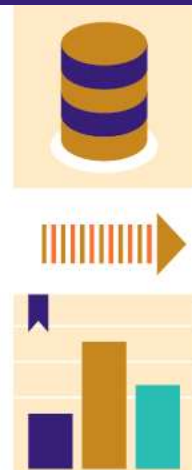




FEE Modulation

FROM EPR COST COVERAGE
TOWARDS A PREVENTION & INNOVATION TOOL

July, 2022





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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 1997¹**.

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)

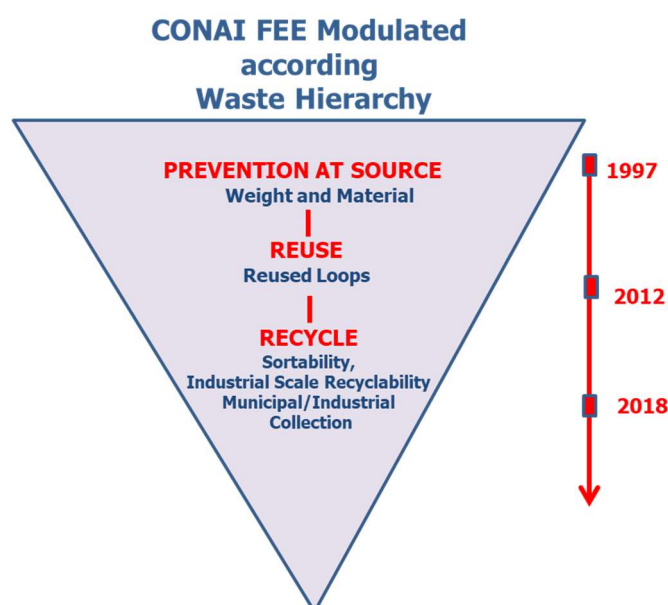
CONAI FEE modulation, accordingly with the EU waste hierarchy, has been introduced as an economic levy in order to **minimize the environmental impact** of packaging and waste through a modulation based on:

- 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/impresse/contributo-ambientale/variazioni_cac_1998_2022/

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

³ <https://www.conai.org/en/businesses/environmental-contribution/special-cases/>;
<https://www.conai.org/en/businesses/environmental-contribution/contribution-diversification-for-plastic/>;
<https://www.conai.org/en/businesses/environmental-contribution/contribution-diversification-for-paper/>

FEE4developing new Recycling Stream (downstream)

Modulation results in higher level EPR fees that account to **develop new recycling stream** for specific packaging when new technologies has been available to **move** in the **industrial** phase. In this case FEEs are invested in order 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).

An high level of transparency is a pre-requisite

In order to introduce FEE4promote Ecodesign & FEE4developing new recycling streams in an effective way, a **high level of transparency**⁴ from the EPR Scheme is need on:

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

CONAI Italian case history or FEE modulation in practice

After 15 years of a EPR fee designed as economy levy also to reduce at source packaging material, in 2012 has been decided by CONAI 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 FEE range from 60% up to 7% of the regular FEE**, on the basis of type of packaging/material and loops (open or closed loop). The FEE amounts take into account 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/>

	TYPE OF PACKAGING	% REDUCED FEE amount
Re-used	Wooden pallet	40
Re-usable in accountable and monitored loops	Wooden pallet	80
	Glass bottle	85
	Plastic crates and basket	93

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.

