

**Paper and board  
packaging  
management: a  
made-in-Italy  
success story**

Paola Sinigaglia



**comieco**

Consorzio Nazionale Recupero e Riciclo  
degli Imballaggi a base Cellulosica

# What is Comieco

Comieco is the Italian Consortium for the recovery and recycling of paper and board packaging:

- founded in 1985 as a free association of paper manufacturing companies,
- established as a consortium in compliance with the European Packaging Directive in 1997,
- currently governed by Article 223 of Italian Legislative Decree No. 152/06.
  
- Comieco is ISO 9001<sup>1</sup>, ISO 14001<sup>2</sup>, OHSAS 18001<sup>3</sup> certified and has obtained the EMAS<sup>4</sup> registration for its environmental management practices

*1.ISO 9001: Standard for Quality Management Systems, ISO means International Organisation for Standardisation*

*2.ISO 14001: Environmental management standard*

*3.OHSAS 18001: Occupational Health and Safety Assessment Series*

*4.EMAS: Eco Management and Audit Scheme*

# COMIECO

- Comieco represents the packaging industry and includes about **3400 companies** (producers and importers of raw material-cellulose (mills); producers and importers of empty packaging (converters); recovered paper sorting plants)
- Its operating structure is organized in three locations: **Milan, Rome, and Salerno** with a total staff of 40
- Apparent paper and board packaging consumption accounts for more than **38%** of total apparent packaging consumption
- Paper and board packaging accounts for about **50%** of total recycled packaging (all materials) in Italy
- The environmental contribution (known as CAC) of paper accounts for **19%** of the total CAC.

# COMIECO: ALL PAPER AND BOARD PACKAGING WITH A LOWER FEE



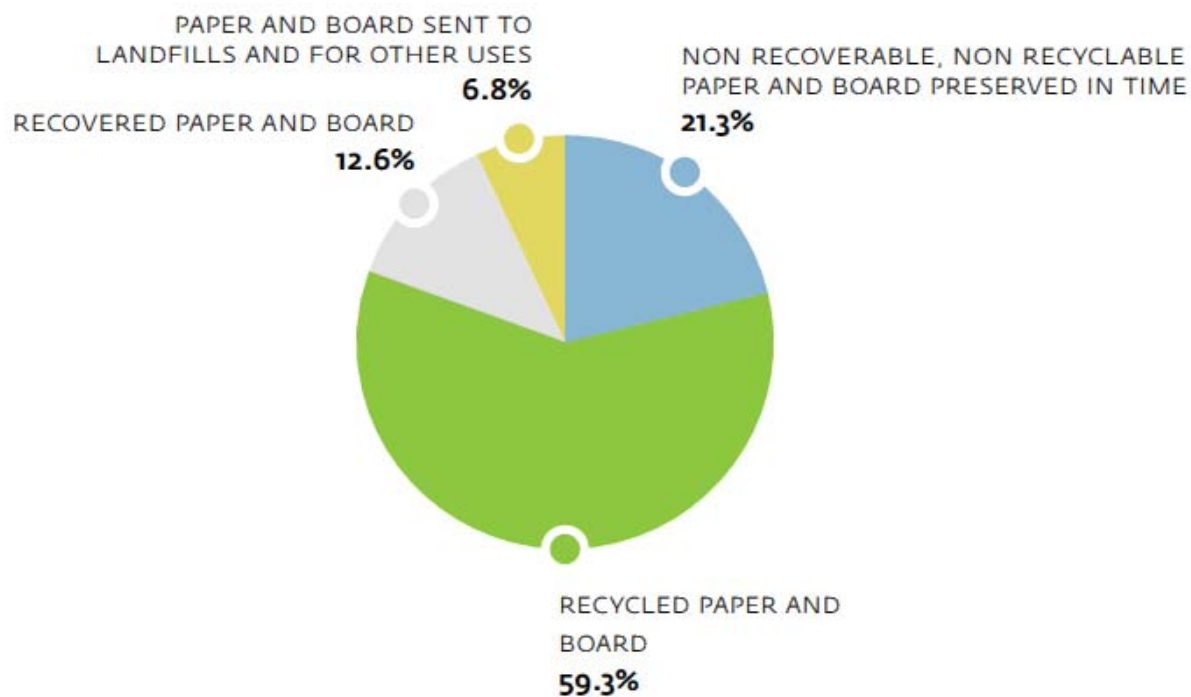
Comieco manages all types of cellulose-based packaging, including beverage cartons, placed on the market, and guarantees the urban separate collection.

## FUNDING

The Conai Environmental Contribution was reduced from 22 to 14 EUR/t since 1/1/2012, to 10 EUR/t from October 1th 2012 and will be 6 EUR/t from April 1th 2013.

# DESTINATION OF PAPER AND BOARD CONSUMED IN ITALY IN 2011

(Source: Assocarta data processed by Comieco)



	kt
NON RECOVERABLE, NON RECYCLABLE PAPER AND BOARD PRESERVED IN TIME	1,780
RECYCLED PAPER AND BOARD	4,945
RECOVERED PAPER AND BOARD	1,050
PAPER AND BOARD SENT TO LANDFILLS AND FOR OTHER USES	571
<b>TOTAL CONSUMPTION OF PAPER AND BOARD PRODUCTS</b>	<b>8,346</b>

