

## Packaging recovery in Italy: THE CONAI SYSTEM

### Summary

Packaging contributes significantly to the “resource efficiency use” characterising the society/environment binomial and there are numerous typologies, uses, characteristics and functions of packaging that cause its extensive and diffuse utilisation.

The European Directive on packaging and packaging waste (94/62/EC) was drawn up with a view to sustainable development and the definition of the environmental and social responsibilities of business enterprise, public authorities and private citizens. It was later acknowledged by Italian law in 1997 with Decree 22/97, amended in 2006 by Decree 152/06.

With the aim of achieving the recovery and recycling targets set by the European directive, Italian law set up CONAI, the national packaging consortium, with obligation of adhesion on the part of all packaging Producers and Users.

CONAI is a non-profit private consortium with an enrolment of around 900 thousand companies (2016).

For the recovery and recycling operations of individual materials CONAI co-ordinates the activities of the Material Consortia (steel, aluminium, paper, wood, plastic and glass), also set up by the decree.

Conai funds itself through the “CONAI Environmental Contribution” applied to packaging sold by Producers to Users.

Packaging recovery rose from around 3.5 million ton in 1998 to almost 10 million ton in 2016, reaching and exceeding the targets set by law.

This achievement was also made possible by the ANCI-CONAI agreement (ANCI is the national association of Italian municipalities), which institutionalised the funding of Italian municipalities for the separate collection of packaging, by means of payment to be effected by CONAI through the “environmental contribution”.

*Table 1. Statistics*

	1998	2016*	Targets (2008)
Packaging:			
<i>placed on the market</i> (kt)	10700	12593	100%
<i>recycling</i> (kt)	3300 (31%)	8448 (67.1%)	55-80%
<i>energy recovery</i> (kt)	235 (2%)	1406 (11.1%)	
<i>recovery</i> (kt)	3500 (33%)	9854 (78.2%)	60%
“Environmental Contribution” (€/000)	217000	491731	

\* General Program for the Prevention and Management of Packaging 2017

*The above data show that the 2008 recycling targets were achieved and exceeded. Results outstripped the minimum recovery targets of 60% for 2008*

## Introduction

Right waste management constitutes one of the most important environmental challenges in modern society. It is not only a question of treatment costs, organisational difficulties, hygiene problems, and many more, associated with the management of the enormous quantities of waste produced every day, but above all it is a question of wasted natural resources: whenever a kilo of waste is thrown into a landfill we throw away almost two kilos of natural resources used to produce and manage it.....and we produce billions and billions of kilos of waste per year.

Various European directives and the national legislation deriving from them have focused on the problem, giving precise directions and indicating tasks and responsibilities, and since there is no consumer item, whether industrial or household, that is not “accompanied” by packaging it is on packaging that most of the attention has been focused: “packaging has become the testing ground and turning point for a cultural and economic turn round that counts on shared responsibility to generate behaviour that is integrated and coherent with the interests of the environment, in all those involved – company enterprises, public administration and private citizens”.

### Municipal waste (MW)

This consists of household waste and so called “assimilated waste”, i.e. waste produced by small trade and cottage industries that special municipal permits allow to be placed in selective waste collections along with household waste.

In Italy, production of municipal waste is constantly on the increase. It has risen from almost 27 million ton in 1997 to 29.5 million ton in 2015. This means that each private citizen produced today around 487 kg of waste per year<sup>1</sup>.

The average composition of municipal waste is as follows: paper and card 23%, plastic 12%, glass 7%, wood 4%, metal 4%, organic 35%, textiles 5%, other 10%. There are no precise data on packaging municipal waste, but the proportion is estimated at 20-25%. After “prevention” i.e. minimising the production of waste, the solution held to be most effective in dealing with the problem consists in setting up an integrated waste management scheme, which can summarily be described as follows:

- development of an economic, effective and efficient system of selective collection;
- adequate treatment capacity (storage, sorting, etc...) for materials collected;
- development of a recycling industry;
- development of incineration with energy recovery, especially with RDF (refuse derived fuel/solid recovered fuel) combustion, in order to recover (in heat or electricity) dry waste not collected separately, waste from sorting and treatment, and other typologies of waste as prescribed by law;
- preparation of sites for the management of residual material, rendered inert, that is no longer exploitable in other ways.

