

**ZERO WASTE
EUROPE LIVE!**

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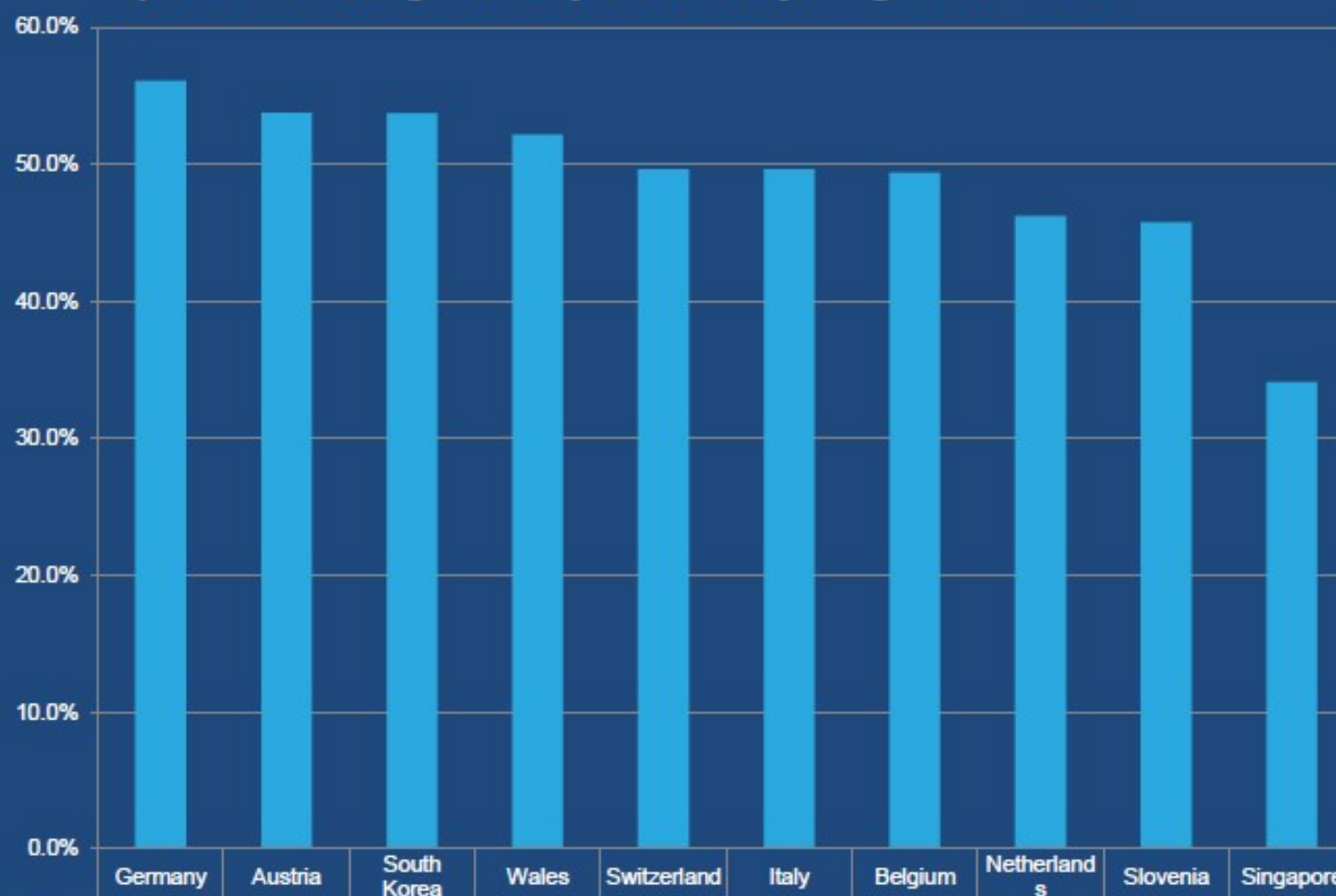
**10 YEARS TO REACH EU TARGETS:
HOW TO MAKE IT HAPPEN?**



