emphasizing their importance in effectively implementing fee modulation strategies focused on material and packaging neutrality.



About Conai

CONAI, the National Packaging Consortium, is a private non-profit consortium. It is a system forming the response from private companies to a problem of collective interest, i.e. the environment, in accordance with the guidelines and objectives set by the political system. Around 650,000 companies which produce or use packaging have joined the Consortium System and CONAI oversees the activities and guarantees the recovery results of 7 Consortia: steel (Ricrea), aluminium (Cial), paper/cardboard (Comieco), wood (Rilegno), plastic (Corepla), bioplastic (Biorepack) and glass (Coreve), ensuring the necessary link between these Consortia and Public Administration.

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