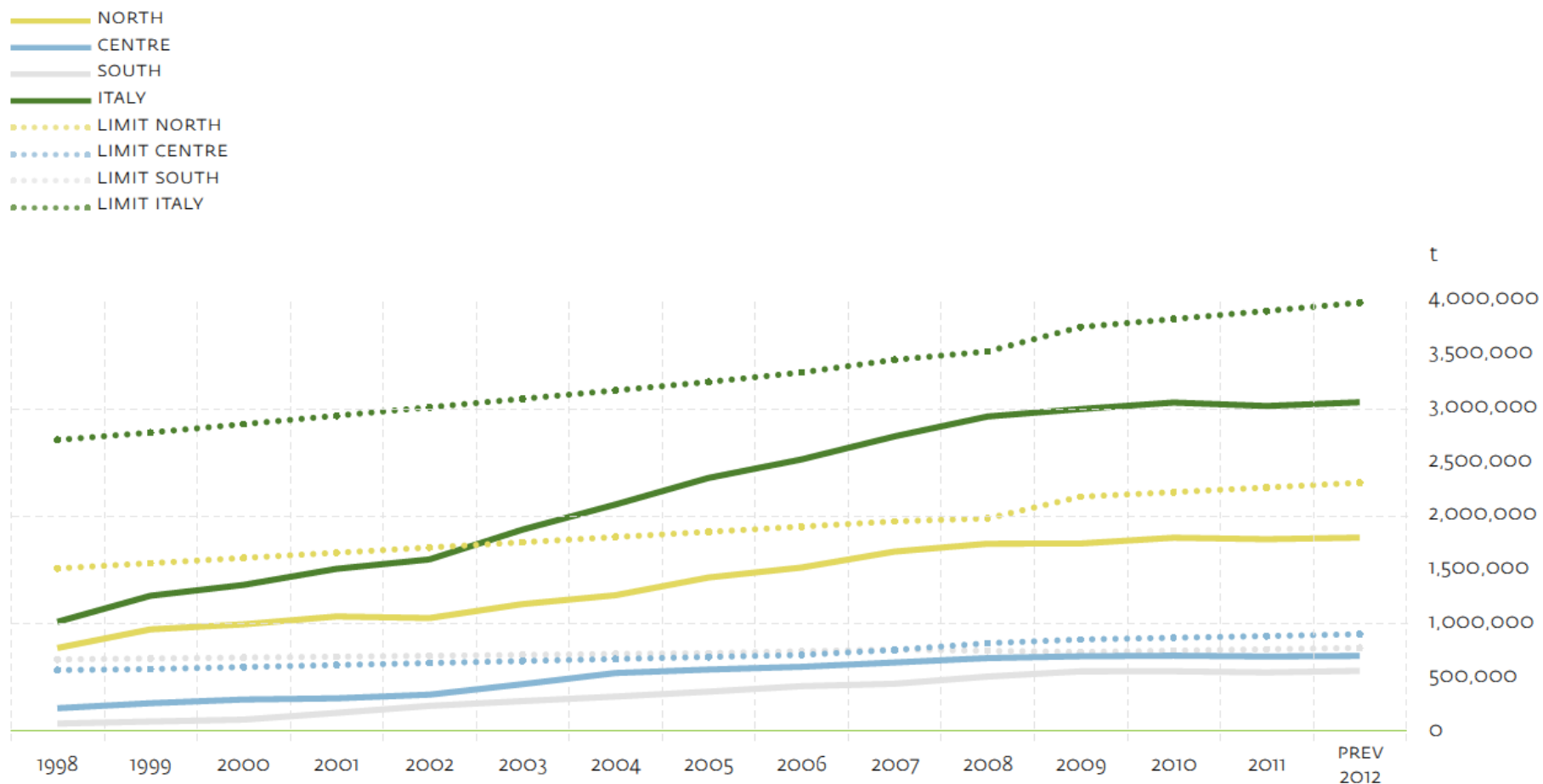
# MUNICIPAL SEPARATE COLLECTION : THE IMPORTANT ROLE OF PAPER AND BOARD

Comparison of urban waste production, overall separate collection, and municipal separate paper and board collection in Italy. 2009-2011 period.  
(Source: Comieco and ISPRA)

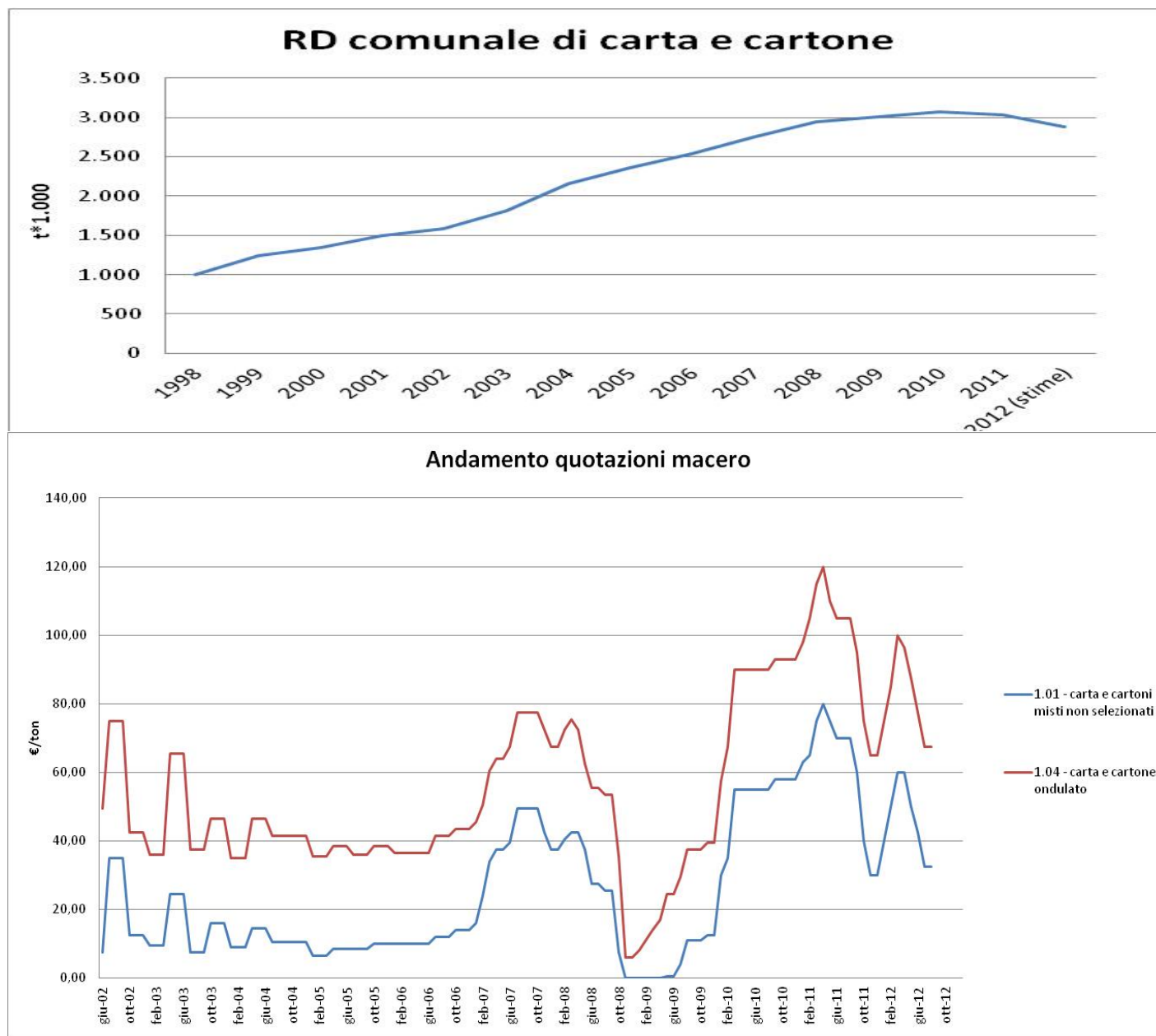
		2010 ISPRA	2011 COMIECO	2010/2011 Δ %
UW	t	32,479,112	31,504,739	-3.0
TOTAL SC	t	11,452,608	11,807,639	3.1
MUNICIPAL PAPER AND BOARD SC	t	3,062,720	3,036,671	-0.9
% TOTAL SC VS. TOTAL UW PRODUCTION	%	35.3	37.5	
<b>% MUNICIPAL PAPER AND BOARD SC VS. TOTAL SC</b>	<b>%</b>	<b>26.7</b>	<b>25.7</b>	