Key provisions of the Circular Economy Package

- Material recovery goals: 65% (2035)
- For packaging waste: 70% (2030)
- Consolidated EPR
- Ecodesign (durability, repairability, no planned obsolescence, less resource-intensity)
- Mandatory separate collection of organics (2023)

Top 10 from Longlist - Adjusted Recycling Rate - MSW



MSW Recycling Rate	Germany	Austria	South Korea	Wales	Switzerland	Italy	Belgium	Netherlands	Slovenia	Singapore
	56.1%	53.8%	53.7%	52.2%	49.7%	49.7%	49.4%	46.3%	45.8%	34.0%

A (basic) workprogramme



- Kerbside collection – include the organics!: **this takes recycling rates to 60-80% depending on situations**
- Waste prevention practices at local level (**e.g. tap water, cloth nappies, eco-events, etc.**)
- Pay-as-you-throw: **typically halves residual waste**
- Audits on residual waste: **keeps you going towards minimisation of residuals**
 - Redesign collection for continued optimisation
 - Feed back to producers in order to address non-reusable/recyclable materials

The key role of organics

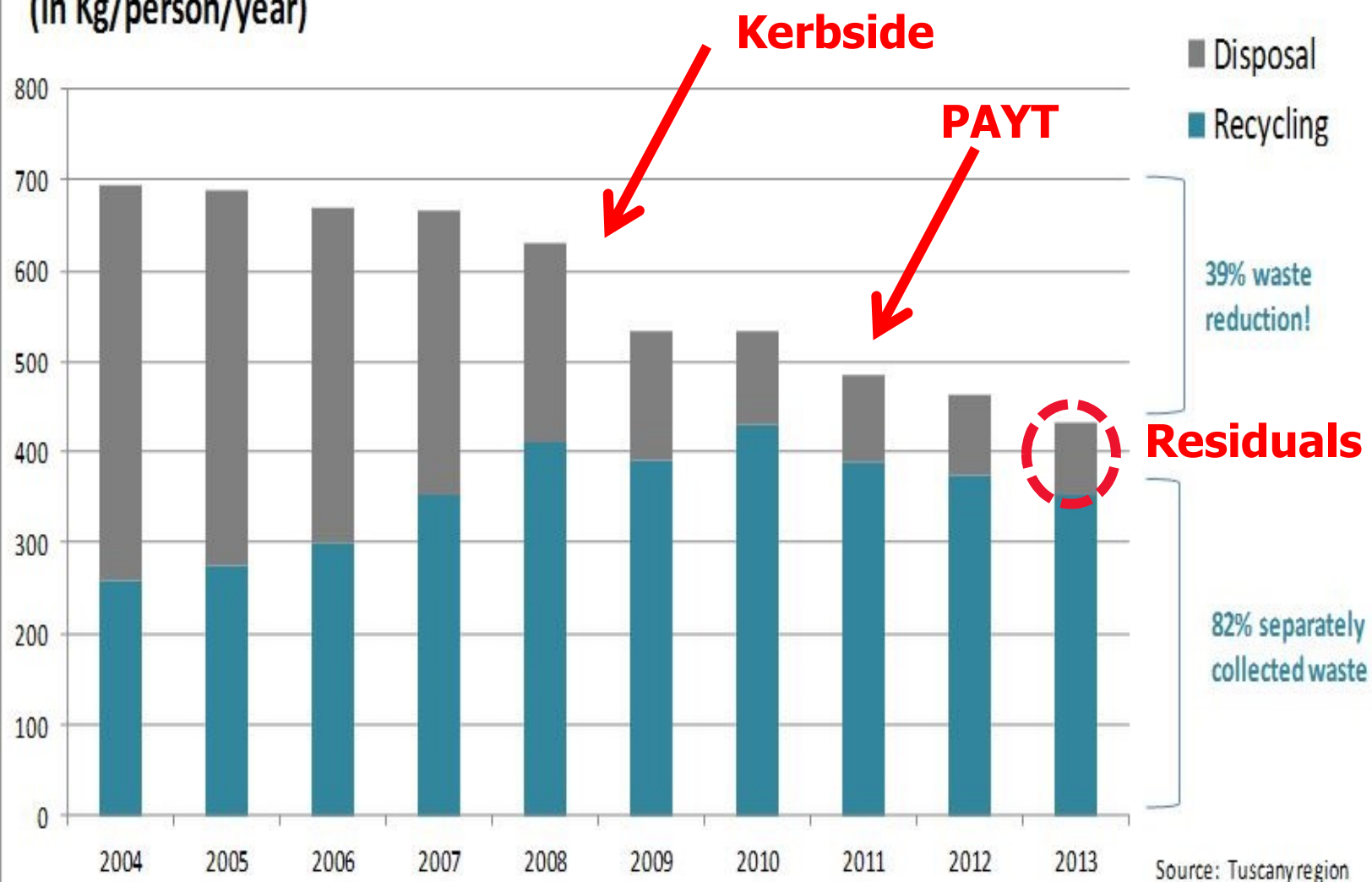
- **QUANTITATIVE:** fundamental to achieve highest material recovery rates
- **OPERATIONAL:** minimising organics in residual waste makes it possible to shrink collection rounds
 - cost-optimisation
 - further driving effect for increased separation of dry recyclables, too)



