

The importance of Biowaste and its pivotal role in Zero Waste programmes

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zeRōwaste





Zero Waste: the global role

- Zero Waste a strategy devised to maximise short- and long-term efficiency in resource management
- The CE Package proposed in July 2014 sub-titled “A zero waste programme for Europe”
- A codified, peer-reviewed Zero Waste Hierarchy is kept by ZWIA (Zero Waste International Alliance)
- Ongoing recognition/certification programmes for ZW Communities and ZW businesses. Minimisation of residuals the key goal (and metrics)
- In a nutshell, ZW based on the 4 “R”s strategy
 - Reduce
 - Reuse
 - Recycle
 - Redesign



ZWIA Zero Waste Hierarchy of Highest and Best Use 5.0

Highest and Best Use

Reduce and conserve materials

Refuse - Encourage producers to provide products or packaging that limit waste or emissions.

Return – Set up systems that require producers to take back products and packaging that create wastes or emissions.

Reduce toxics use - Eliminate toxic chemicals use; replace them with less toxic or non-toxic alternatives.

Design out wasting - Identify why materials are discarded and redesign the system to be more efficient and no longer discard those materials.

Reduce consumption and packaging - Use less; buy less and with less packaging; avoid disposables; bring your own.

Encourage cyclical use of resources and shift incentives to stop wasting

Shift government funds or financial incentives (at any and all levels) from supporting harvesting and use of virgin natural resources to support the circular economy.

Government and businesses should implement sustainable purchasing that support social and environmental objectives.

Ensure incentives are in place for cyclical use of materials and disincentives in place for wasting (policies, research funds, regulations, etc)

Set up systems to encourage local economies. (for example. use of proximity principle, marketing support, policies, incentives, social and environmental purchasing practices, information exchanges, etc.)

Manufacturers design products for sustainability and takeback

Design to be durable, to be repairable, to be reusable, to be disassembled, to be fully recyclable, from reused, recycled or sustainably-harvested renewable materials designed for easy disassembly.

Label products to identify who has made it and what it is made of

Minimize volume and toxicity of materials used in production.

Lease services and products rather than just sell products to customers.

Take products and packaging back after they are used, and reuse, or recycle them back into the economy or nature.

Reuse (retain value and function)

Reuse products.

Repurpose products for alternative uses (e.g. old doors made into walls; old photos and scrap metal into art).

Repair to retain value and usefulness.

Refurbish.