### Packaging

The main functions of packaging are:

- to protect and safeguard the product;

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<sup>1</sup> [www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-urbani-edizione-2016](http://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-urbani-edizione-2016)

- to facilitate transport;
- to provide users with valuable information: quality and composition of the packed product, place and date of production; expiry date; producer name; packaging material.... instructions for separate waste collection and much else besides.

Official nomenclature divides packaging into three categories (the following definitions are drawn from art. 218 of legislative decree 152/06):

- Primary packaging (for sales purposes). This is “packaging conceived in such a way as to constitute, at point of sale, a sales unit for the end-user or consumer”. E.g. bottles for water, cans for soft drinks etc. ...
- Secondary packaging (multiple). This is “packaging conceived in such a way as to constitute, at point of sale, a grouping of a certain number of sales units...”. E.g.: the plastic film that encloses several bottles etc. ...
- Tertiary packaging (for transport). This is industrial and commercial packaging used during transport”. E.g.: pallets, plastic shrink hooding, large crates etc. ...

#### Packaging management: responsibilities and duties

- Responsibilities: “Product responsibility”, which concerns the entire life-cycle of the product (IPP, integrated product policy), assigns most of the environmental responsibility involved in managing goods throughout their entire lifecycle, including the ensuing waste management, to production and distribution companies.
- Duties: after establishing the validity of the concept of “Product Responsibility”, the legislator has indicated the duties inherent in environmental management. One of the most important among these is the “Hierarchical Scale”. This affirms the principle that correct product and waste management is to be achieved through four fundamental activities placed on a hierarchical scale, i.e. with precedence given in decreasing order:
  1. Prevention: reduction of environmental impact both in terms of quantity (reducing consumption and weight) and of risk for the environment and health.
  2. Reuse: design and production of reusable packaging, delaying the moment when it becomes waste.
  3. Recycling: the production of “secondary raw materials” from packaging waste in order to produce new goods from the material that the packaging was made out of (paper is re-obtained from paper packaging, plastic from plastic packaging etc...). Composting is also included in recycling.
  4. Energy recovery, meaning all the processes that enable energy, in the form of heat or electricity, to be obtained from waste for combustion.

The term Recovery by itself indicates Recycling and Energy recovery together:

RECOVERY = RECYCLING + ENERGY RECOVERY

The European Directive and Italian law specify that, though valid as a general direction, the hierarchical scale must anyway be supported by a Life Cycle Analysis before making a final decision. In short, when opting between two or more solutions, the final decision should whenever possible be made after “scientifically” verifying its effective environmental expediency.

## **THE ITALIAN SYSTEM: CONAI and the Material Consortia**

In Italy, October 1997 marks an important turning point for packaging and packaging waste management. This is when CONAI, Consorzio Nazionale Imballaggi, (the national packaging consortium) was born. Its management was entrusted by law to its member companies: more than 900000 companies have joined the consortium. Its task is to manage the recovery and recycling of packaging in its entirety, and to pursue the recycling and recovery objectives set by European legislation, first acknowledged in Italy by the Ronchi Decree (legislative Decree 22/97), which was replaced by the legislative Decree “Environment Regulations” in 2006 (legislative Decree 152/06 and subsequent updates).

The operational management of recovering packaging for each single material (steel, aluminium, paper, wood, plastic, glass) is entrusted to six Material Consortia, one for each material.

This is the “CONAI system”, or rather the Italian System: a system of consortia on a national level, which constitutes a unique case in Europe in terms of regulations, structure and operational and financial management.

It is a self-funded system that has achieved its targets at the lowest costs in Europe, while also investing considerable resources in information to the general citizens.

This system, set up by law and entrusted to companies, has marked the transformation from a landfill based management to an integrated system based on the prevention, recycling and energy recovery of packaging waste, then extended to other waste.

### Regulations and structures

With Decree 22/97 and the subsequent Decree 152/06, which amplifies and modifies it (later we shall refer only to the latter decree), Italy acknowledges the European Waste Directive and specifically the Packaging and Packaging Waste Directive (Directive 94/62/CE and subsequent updates).