Dedicated collection of foodwaste at high-rises



Evolution of separate collection and waste generation in Capannori 2004-2013 (in Kg/person/year)



The role of PAYT



BOLTIERE (6.051 ab.)

MSW

Sep Coll %

Residuals

Tipologia	2014	2016
Produzione rifiuti annua (kg)	444	359
Raccolta differenziata	58,1%	79,8%
Produzione secco pro capite (kg)	112	34
Smaltimento pro capite (kg)	170	72

Residuals

Plastics

Paper

Organics

Risultati TP 2014-2016	-	+
R.U.R. (secco)	-69,7%	-
Imballaggi in plastica	-	+127%
Carta/cartone	-	+17,81%
Organico	-	+22.57%

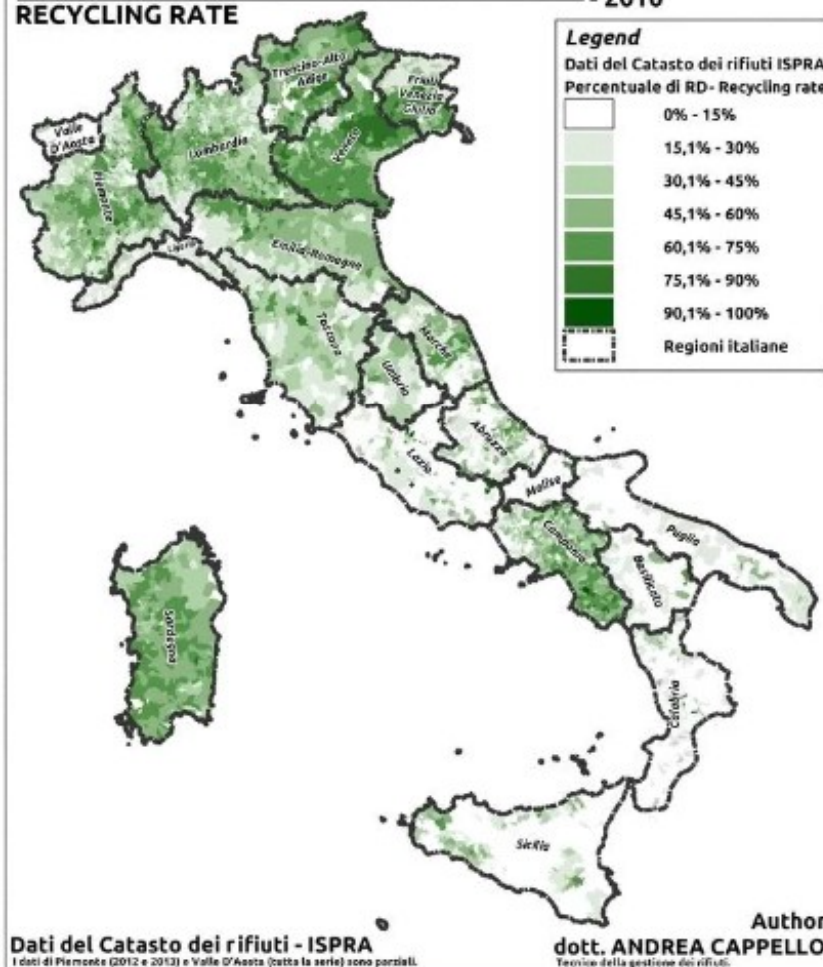
Parma – pop. 200,000

Municipal solid waste figures

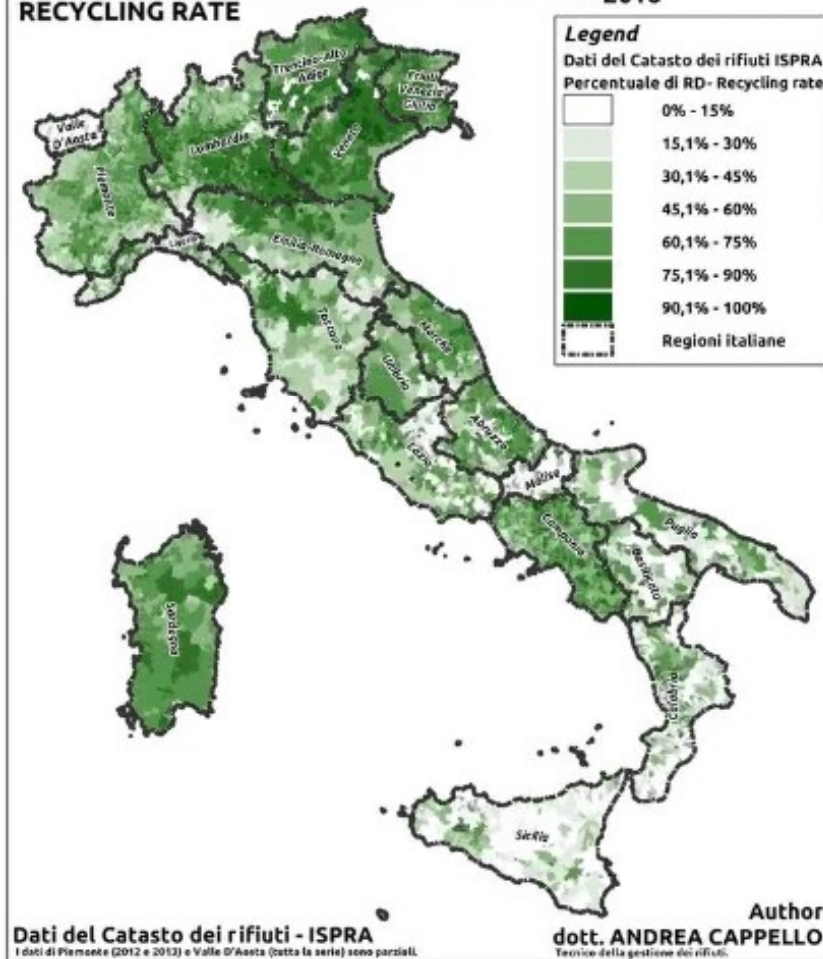


Kg per capita/year	2012	2013	2014	2015	2016	Diff. 2016 vs 2012
Paper	49,84	49,38	54,09	54,44	55,28	+11%
Cardboard	18,77	19,71	19,61	19,23	19,95	+6%
Plastic/metals - Glass*	64,54	66,78	79,97	87,32	89,88	+39%
Organic waste	52,67	62,69	90,50	99,11	104,85	+99%
Garden waste	55,55	59,50	62,22	82,92	77,97	+40%
Residual waste	248,62	220,87	143,52	117,43	110,13	-56%