A basic ZW workprogramme

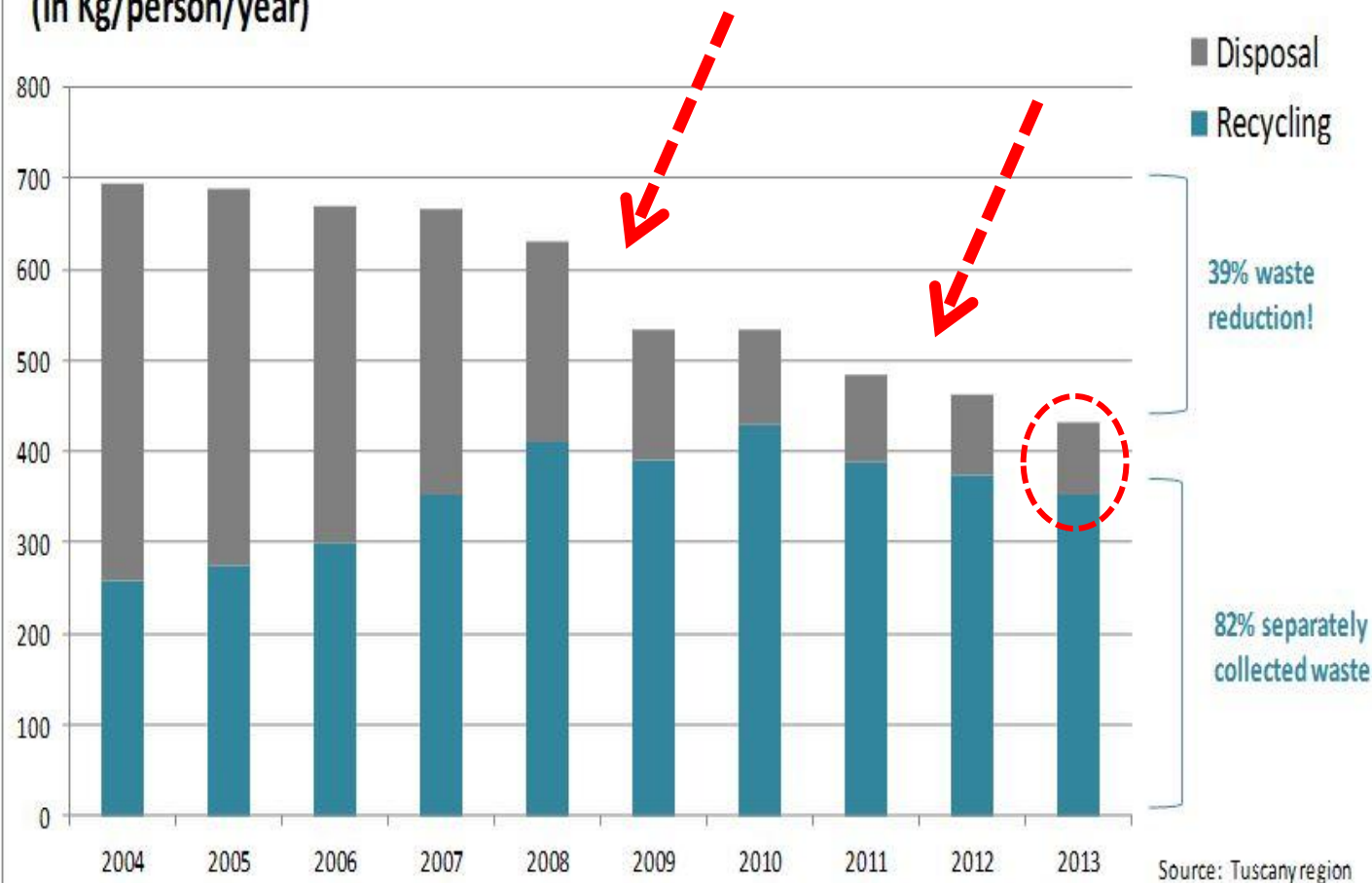
- Kerbside collection – include the organics!
- Waste prevention practices related to responsibility of Communities
- Pay-as-you-throw
- Check composition of residual waste
 - Redesign collection for continued optimisation
 - Feed back to producers in order to address non-reusable/recyclable materials