Packaging recycling and recovery targets are listed in “Item II – Packaging Management” of the decree, together with management regulations and a specification of responsibilities and duties, particularly for companies: the decree establishes the constitution of CONAI and the Material Consortia, dictating objectives and lines of action (“what to do”), but leaving companies free to decide on modalities (“how to do it”).

The main characteristics and contents of the decree can be summarised as follows:

- The decree concerns all packaging and all economic operators, the latter divided into two categories: packaging Producers and packaging Users.

Packaging Producers are companies that produce packaging and/or raw material for the production of packaging, along with importers of “empty packaging”, i.e. packaging not containing goods.

Packaging Users are companies that use packaging to pack their products or that sell packed goods. Belonging to this category are the numerous companies that produce/distribute/sell consumer goods and/or industrial and commercial products: large and small scale producers, distributors, shops, craft workers etc... Similarly to the case of producers, this category also includes importers of “filled packaging” i.e. packed goods ready for sale on the Italian market.

Stressing that the decree “concerns all packaging and all economic operators”, we wish to draw attention to the fact that the strategic aim was to put a unitary system into practice that is able to represent the entire nation, both in terms of policy and management of information and results. This is the aspect that distinguishes the Italian System from the rest of Europe. CONAI is in fact the only

organisation where data on packaging and its recovery represents the situation in *Italy as a whole*, since all Italian enterprise is effectively part of the Consortium.

- General principles: “WHOEVER POLLUTES PAYS” and “SHARED RESPONSIBILITY”.

Taking pollution to mean any irreversible change to the environment, the “Polluter pays principle” establishes that whoever is responsible for pollution must also bear the costs of “decontamination”: in the case of waste, the cost of collection and recovery or landfill disposal. Since company enterprises have been attributed with the greatest responsibility for pollution, in that they produce the goods – which by the simple fact of being produced by special plant and processes, cause “pollution” and cause it even as waste – they are also called to bear the greater part of the cost of packing and packaging waste management. The decree establishes that the CONAI system compensates the additional fee due to the packaging separate collection and recovery / recycling. Obviously one player alone cannot be held responsible, but responsibility must be shared proportionally by all players in the system: the “shared responsibility” principle.

In practice this means that companies cannot be totally and unconditionally charged with costs and, in the specific case of packaging waste, the Public Administration (PA) must organise the separate collection “efficiently and economically”, and private citizens must follow the PA’s directions.

In this way two important points are established: a) “the management” of private citizens is the exclusive task of the PA; b) the CONAI System contributes economically to the expenses of correct, i.e. “efficient and economical”, waste management: it does not pay excess costs due to poor quality collection (extraneous material), inefficient sorting, over-costly transport etc...

- Targets.

The CONAI System is running on the basis of national targets 2008, currently under revision at EU level:

		% placed on the market			
For all materials together (steel, aluminium, paper, wood, plastic, glass)	<b>recovery</b>	min 60%			
	<b>recycling</b>	55-80% →	glass	60%	min
			metals	50%	“
			paper	60%	“
			plastic	26%	“
			wood	35%	“

- Producer and User obligations.

Both categories “are responsible for the correct environmental management of the packaging and packaging waste produced by their products”; particular reference is made to the following specific responsibilities:

- to achieve recovery and recycling targets: therefore companies are directly responsible for finding ways and means of recovering the target quantities by the set deadline;
- to set up and be part of the CONAI consortium: an ad hoc organisation by which to reach the above targets, and by which to fulfil the obligations of the take back of primary packaging waste or otherwise vested in the public service of packaging and collected separately;
- or, packaging producer can, alternatively,:

- ✓ organize autonomously, even in the collective form, the management of its packaging waste throughout the country
- ✓ certify under his own responsibility that has been put in place a system of return of their packaging, using appropriate documentation demonstrating the viability of the system, in accordance with the criteria and procedures established by law

Currently has been recognised two autonomous organisation:

CONIP, for plastic crates and pallet ([www.conip.it](http://www.conip.it)) and P.A.R.I. for their own plastic PE films ([www.aliplastspa.com](http://www.aliplastspa.com))

Producers not adopting at least one of these measures, are obliged to enrol in the appropriate Material Consortium, i.e. in one of the consortia that, as we shall see, must organise and operate packaging recovery.