# MUNICIPAL SEPARATE PAPER AND BOARD COLLECTION.

## 1998-2011 TREND AND FORECASTS FOR 2012



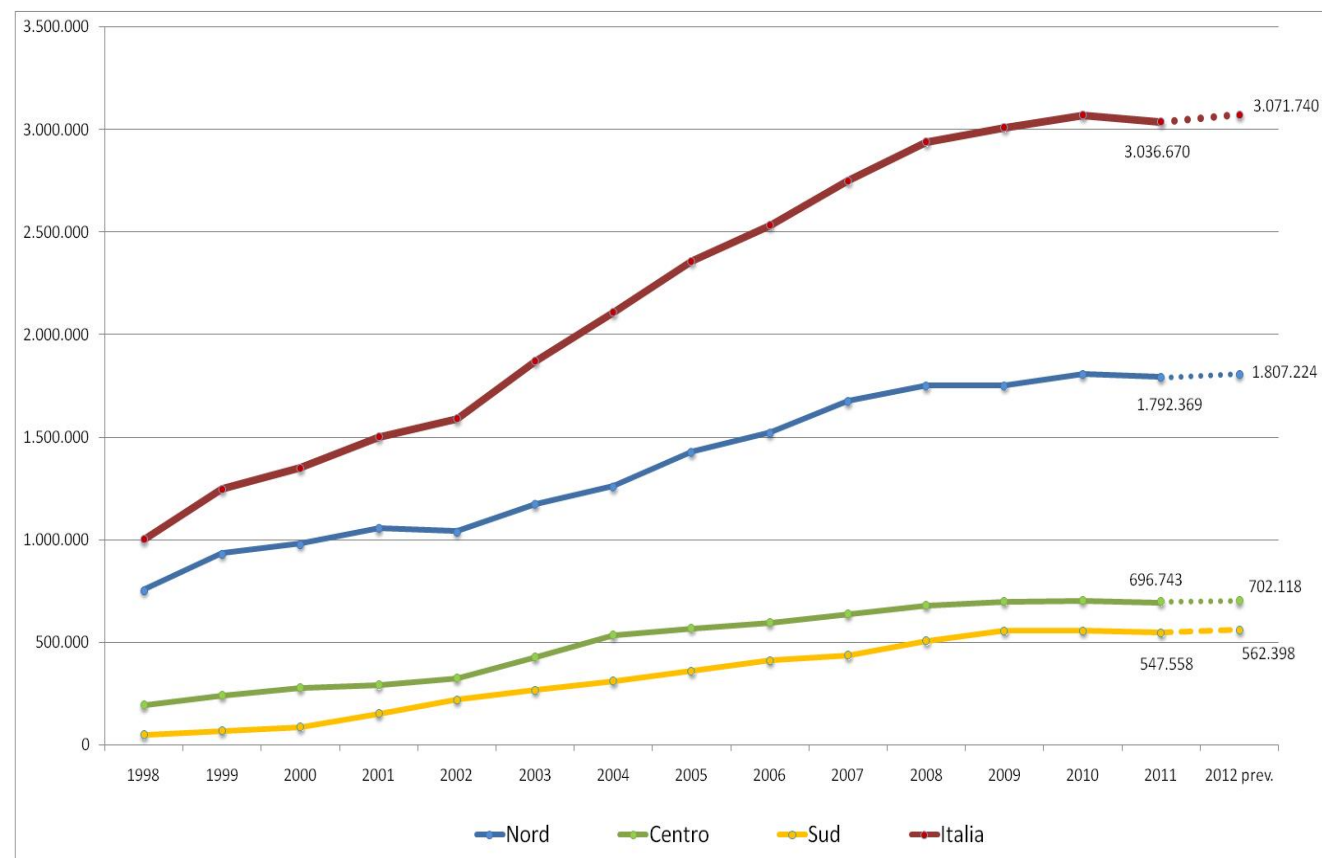
Stop of municipal separate collection of paper and board: for the first time ( – 3%). despite the reduction of the offer the prices don't get up





## Differences for area

Area	raccolta 2011		Variaz. su 2010	
	t	%	t	%
NORD	1.792.369	-0,8		
CENTRO	696.743	-1,1		
SUD	547.558	-0,9		
<b>ITALIA</b>	<b>3.036.671</b>	<b>-0,9</b>		