A basic ZW workprogramme

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

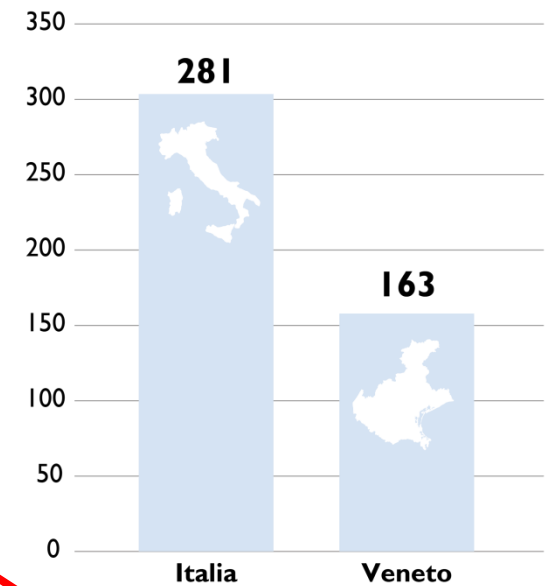
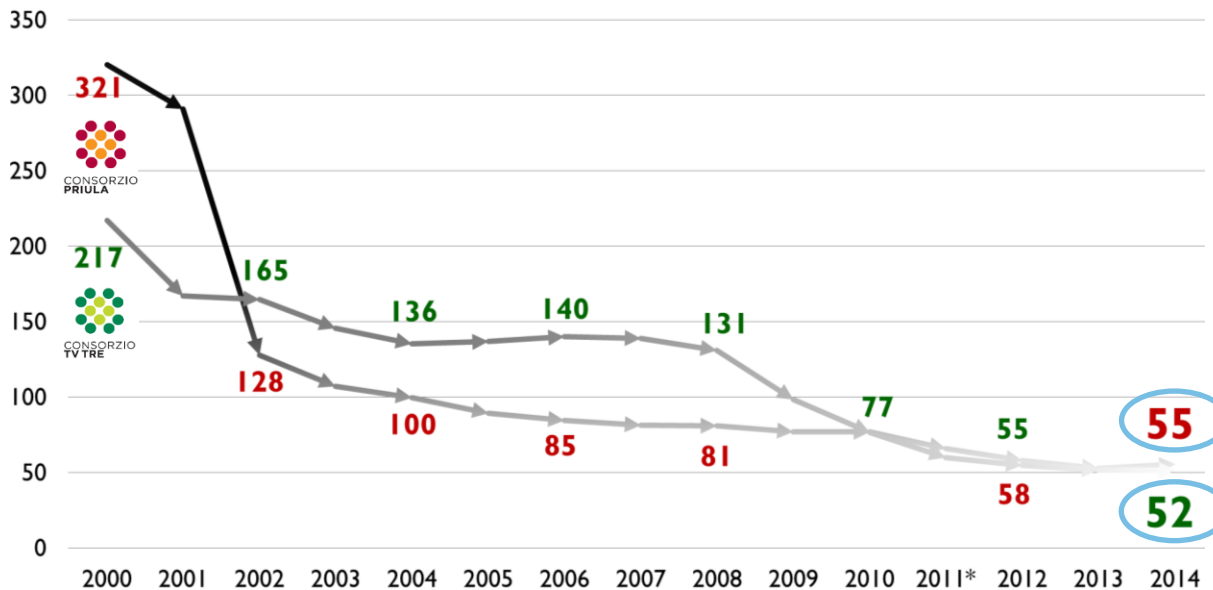


Present and future ZW plans in Ljubljana



- Current situation:
 - Separate collection rate: 61 %
 - Amount of residual waste: 110 kg / person / year
- Commitments:
 - Separate collection rate by 2025: 78 %
 - Separate collection rate by 2035: 80 %
 - Amount of residual waste by 2025: 60 kg / person / year
 - Amount of residual waste by 2035: 50 kg / person / year

Residual waste in Contarina (2 sub-districts, 50 Municipalities, pop. 530.000) (kg*inhabitant/year)



SOURCE

dati Contarina 2014 (Media annuale aggiornata a Giugno),
Rapporto Rifiuti ISPRA 2014 (dati 2013 Italia); Relazione Rifiuti Urbani ARPAV (dati 2013 Veneto)