Again there are six Material Consortia: CIAL (aluminium) [www.cial.it](http://www.cial.it), COMIECO (paper) [www.comieco.org](http://www.comieco.org), COREPLA (plastic) [www.corepla.it](http://www.corepla.it), COREVE (glass) [www.coreve.it](http://www.coreve.it), RICREA (steel) [www.consorzioricrea.org](http://www.consorzioricrea.org), RILEGNO (wood) [www.rilegno.org](http://www.rilegno.org).

In conclusion: all companies – packaging Producers + packaging Users – are invested with responsibility for environmental packaging management, principally through enrolment in CONAI. Producers must organise packaging recycling and recovery operations through the Material Consortia.

- CONAI, National Packaging Recovery Consortium ([www.conai.org/en/](http://www.conai.org/en/)).

Legislative Decree 152/06 establishes the following for CONAI:

- Its STATUTE has been approved by ministerial decree and is therefore legally binding. This means that once they are enrolled, companies are under legal obligation to respect the rules dictated by the statute, e.g. payment of the CONAI contribution, introduced to fund the system.
- IT IS A NON-PROFIT ORGANISATION: no “dividend” can be distributed to its members.
- It is made up EQUALLY of producers and users; its BOARD OF DIRECTORS includes 14 Producers and 14 Users (plus one government-nominated consumer representative).
- GOAL: to reach the global targets for recovery and recycling
- Main FUNCTIONS:
  - ✓ it outlines general take-back conditions with Public Administrations, i.e. the general conditions under which the Material Consortia take back packaging waste after separate collection: Conai is called to set, through appropriate procedures, the amount (€/kg) to compensate the municipalities in return of the separate collection they carry out. The procedure consists above all of a national agreement with ANCI (the national association of Italian municipalities), the so-called ANCI-CONAI AGREEMENT, which we shall talk about later;
  - ✓ it ensures co-operation between the Material Consortia and Pas;
  - ✓ it organises citizen information campaigns
  - ✓ it shares, between packaging Producers and packaging Users, the compensation fees for the additional fee of packaging separate collection and recycling/recovery, i.e. it decides on contribution methods to fund the system;

- ✓ it elaborates and updates the GENERAL PREVENTION AND MANAGEMENT PROGRAMME, a document that Conai presents each year in which it displays the results achieved, and forecasts for the following years, relative to:
  - recovery and recycling targets
  - preventative actions
  - Citizen Communication
  - the management, economic and financial situation
  - training activities and research and development.

The document is drawn up on the basis of Special Prevention Plans prepared by individual Material Consortia and must be sent for approval to the Waste Authority and the Italian Ministry of the Environment and Production Activities.

- Material Consortia.
  - Their statutes are approved by ministerial decree in a similar way to CONAI; THEY ARE NON-PROFIT ORGANISATIONS; they must present a Special Prevention Programme every year;
  - they have the specific task of “rationalising and organising”:
    - ✓ the take-back of material after selective collection;
    - ✓ the collection of secondary and tertiary packaging waste (not collected by independent operators)
    - ✓ recycling and recovery.

The Consortia operate throughout Italy by special conventions stipulated with Municipalities and companies that manage separate collection by municipal mandate. Such conventions are stipulated on the basis of the ANCI-CONAI Agreement.

### Management

CONAI came into being on the 30th October 1997. It is a privately managed consortium of around 1 million business concerns, who are its members. It is self-funded through the CONAI Environmental Contribution.

- Prevention Management ([www.conai.org/en/prevention/](http://www.conai.org/en/prevention/))

Institutionally CONAI has the task of fostering prevention policies and actions geared to reduce the environmental impact of packaging.

The principal aims of promoting a culture of environmental sustainability, which is basically CONAI’s main mission, are to promote increasingly cleaner technology, optimise the quantity of materials and energy used in production and facilitate the reuse and recycling of packaging.