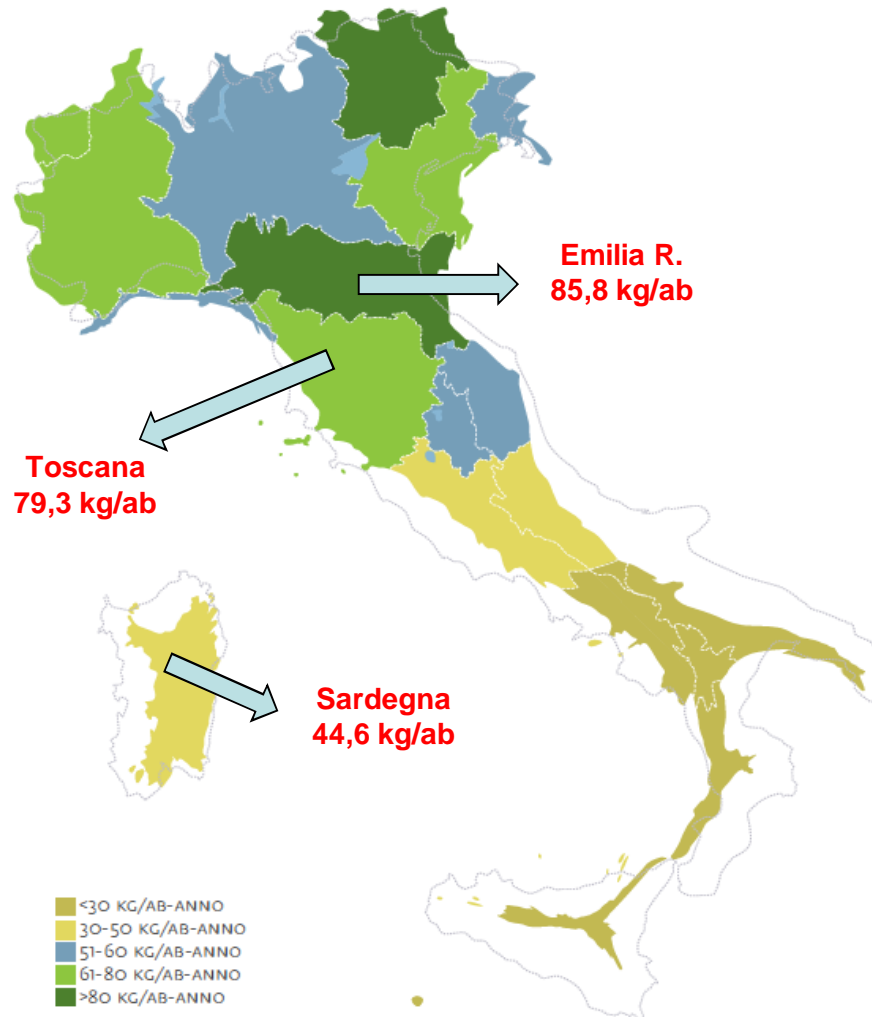


# Differences for area

Ciascun italiano raccoglie oggi in media

il triplo di carta e cartone di quanto facesse nel 1998

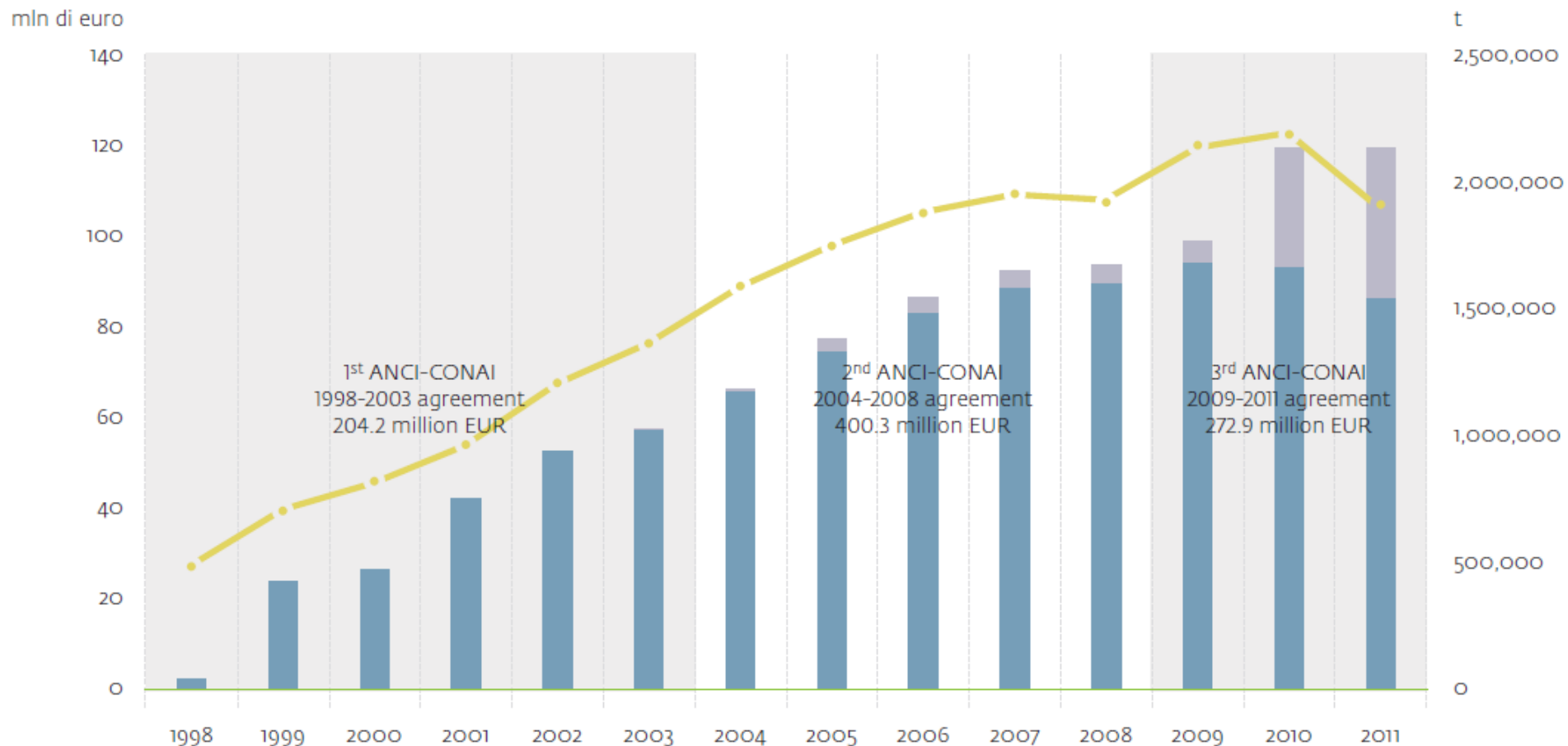
Esistono differenze importanti tra le regioni dovute a livelli di raccolta, consumo e.....assimilazione molto diversi



kg/ab-anno

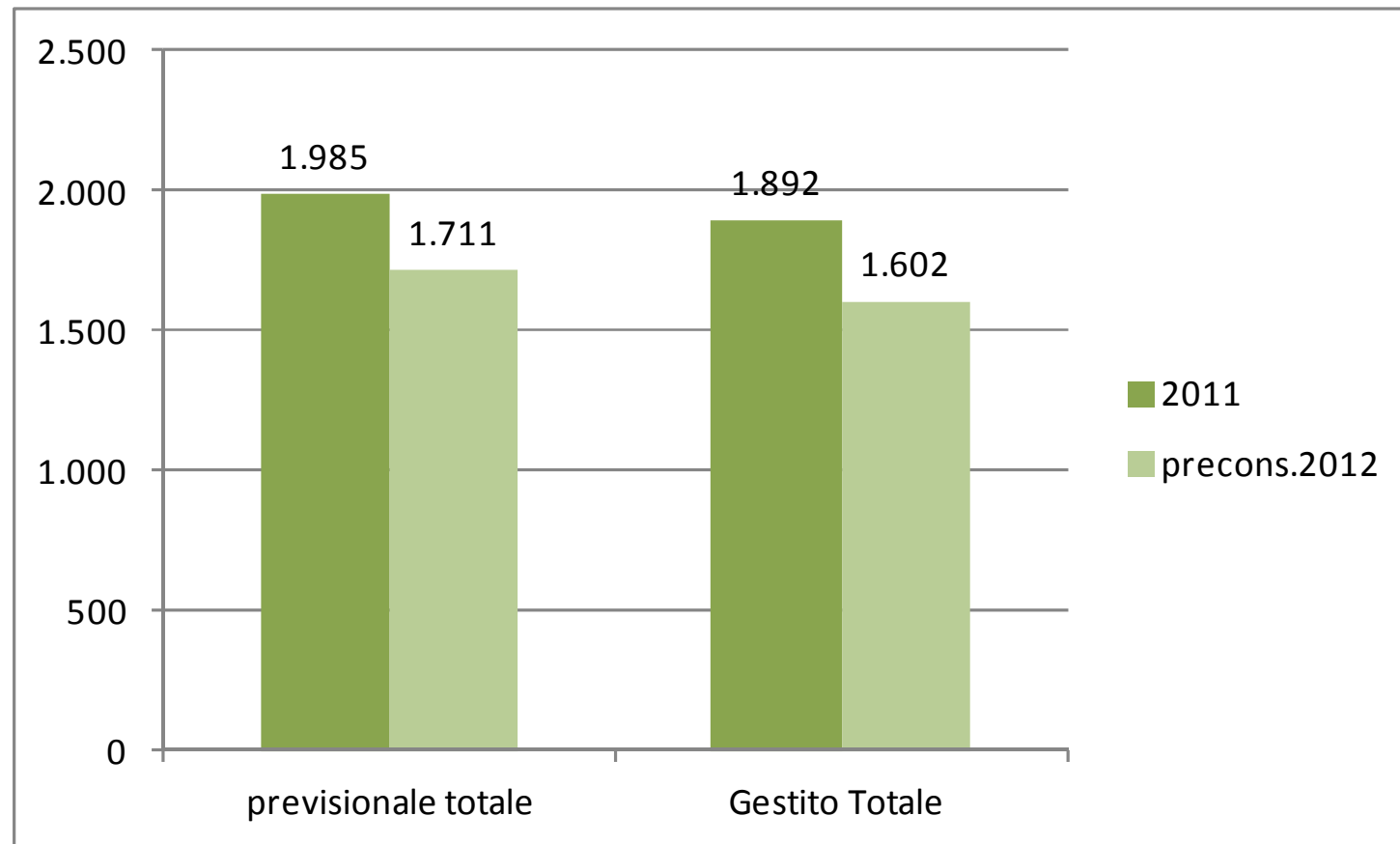
NORD	65,5
CENTRO	59,1
SUD	26,3
ITALIA	50,6