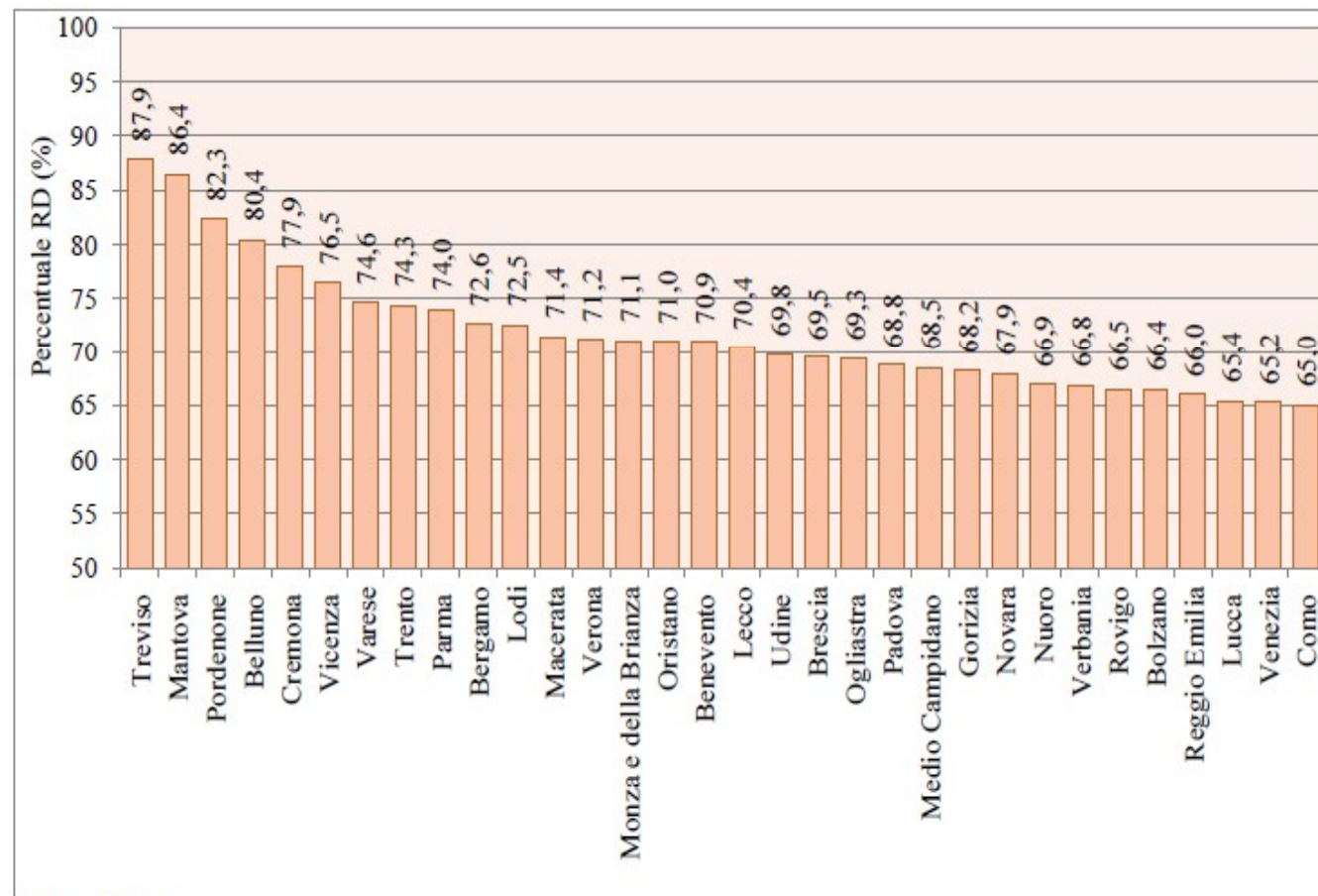
PERCENTUALI DI RACCOLTA DIFFERENZIATA - 2010 RECYCLING RATE



PERCENTUALI DI RACCOLTA DIFFERENZIATA - 2016 RECYCLING RATE



Topmost provinces (108 Provinces in Italy)



Fonte: ISPRA

2017 – 505 Municipalities below 75 kgs

REGIONE	TOTALE COMUNI	COMUNI Rifiuti Free	% DEI COMUNI Rifiuti Free SUL TOTALE	ABITANTI COINVOLTI
Abruzzo	305	14	5%	51755
Basilicata	131	11	8%	22299
Calabria	404	10	2%	34615
Campania	550	26	5%	133082
Emilia Romagna	331	7	2%	119360
Friuli V. Giulia	215	54	25%	268771
Lazio	378	11	3%	44186
Liguria	234	2	1%	3730
Lombardia	1516	101	7%	694036
Marche	229	12	5%	52180
Molise	136	4	3%	9346
Piemonte	1197	12	1%	47115
Puglia	258	1	0%	11581
Sardegna	377	9	2%	32131
Sicilia	390	1	0%	2315
Toscana	274	18	7%	322856
Trentino A. Adige	292	51	17%	296590
Umbria	92	2	2%	2359
Valle d'Aosta	74	0	0%	0
Veneto	571	159	28%	1315541
Totale	7954	505	6%	3463849