The actions carried out can be summarised as follows:

- monetary levy: the Environmental Contribution due on packaging sold by Producers to Users (see “Funding the System”) according to the weight of packaging transferred, is in itself an invitation to reduce the weight of the packaging. It therefore constitutes a preventive action. As well specifics reductions of the contribution in case of reusable packaging, based on the reuse rate.
- promotion of virtuous examples, i.e. the creation of appropriate means and methods for publicising and incentivising company actions of this kind. The THINK FUTURE

project ([www.conai.org/en/prevention/thinking-about-the-future/](http://www.conai.org/en/prevention/thinking-about-the-future/)), institutionally set up by CONAI, is one such concrete initiative. The following examples are part of the project:

- ✓ the Prevention Dossier: a volume, publishing the latest cases of prevention by companies. The cases are selected according to the different ways that prevention aims have been met. E.g. saving in raw materials; reuse of packaging placed on the market; use of recycled material for the production of the packaging itself; optimised logistics, particularly of transport etc. The volume can be consulted on the CONAI website (
- ✓ Ecotool, a simplified online methodology LCA (Life Cycle Assessment) as a technical support for the company participating in the Prevention Dossier
- ✓ Tender for prevention, a fund to reward eco packaging solutions
- ✓ Design for recycling guide and guidelines on packaging and packaging waste management
- communication programmes and activities ([www.conai.org/en/communication/](http://www.conai.org/en/communication/)):
  - ✓ Calls for funding of local separate collection communication
  - ✓ Mass Media National Campaign
  - ✓ Local Campaigns
  - ✓ [www.riciclodiclasse.it](http://www.riciclodiclasse.it) for all students of primary school to offers educational activities designed to develop a sense of responsibility towards the environment
- Funding system ([www.conai.org/en/businesses/](http://www.conai.org/en/businesses/)).

The system is continuously self-financing, raising funds directly from companies, or rather from the sale of packaging waste materials, by the Producers and Users.

Funding takes place through the application of the “CONAI Environmental Contribution” on packaging sold by the last producer to the first user, in the following way:

- when issuing an invoice, the Producer adds an amount in Euro, equal to the weight in kilos of the packaging sold, multiplied by the value in euro/kg set for that particular material (see following pages) and the same for all packaging made of the same material (CONAI contribution);
- the Producer pays the resulting amount to CONAI, who will then transfer it to the competent Material Consortium, after deducting a minimum percentage for its own administration;
- payment procedure is as follows: each Producer who has sold packaging to the User, for use on the Italian market, periodically makes a report to CONAI stating the contribution amounts he has entered on invoices issued during the period in question, specifying the amounts for each individual material. The Producer is obliged to pay this amount to CONAI, independently of payments made by the user (shared responsibility);
- CONAI pays the contributions received to the Material Consortia deducting no more than 20% for its own management costs. The Material Consortia mainly use these funds to pay Municipalities the “compensation fee”, as stipulated by the ANCI-CONAI Agreement (see following pages) for separate collection;
- the CONAI contribution is applied only on packaging used for the sale of goods on the Italian market (i.e. that produces waste on Italian soil): it is the User who must inform the Producer of the expected final destination of the goods at the moment of purchase. No CONAI contribution is applied to exported packaging.

➤ CONAI Environmental Contribution.

The value of the contribution for each material is fixed by the CONAI Board of Directors. The following contributions are in force:

*Table 2. Environmental Contribution CONAI :*

	1998 (€/ton)	2016 (€/ton)	2017 (€/ton)
STEEL	15.49	13.00	13.00
ALUMINIUM	51.64	45.00	45.00
PAPER/CARD	15.49	4.00	4.00
WOOD	2.58	7.00	7.00
PLASTIC	72.30	188.00	188.00
GLASS	2.58	17.30	16.30

Total annual payments to CONAI amount to around 490 million euros (source Annual Report 2016), and have remained quite stable from 1998 until now. This shows that there has not been and is not at present any significant evasion by member companies (estimated at below 10%).

➤ The two packaging management procedures: primary and secondary-tertiary.