# 1998-2011 MUNICIPAL SEPARATE COLLECTION MANAGED BY COMIECO: VOLUME AND RESOURCES

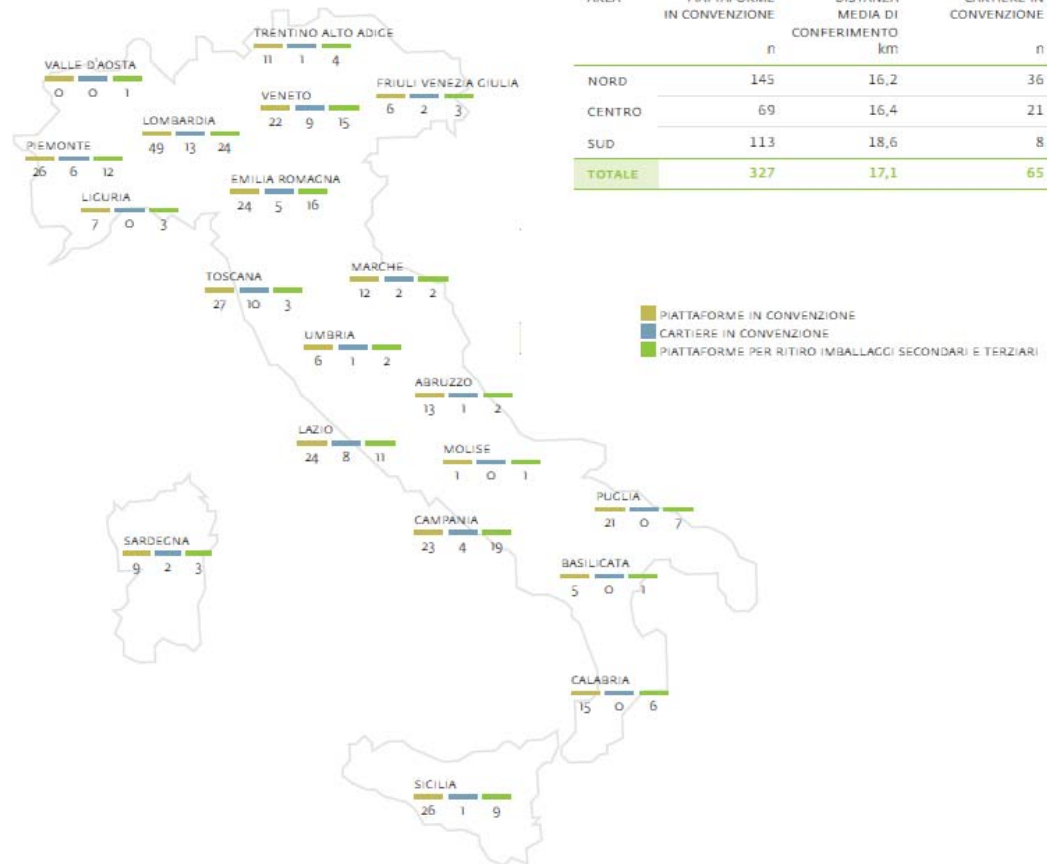


**Comieco's  
management  
2012-2011**

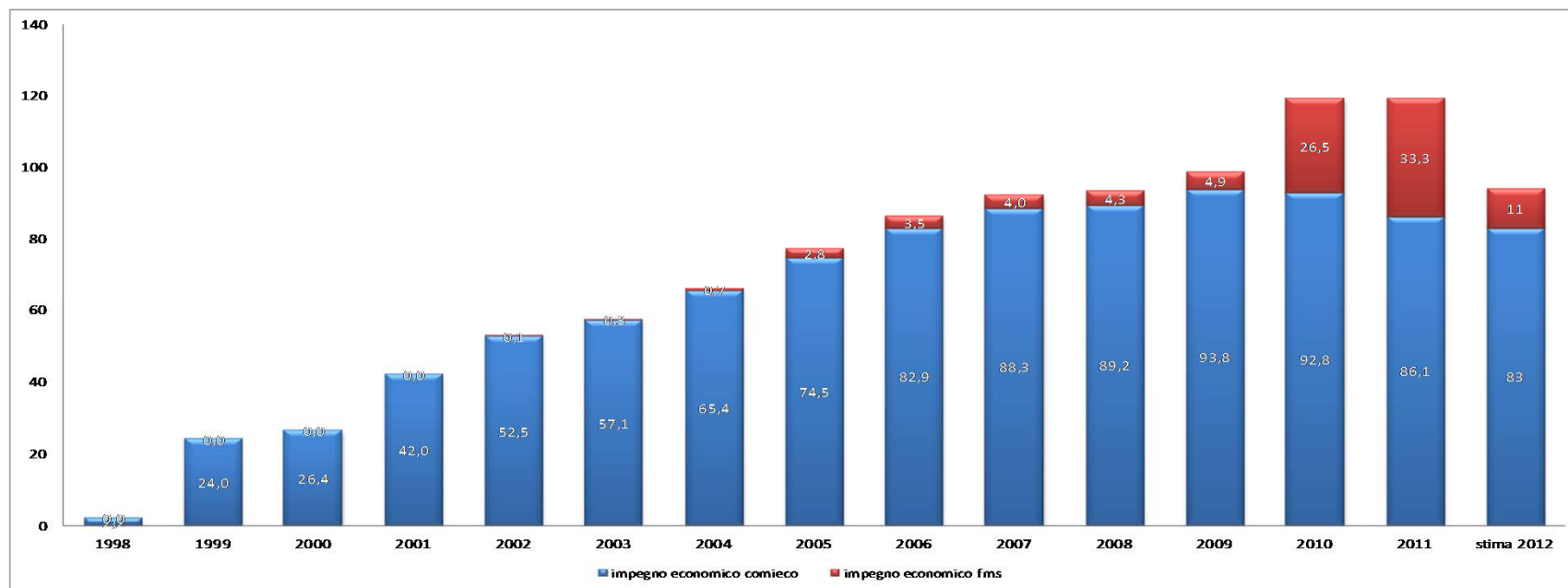
Reduction  
of the collection  
managed of 15,4%



# THE NET OF THE RECYCLING



# 1998-2011 MUNICIPAL SEPARATE COLLECTION MANAGED BY COMIECO: VOLUME AND RESOURCES



## Impegno economico 2012

**94 milioni di euro**

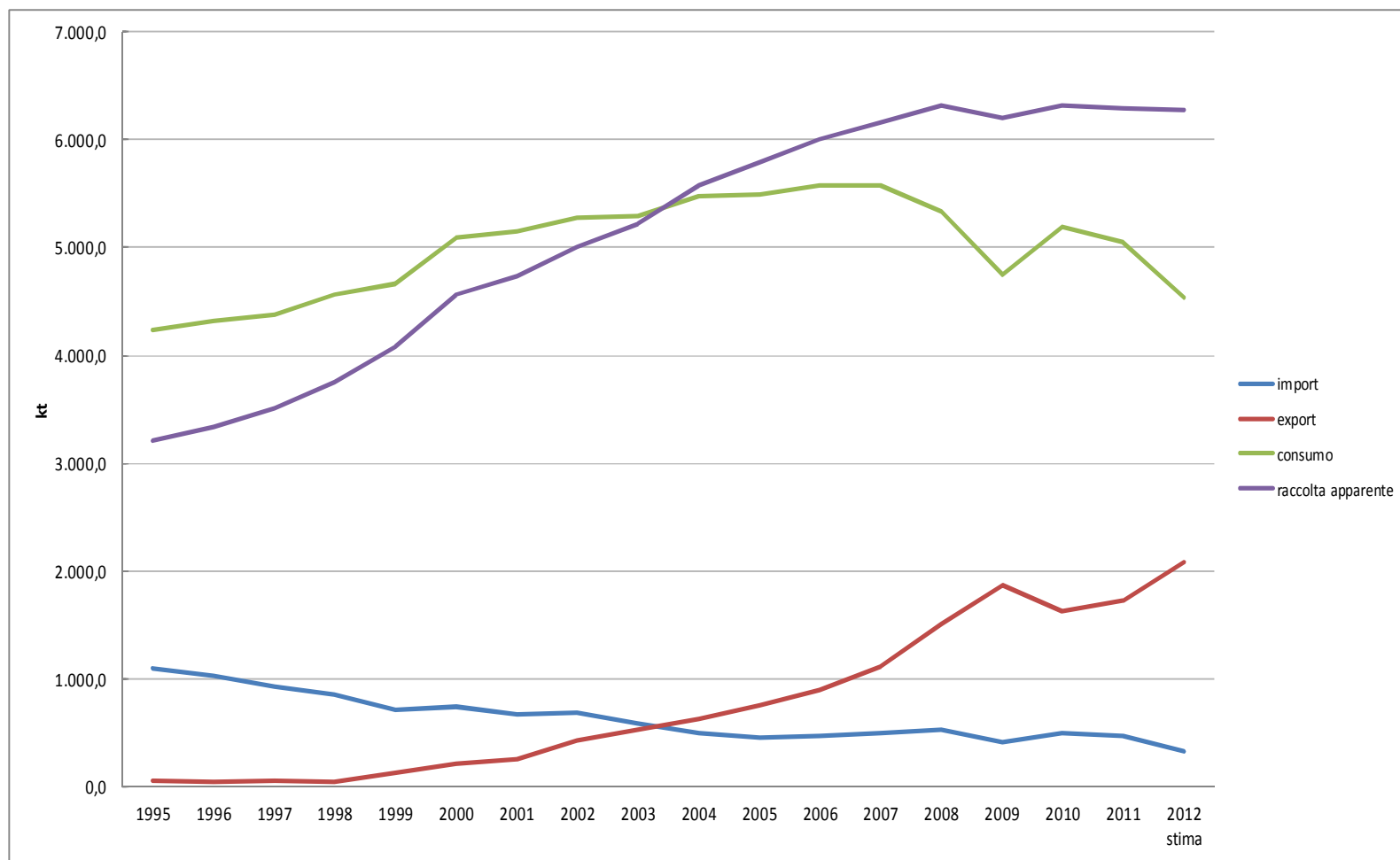
- Comieco (imballaggi)
- Riciclatori (f.m.s.)