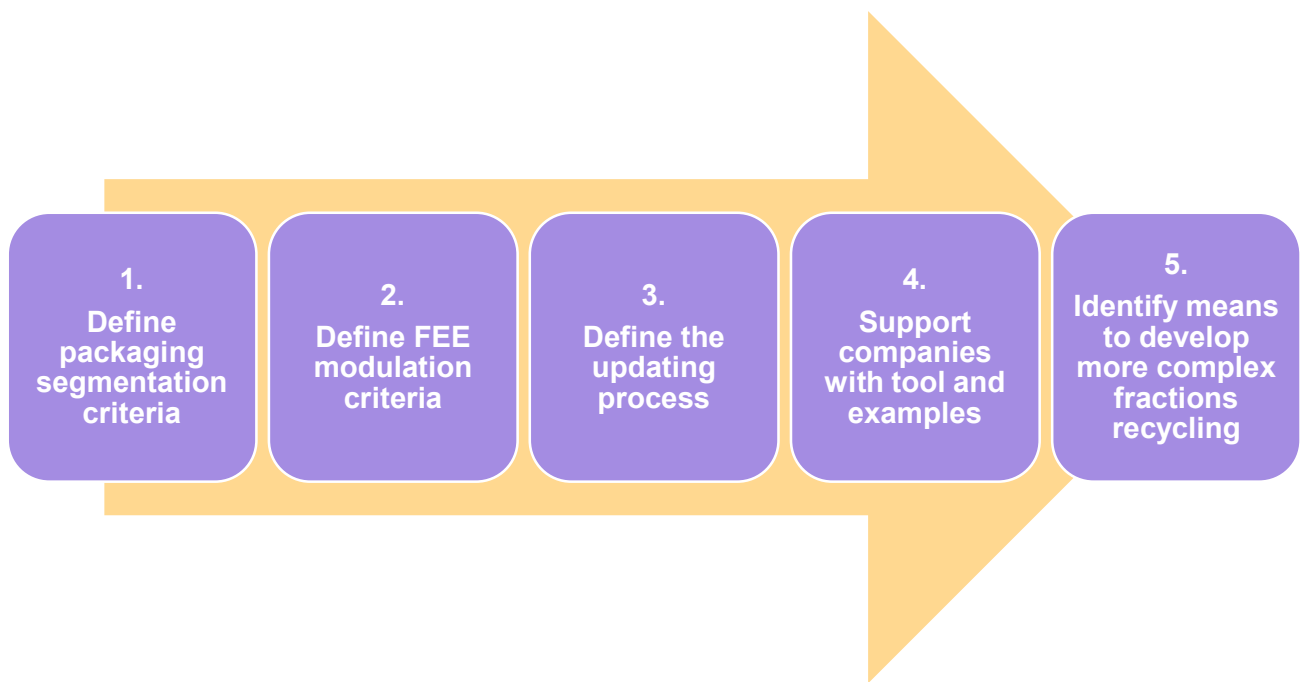
After this experience, CONAI, accordingly with the conversations that has been taken in place at European level on recyclable packaging, decided to **extend the FEE modulation to reward recyclable solutions, starting with plastic packaging**, more articulated and heterogeneous for types of packaging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

Since 2018, thanks to an **extraordinary stakeholder engagement**, has been adopted by CONAI the first approach of FEE modulation based on recyclability for **plastic** packaging.

A CONAI **specific working group** has been introduced to **develop and verify the implementation** of FEE modulation introduced. The working group can be considered as a FEE modulation **project manager**.

For this reason inside the working group **producers and industrial and commercial packaging users** has been represented, as well as the technical representatives of the recycling down streams.

The dissemination activity between the company once introduced the FEE modulation has been more and more important during the recent years.



Step 1: Define packaging segmentation criteria

The first step was to define the criteria to segment the different types of plastic packaging. Three criteria has 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 meeting** 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 lists and in 2023 they will become 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 last step was to identify means to develop the recycling of the more complex fractions.