The CONAI System manages the collection, sorting and recovery of post-consumption packaging in two different ways depending on their origin:

- primary packaging: from separate collection, i.e. from municipal waste (MW). This is managed on the basis of the ANCI-CONAI Agreement (see below). The packaging concerned is what is transferred to the public administrations and therefore mainly primary;
- secondary and tertiary packaging: originating from private premises (industry, shopping centres etc...), this is managed (optionally) through a platform system.

➤ Primary packaging management (MW) and the ANCI-CONAI Agreement (ANCI: National Association of Italian Municipalities).

Municipalities wishing to operate a scheme for the separate collection of packaging made of one or more materials (paper, glass etc...) and receive the remuneration stipulated (compensation fee), must sign a convention with the respective Material Consortium/a. Only after signing the convention, the municipality (or the company it has entrusted with collection) can deliver the material collected to the place and operators indicated by that Consortium. Then, depending on the type of material and quantities separately collected, it issues an invoice to the Material Consortium concerned, applying the “compensation fees” stipulated in the convention.

The Consortium will then see to the recovery and recycling of the packaging collected through the Italian industrial system.

Fees, methods and procedures are dictated by the ANCI-CONAI Agreement, stipulated every five years (most recently in 2014), that principally determines:

- compensation fees: the fees in Euro/ton for the quantities of packaging of a particular material collected and taken back by the relative consortium;

- the amount of the fee in relation to the quality of the material collected, i.e. the impurities (contamination) it contains. “Compensation fees” vary from a minimum to a maximum according to the percentage of impurities present. These are ascertained through analyses carried out periodically by specialists, at the joint behest of consortium and municipality. No “compensation fee” is payable if the percentage of impurity exceeds the maximum stipulated, and the consortium may opt not to take back the material;
- any other charges payable to municipalities depending on distance and transport costs, or other additional costs (compressing, sorting/cleaning etc...).

**Table 3.** *Compensation fees (2016)*

	€/ton		max Impurity (%)
	max	min	
Steel	112.43	43.72	20%
Aluminium	551.60	150.44	15%
Paper	99.28	49.64	10%
Wood	16.75	8.38	10%
Plastic	395.14	80.23	20%
Glass	45.64	5.02	5%

➤ Secondary and tertiary packaging management.

Post-consumption secondary and tertiary packaging generally comes from private industrial and commercial premises and is often collected by independent take-back or recycling agents, operating outside the CONAI system. The statutes of the Material Consortia explicitly stipulate that consortia must not go into competition with these operators (who must however inform the CONAI system of the total quantities collected and taken back). Reception platforms are provided for packaging that is not collected by independent operators, but which comes from private premises and is therefore not transferable to the public administration (except in the case of assimilated packaging, i.e. packaging from private premises transferable to the public administration by decision of the Municipality concerned).

Supermarkets, industrial companies, craft workshops etc...that must process their used packaging can take it to special privately operated Platforms, working under agreement with the Material Consortia, at zero cost (except for transport). The Consortia then see to recovery and recycling. This is known as “subsidiary action” by the CONAI system, in that it enables the recovery of post consumption packaging that the free market has no advantage in managing. There were 582 such Platforms operating on 31<sup>st</sup> Dec 2015.

### Results

Recovery and recycling data refer to the quantities of packaging on the market each year, which therefore produces the corresponding quantity of waste on Italian soil. All data concerning packaging issued for consumption and the results for recovery and recycling for each year can be consulted on the CONAI website ([www.conai.org/en/about-us/results](http://www.conai.org/en/about-us/results)) under the General Prevention and Management Plan. The same is true for individual Material Consortia under the Specific Prevention Plan.