**83, milioni di euro**  
**11, milioni di euro**

**Dal 1998 al 2012 Accordo Anci-Conai trasferisce al territorio 1.051 milioni di euro**

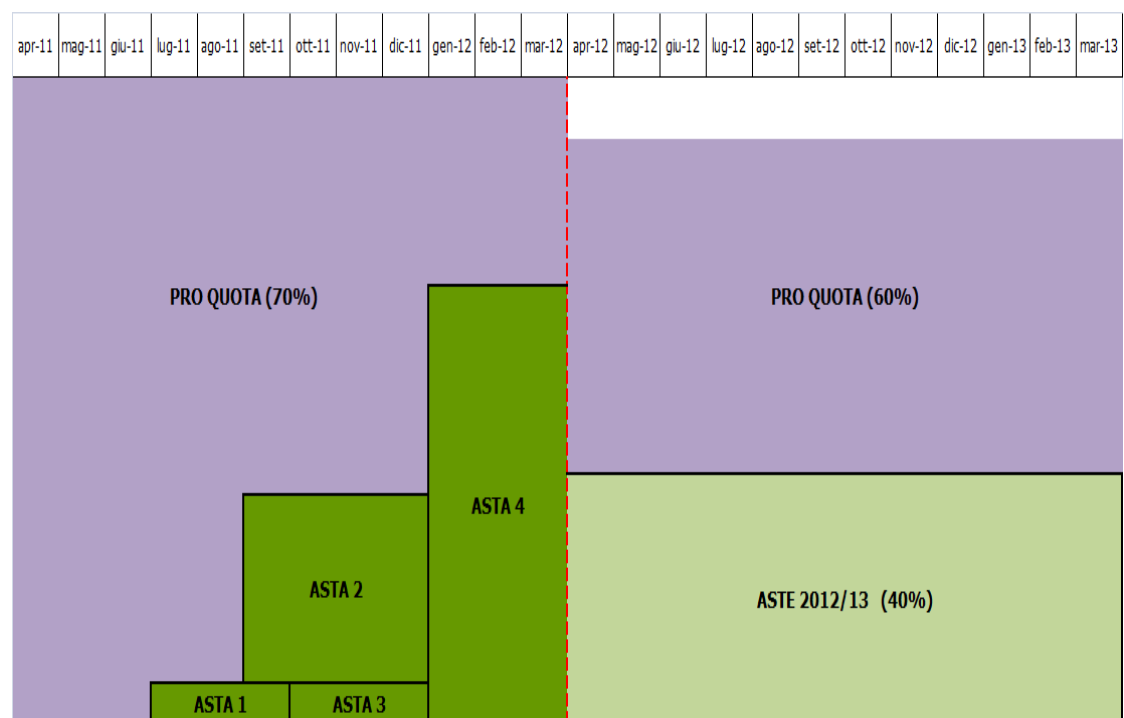
# Consumption, import, export raw material-cellulose

La riduzione del consumo interno (-10%) è compensata dall'export (+20%), in calo l'offerta complessiva



## DIFFERENT WAY OF RECYCLING

periodo		RD a riciclo con pro-quota	RD a riciclo con aste	previsionale totale
2011-2012	%	70%	30%	100%
	t/1000	1.257	537	1.794
2012-2013	%	60%	40%	100%
	t/1000	979	660	1.639