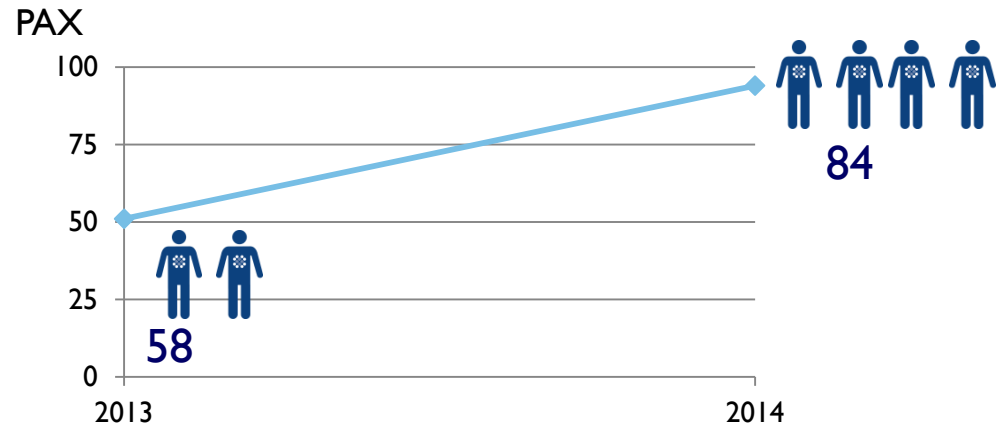
**mid-term goal:
-80% Residual
Waste by 2023**

'Green jobs' and savings

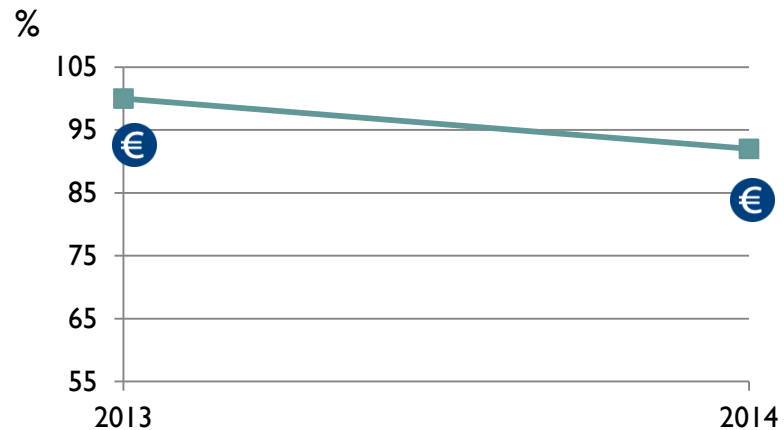
Kerbside collection in Treviso (pop. 80.000)



Employees



Total unit costs / person (management + disposal)