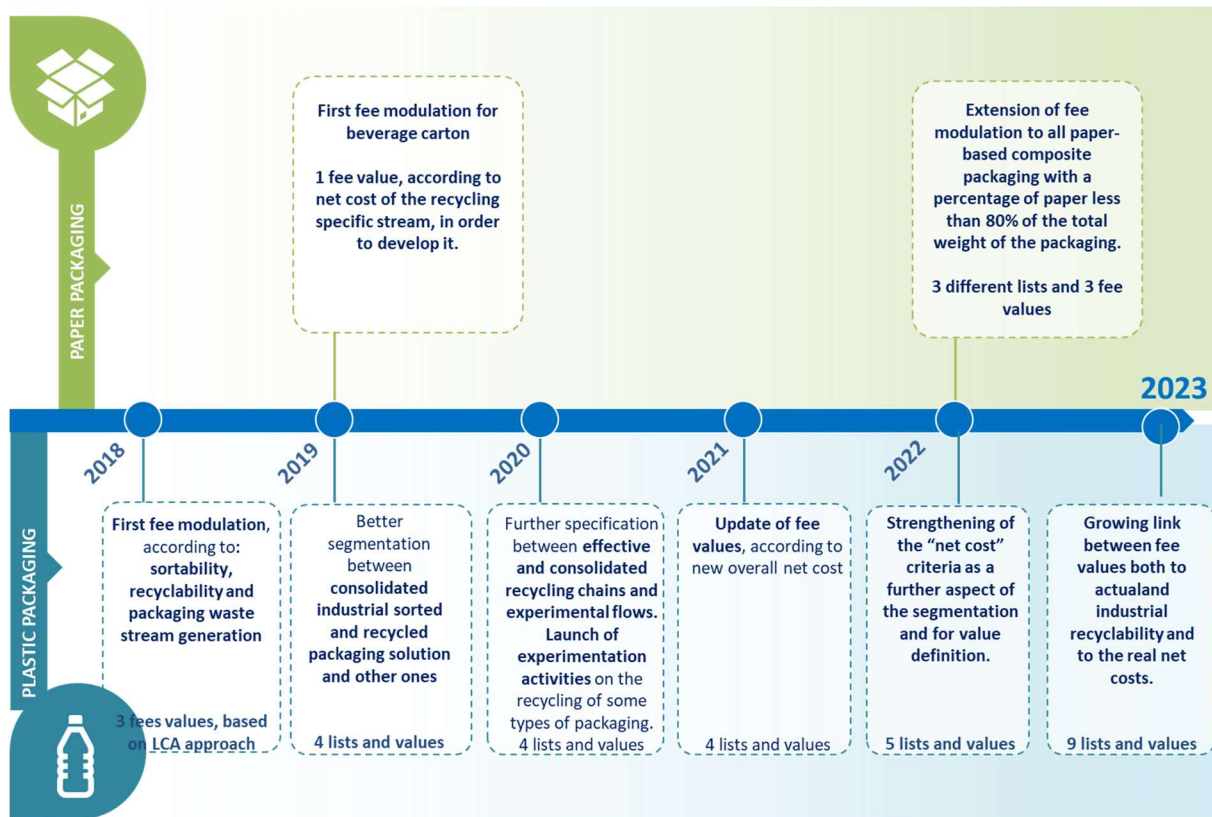
The chosen approach was to develop specific recycling experiments supported by the EPR consortia on specific flows (eg PET trays), using a distinct FEE.

It was precisely in this direction that the **extension of the modulation of the recycling FEE to the paper packaging sector** went.

Since 2019 also paper packaging solutions has been gradually grouped according the different recyclability level. Starting from beverage cartons and now evolved to all paper packaging with fiber content less than 80%.

The approach followed was to define an **extra FEE value necessary to guarantee the consolidation and effectiveness of an experimental recycling chain** that finds in Italy the availability of innovative recycling technologies at specialized paper mills for the

recovery of cellulose fibers for paper-based composite packaging. In fact, this extra FEE mainly covers the costs for their selective collection or their targeted selection in the flows to be sent for recycling and their sending to specialized paper mills.



10-years of lesson learned

In order to introduce a FEE modulation according to **material/packaging neutrality** an adequate level of **transparency** is a pre-requisite: a high quality **accountability for material flows and costs** have to be guaranteed

After 10 years FEE modulation the lesson learned are the following:

- **gradually introduce** the new FEE criteria identified
- **follow the implementation** because is a try & learn interactive **process**
- a structured **continuous upstream and downstream stakeholder engagement** is needed
- for the previous reasons a FEE modulation EPR working group is recommended
- develop **design for recycling tools** in order to support companies to move vs lower FEEs
- remember to regularly **update** the **promising recycling** technologies map



About Conai

CONAI, CONSORZIO NAZIONALE IMBALLAGGIO, is the main PRO, Producer Responsibility Organisation, for packaging in Italy. A non-profit private Consortium of over 750 thousand companies among packaging producers and packaging users (fillers), committed to prevent the environmental impact of packaging and packaging waste and to achieve the recycling targets of all packaging placed on the Italian market.

In 2021 it guaranteed the recycling of 73.3% of packaging waste puts on the market in Italy.

According to a recent study by the Bocconi University and the Wuppertal Institute, the Italian packaging management system is among the most effective and efficient in Europe.

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