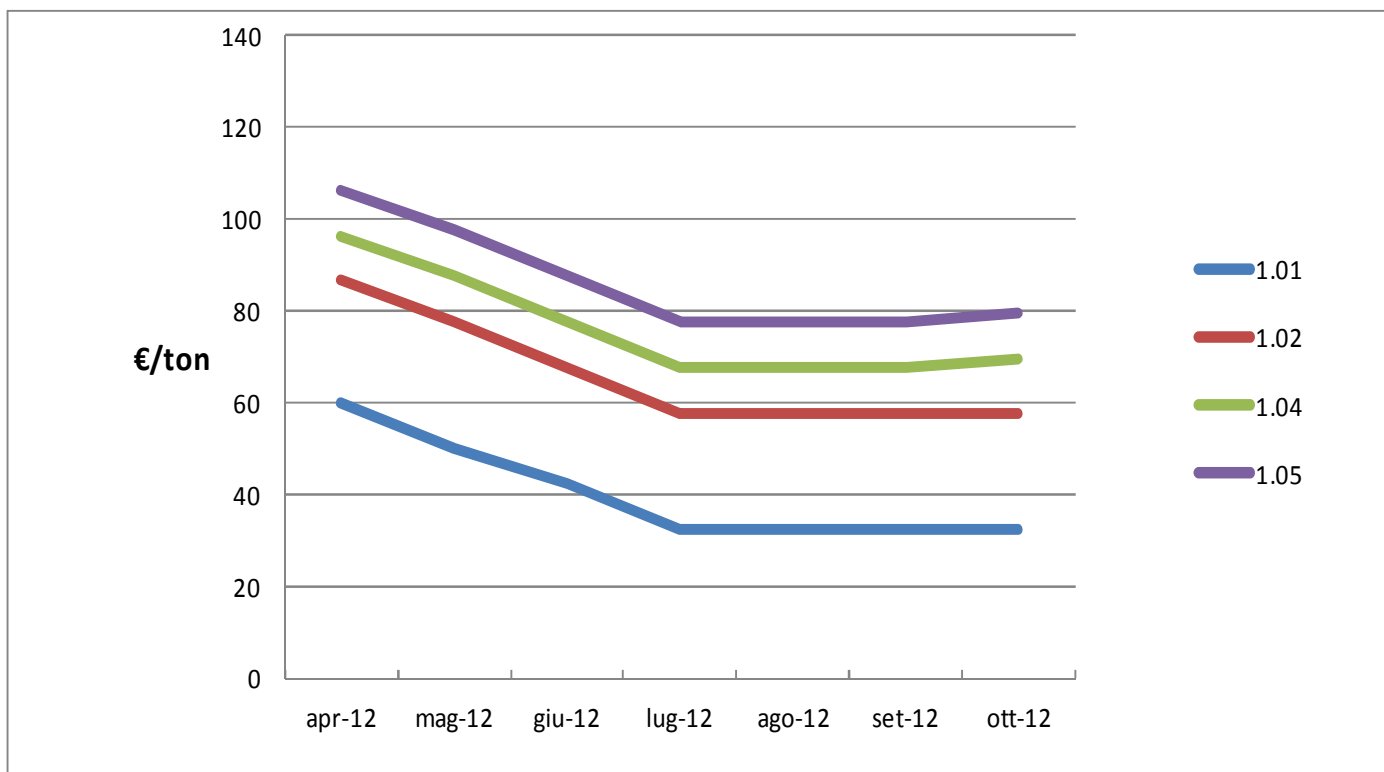




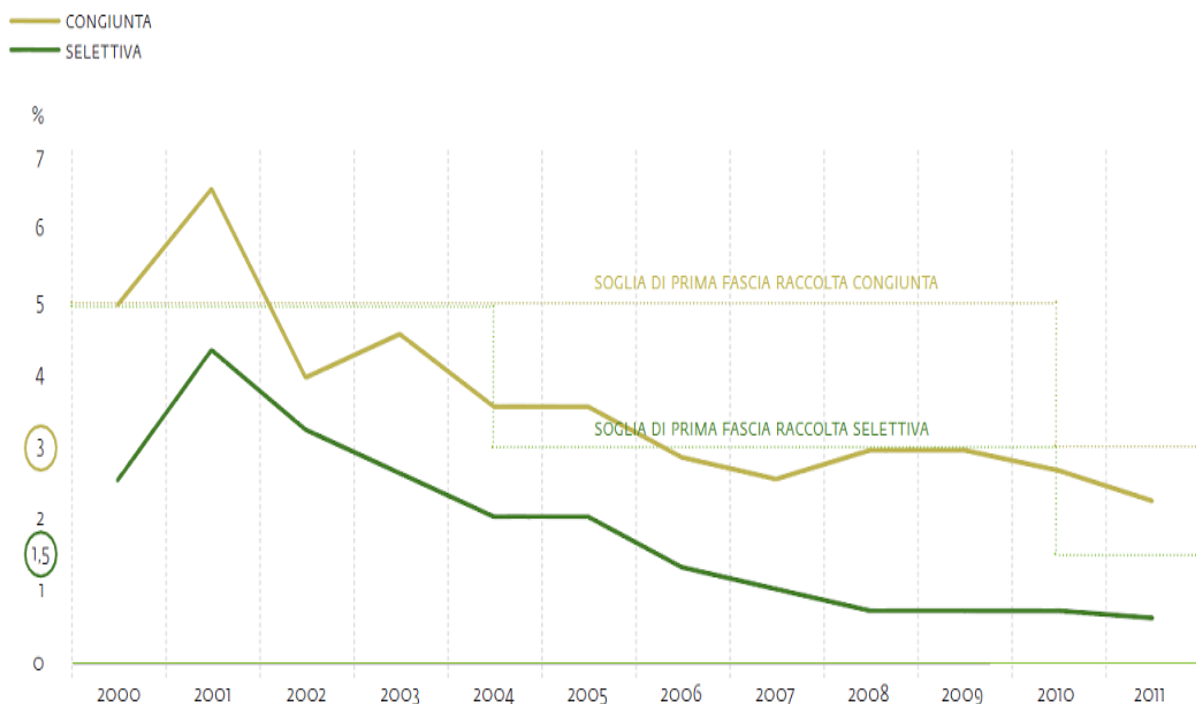
# Prices

Comieco riconosce comunque

€t 94,95 per la raccolta e da €t 20 a 31,5 per la lavorazione.



# Quality improvement of collection



RACCOLTA	DATI	2011
<b>CONGIUNTA</b>	QUANTITÀ ANALIZZATE (kg)	220.178
	FRAZIONI ESTRANEE (%)	2,2
	ANALISI SVOLTE (n)	1.054
<b>SELETTIVA</b>	QUANTITÀ ANALIZZATE (kg)	186.802
	FRAZIONI ESTRANEE (%)	0,6
	ANALISI SVOLTE (n)	1.041

**Migliora la qualità media della raccolta (oltre 2.000 campionamenti)**

**Si confermano ampiamente conseguibili i nuovi parametri di prima fascia qualità, entrati in vigore da aprile 2010**

# TARGETS ACHIEVED IN 2011

- Cellulose packaging consumed 4,4436 Mt
- Cellulose packaging recycled 3,526 Mt
- Cellulose packaging recovered 3,881 Mt
- **Targets achieved** 79,47% recycling; 87,48% recovery

# COMMUNICATION ACTIVITIES: CARTONIADI

The Olympic games of paper recycling, a unique competition where town councils “play” against each other to decide who is the “champion of paper recycling”.

- 5 competitions in 2012
- 3 million citizens involved
- 10% the average increase in paper collection during the competition



# COMMUNICATION ACTIVITIES: RICICLOAPERTO

National open day of the paper and board production and recycling facilities. Each year, since 2000, around 16.000 people visit nearly 100 member companies nationwide.



# COMMUNICATION ACTIVITIES: PALACOMIECO



An itinerant exhibition which tours Italy to show how the recycling system works. Over the years, PalaComieco has welcomed around 120.000 students.



# WASTE HIERARCHY



## PACKAGING TO...

- **contain** and **protect** certain goods, from raw materials to end products,
- **allow their handling** and **delivery** from the producer to the consumer or user,
- ensure their **display**.



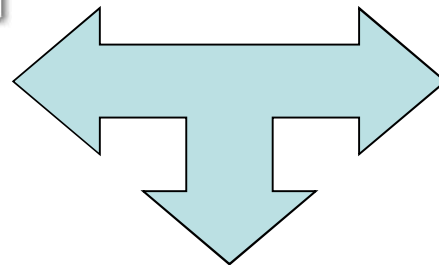
# PACKAGING ORIGINATES FROM THE RELATION BETWEEN USER, PACKAGING PRODUCER, AND DISTRIBUTOR



**PRODUCT**



**PACKAGING**



**UNIT ON SALE**

# PACKAGING: THE MAIN PLAYERS FROM PRODUCTION TO CONSUMPTION

**Producer of the goods for sale**

**Designer of the packaging**

**Producer of the packaging and the relevant raw materials**

**Producer of packaging manufacturing and filling machines**

**Logistic manager**

**Distributor/Dealer**

**Consumer disposing of the packaging**

# CONAI PREVENTION DOSSIER

The Prevention Dossier is a tool to collect and disclose all the measures taken by companies to design, manufacture, and use low-environmental impact packaging (of all materials).

With the 2010 edition, an additional assessment criterion was introduced, based on the simplified **LCA (Life Cycle Assessment)** method.