**Table 4. Packaging consumption (kt)**

	1998	2016*
STEEL	600	465
ALUMINIUM	57	66.5
PAPER	4023	4709
WOOD	2360	2811
PLASTIC	1800	2178
GLASS	1905	2364

\*General Program for the Prevention and Management of Packaging 2017

**Table 5. Packaging recycling (kt and their percentages on packaging consumption)**

	1998		2016*	
	kt	%	kt	%
STEEL	27	4.5	360	77,5%
ALUMINIUM	7	12.3	48,7	73,2%
PAPER	1489	37.0	3.752	79,7%
WOOD	880	37.3	1.705	60,7%
PLASTIC	192	10.7	894	41,1%
GLASS	740	38.8	1.688	71,4%

\*General Program for the Prevention and Management of Packaging 2017

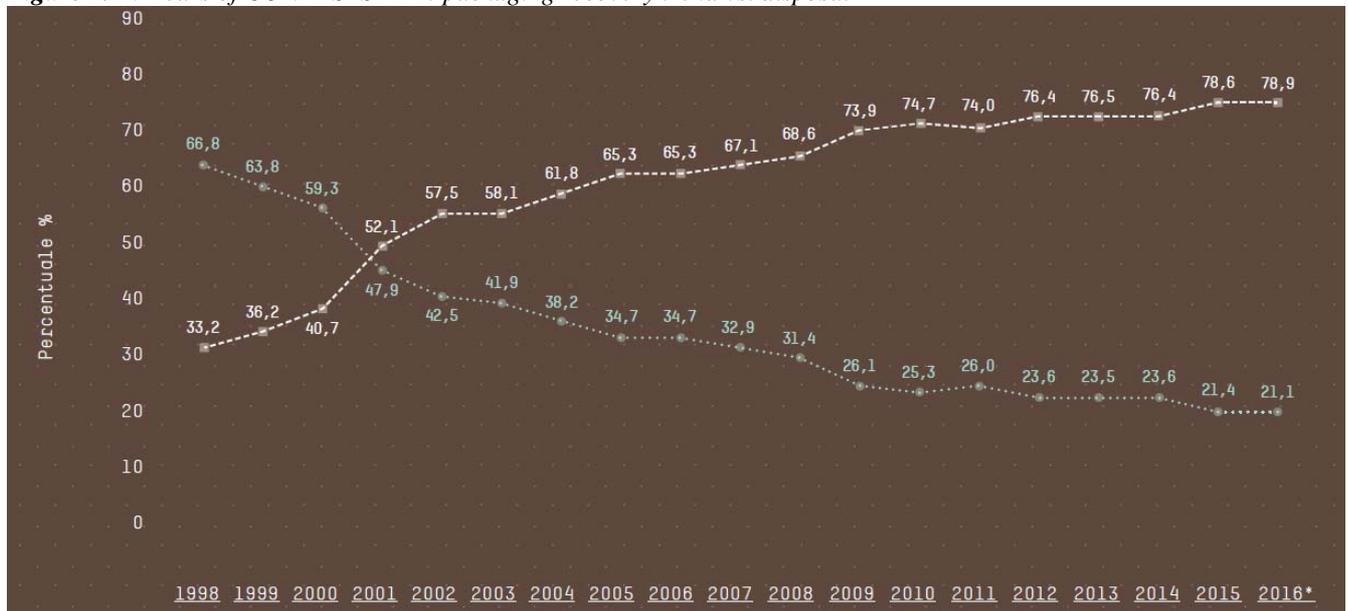
## Conclusions

The Italian packaging waste recovery and recycling system was required by law, which entrusted its management to enterprise companies, or more exactly, to packaging Producers and Users. The general set-up and management of the system has been marked by a noteworthy collaboration between public and private sectors: Ministries, the National Waste Observatory (now the Waste Authority) and Public Administration on one side; CONAI and the Material Consortia on the other. The former issued the laws, have made sure they have been respected and organised separate collection; the latter has raised funds, defined take-back and recycling/recovery methods and fostered the growth of a sizeable, modern industrial concern with a constant eye above all to the need for efficiency and economy, also shouldering responsibility for prevention and information to the citizens.

The citizens had played and continues to play a fundamental role, demonstrating that when adequately informed and prepared, it can become the painstaking key element in waste valorisation. The recovery and recycling targets have been reached within the forecast times, at costs far below the rest of Europe.

If in 1998 Italy was recycling 1 packaging on 3 now is recycling 2 packaging on 3, demonstrating that the system has achieved concrete results.

**Figure 1.** 20 Years of CONAI SYSTEM: packaging recovery trend vs. disposal



Contact: [international@conai.org](mailto:international@conai.org)

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