The case of Sardinia

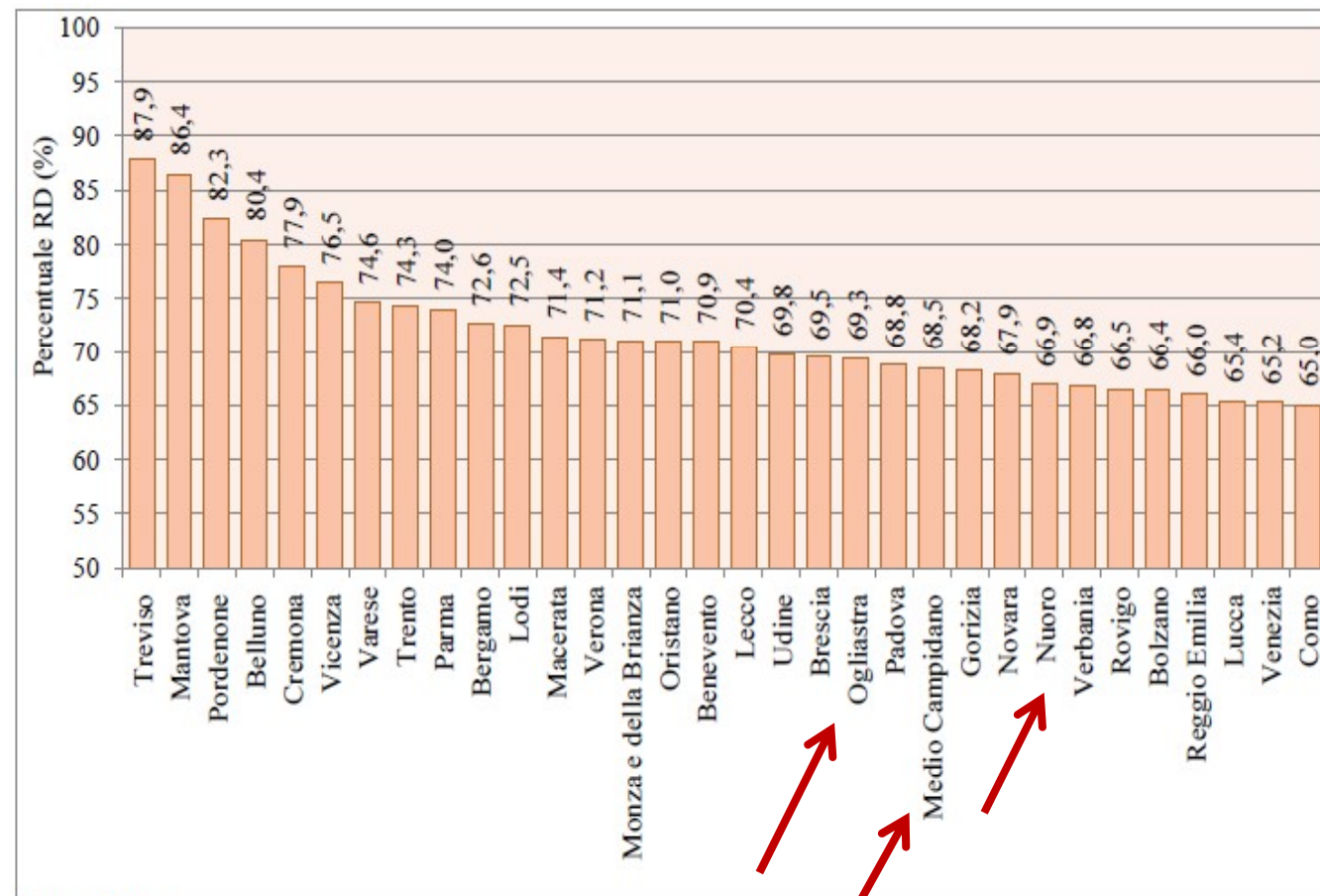


Regione	% RD 2001	% RD 2002	% RD 2003	% RD 2004	% RD 2005
Piemonte	21,6	24,6	28	32,8	37,2
Valle d'Aosta	16,9	20,7	23,5	25,6	28,4
Lombardia	36,1	36,4	39,9	40,9	42,5
Trentino Alto Adige	23,5	27,7	33,4	37,8	44,2
Veneto	34,5	39,1	42,1	43,9	47,7
Friuli Venezia Giulia	21,5	24,1	26,8	25,8	30,4
Liguria	12,6	14,3	14,7	16,6	18,3
Emilia Romagna	24,7	26,5	28,1	29,7	31,4
Nord	28,6	30,6	33,5	35,5	38,1
Toscana	24,4	25,9	28,8	30,9	30,7
Umbria	12,7	15,6	18	20,2	24,2
Marche	11,9	14,9	14,9	16,2	17,6
Lazio	4,2	5,5	8,1	8,6	10,4
Centro	12,8	14,6	17,1	18,3	19,4
Abruzzo	8,9	10,8	11,3	14,1	15,6
Molise	2,8	3,5	3,7	3,6	5,2
Campania	6,1	7,3	8,1	10,6	10,6
Puglia	5	7,6	7,2	7,3	8,2
Basilicata	4,9	5	6	5,7	5,5
Calabria	3,2	7	8,7	9	8,6
Sicilia	3,3	4,3	4,4	5,4	5,5
Sardegna	2,1	2,8	3,8	5,3	9,9
Sud	4,7	6,3	6,7	8,1	8,7



An	Kg/hab.	Sep collection%
2006	n.a.	19,8%
2008	518	27,9%
2010	492	44,9%
2012	460	48,5%
2014	436	53,0%
2016	445	59,5%
2018		65%?