The key role of organics

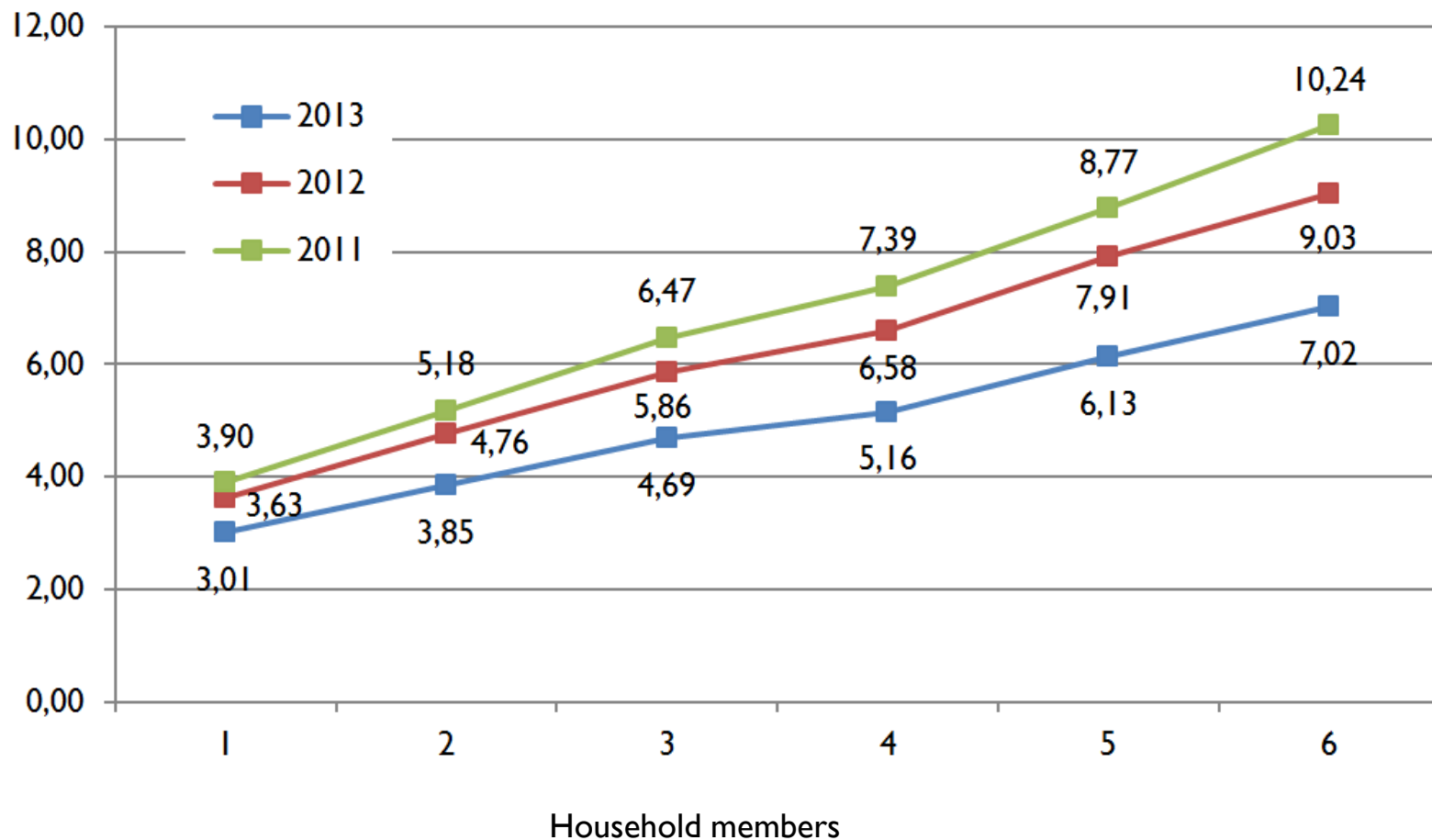
- QUANTITATIVE: fundamental to achieve highest material recovery rates
- OPERATIONAL: minimising organics in residual waste makes it possible to shrink collection rounds
 - cost-optimisation
 - further driving effect for increased separation of dry recyclables, too)
- QUALITATIVE: reducing organics in residual waste makes it less “dirty”, remarkably more “workable”/recyclable



The regulatory context: drivers from EU env policy

- WFD → waste hierarchy + (general) recycling targets
- art. 22 “*encourage sep collection, if appropriate...*”
- Landfill Directive → diversion targets for biodeg waste + obligation for pretreatment
- Climate Change Programme → C sequestration
- Soil Strategy

Average set-out rates of residuals





Food scraps in residual waste

| Municipality | % Food waste |
|----------------------|--------------|
| Altivole | 7,82 |
| Arcade | 8,24 |
| Breda di Piave | 7,61 |
| Casale sul Sile | 9,42 |
| Castello di Godego | 8,05 |
| Cessalto | 6,30 |
| Conegliano | 9,40 |
| Cornuda | 7,19 |
| Giavera del Montello | 6,88 |



Notes for the file - 1:



- We need to support proper management of biowaste through appropriate regulatory drivers
- We support revision of article 22, as a guiding principle:
 - *Member States shall ensure separate collection of bio-waste*

Notes for the file - 2:



- We also need result-oriented targets
 - e.g. X% of biowaste to be separately collected and processed by a given deadline
 - (Consider, though, the possible contribution of home composting - targets might be related to minimisation of organics in residual waste, *before* any further treatment)
- Grants/Funds/Loans to be primarily dedicated to biowaste processing sites.

Thanks for your interest (and commitment)

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