[www.conai.org](http://www.conai.org)



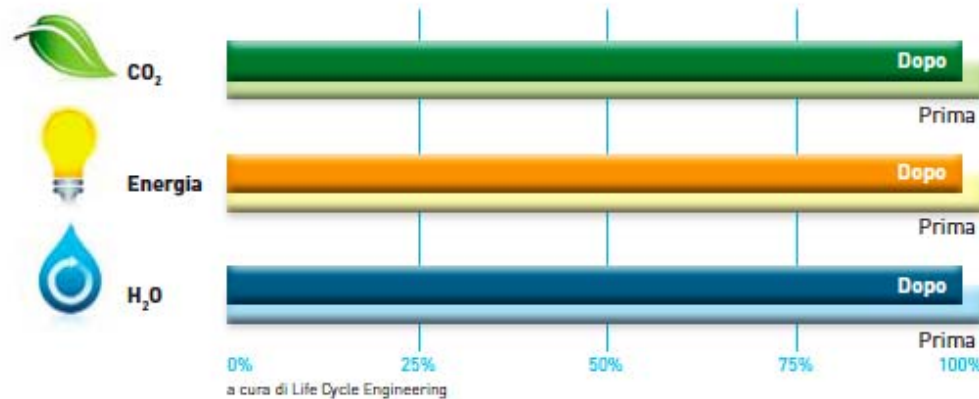
# CASE STUDY: COPPA DEL NONNO ICE-CREAM



Prima dell'intervento

Dopo l'intervento

Change in size of the cardboard case:  
+ 18% pallet saturation  
- 2.5% raw material



Confezione per cutter  
E-FORMULA BY ELEMATIC  
Itw Construction Products Italy Srl



Prima  
dell'intervento  
(i due formati)



Dopo l'intervento  
(i due formati)

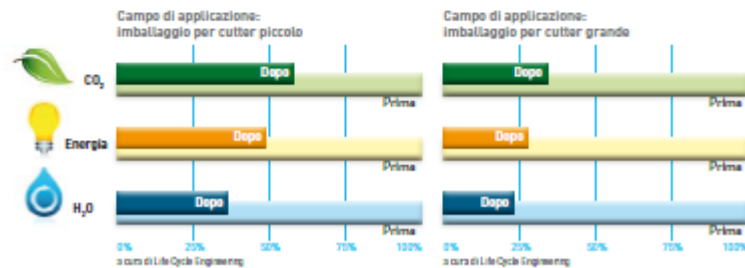


## Confezione per cutter E-FORMULA BY ELEMATIC Itw Construction Products Italy Srl

Nel 2009 ELEMATIC, brand della famiglia Itw Construction Products, ha introdotto sul mercato un nuovo imballaggio per la linea di prodotti cutter nei diversi formati. La nuova soluzione riduce l'utilizzo di materia prima, per l'allungamento della confezione, e facilita le operazioni di riciclo attraverso un sistema di imballaggio che consente la perfetta separabilità delle sue componenti. L'azienda ha apportato anche modifiche all'imballaggio secondario: ha allungato le scatole americane (disponibili in 3 diverse misure) per il trasporto dei prodotti e utilizza il 60% di carta riciclata per la loro produzione. Ulteriori vantaggi derivano dall'approvvigionamento effettuato esclusivamente in Italia per tutte le componenti dell'imballaggio primario. L'azienda ha intrapreso un percorso di certificazione UNI EN ISO 14001, per il proprio Sistema di Gestione Ambientale, ed intende estendere tale procedura, per tutte le sedi ed attività aziendali. L'azienda ha infine avviato studi di analisi di impatto ambientale non ancora conclusi.

### RISULTATI ANALISI LCA SEMPLIFICATA

L'intervento è basato sulla riprogettazione dei componenti per minimizzare l'uso di materiale. I risultati rivelano una riduzione degli indicatori indagati superiore alla mera riduzione di massa dei diversi componenti. Contribuisce al risultato positivo l'ottimizzazione della logistica ottenuta grazie ad una più efficiente saturazione degli spazi con il nuovo imballaggio. Il miglioramento percentuale ottenuto dalle versioni (grande e piccolo formato) varia essenzialmente in funzione del quantitativo di materiale risparmiato.



I casi del Dossier  
CAPITOLO V

# COMIECO PREVENTION: GOOD PRACTICE DISSEMINATION

“Best Pack” ([www.comieco.org](http://www.comieco.org)) includes **over 350 cases** of packaging representing some of the best examples of paper and board based eco-innovation.



- A data base available to private citizens and companies, gathering the **packaging awarded at national and international level for sustainability.**



# PACKAGING DESIGN ARCHIVE

<http://www.packagingdesignarchive.org>



# easyEATING

PACKAGING SOSTENIBILE IN CARTA  
PER PRODOTTI ENOGASTRONOMICI

SUSTAINABLE PAPER PACKAGING FOR TRADITIONAL PRODUCE

a cura di / edited by  
**Marco Bozzola**



**Edizioni Dativo**







# BENEFITS

Recovered paper has become the main raw material for paper industries in many countries –due first and foremost to economic, rather than ecological reasons.

- 95.6 milion EUR money transferred to municipalities
- 5,069.4 milion EUR global benefits for Italy (1999-2011 period)
- 270 avoided landfill
- 10.2 ton/mln of greenhouse gas emission avoided

# GHG SAVINGS FROM 2010 RECYCLING

Estimated GHG savings (at global level) from Italian industrial recycling in 2010 were equivalent to about **53** million tons of avoided CO<sub>2</sub>eq emissions (set within a wide window ranging from 27 to 97 million tons of CO<sub>2</sub> equivalent avoided emissions)

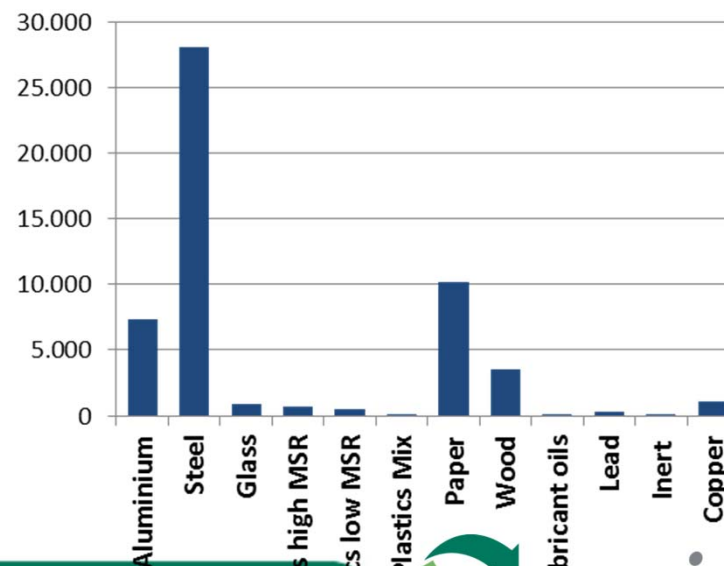
The “potential” substitution of existing primary production processes located in Italy corresponds to approximately 33-38 million tons representing 62-72% of total avoided emissions.

Considering the 494 million tons of CO<sub>2</sub> equivalent emissions for Italy in 2010, the potential savings generated by industrial recycling in the Italian economy for 2010 were equivalent to 10.7% of actual emissions.

## GHG SAVINGS – ITALY 2010

(kt CO<sub>2</sub>eq)

	<i>minimum</i>	<i>maximum</i>	<b>Reference value</b>
<b>Steel</b>	10.332	47.794	<b>28.100</b>
<b>Paper</b>	9.428	22.786	<b>10.209</b>
<b>Aluminium</b>	4.020	15.578	<b>7.392</b>
<b>Wood</b>	372	5.072	<b>3.490</b>
<b>Plastics</b>	488	2.009	<b>1.223</b>
<b>Copper</b>	521	1.571	<b>1.046</b>
<b>Glass</b>	794	964	<b>907</b>
<b>Lead</b>	167	459	<b>313</b>
<b>Tires</b>	49	460	<b>298</b>
<b>Lubricants</b>	64	137	<b>92</b>
<b>Inerts</b>	-10	50	<b>8</b>



emissions.



# Thank you for your attention!



For further information

[www.comieco.org](http://www.comieco.org) [sinigaglia@comieco.org](mailto:sinigaglia@comieco.org)