Topmost recycling Provinces out of 108 in Italy (2016)



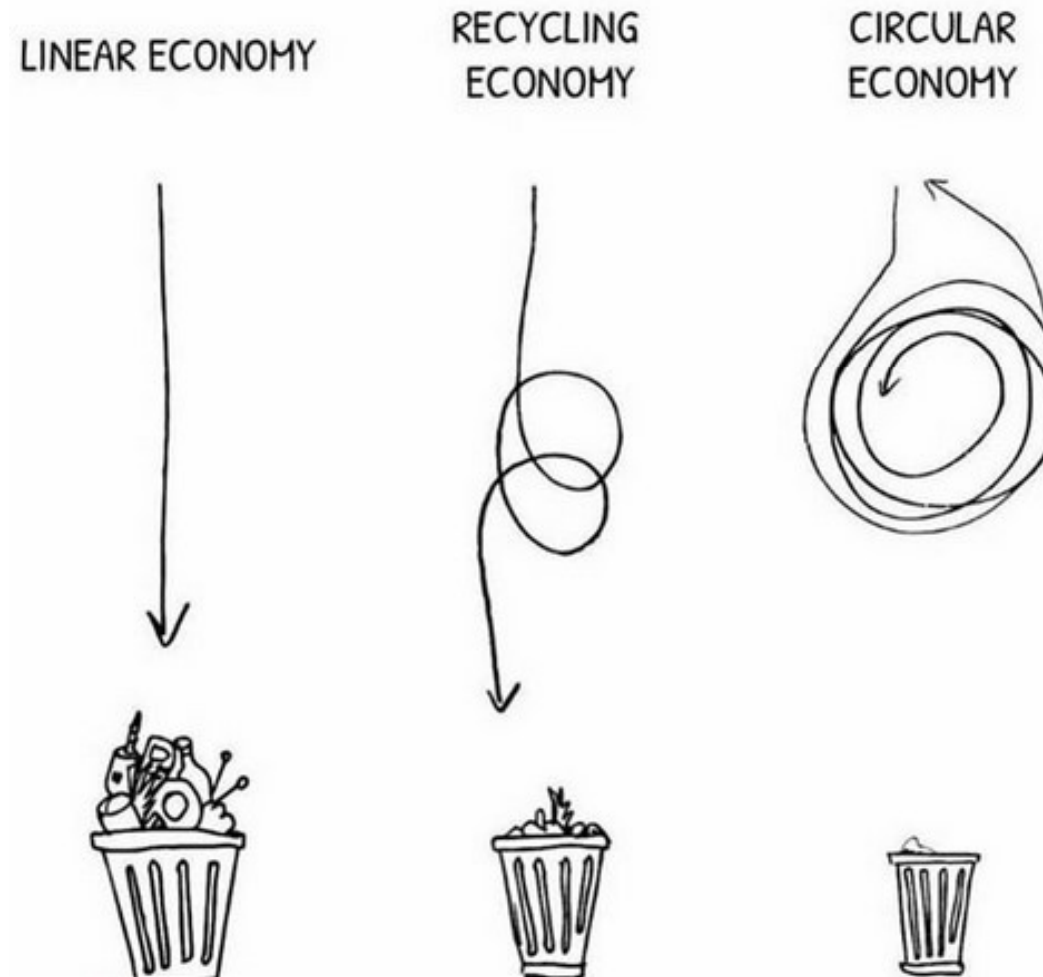
Fonte: ISPRA

Sardinian Provinces

The Regional Plan for management of waste

- Separate collection goal: 80% by 2022
- Material recovery goal: 70% by 2022
- Depending on separate collection rates, Region Sardinia applies to each Municipality:
 - Bonus for performing Municipalities: reduction on gate fees for residual waste
 - 25% above 70% separate collection
 - 50% above 80%
 - Penalisation for Municipalities lagging behind:
 - 5% extra levy on treatment of residual waste for Municipalities below 65% separate collection
- Earmarked money to support separate collection, recycling, waste reduction initiatives

Circular economy made simple





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Thanks for your attention



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