

NVAD
SAMEN VOOR SCHONE EN
AFVALVRIJE GEMEENTEN

Dakofa – Plastic Recycling Study Tour to the Netherlands

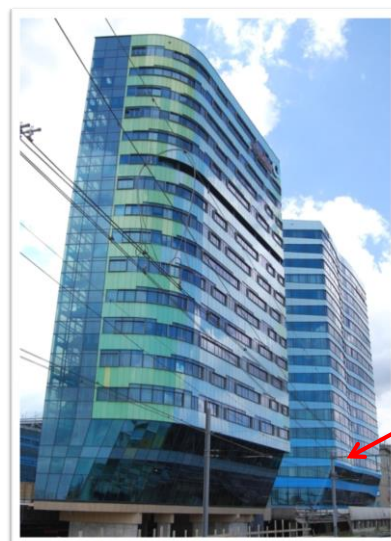
Rotterdam
June 18, 2019

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Royal Dutch Solid Waste Association

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AFVALVRIJE GEMEENTEN

- Founded in 1907
- Members:
 - Public waste collection companies
 - Municipalities
 - Institutions (associated members)
- Represents the public waste management sector
- Aims:
 - Serving of interest
 - Knowledge and support provider
 - Provide a platform for networking



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International

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NATIONALE VERENIGING
VAN AFVALVEERders



ISWA
International Solid Waste Association

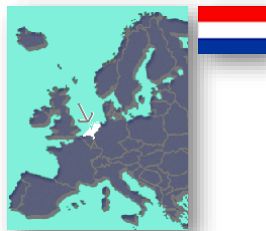
mwe
MUNICIPAL WASTE
EUROPE

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The Netherlands

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- 17 million inhabitants
- 40.000 km²
- 12 provinces
- 393 municipalities
- 456 inh/km²
- 46,010 US\$ GDP/cap
- 2.12 kg/cap/day MSW generation



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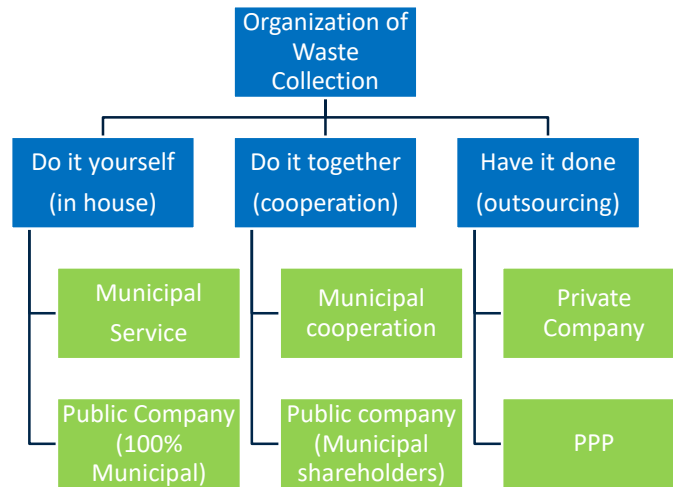


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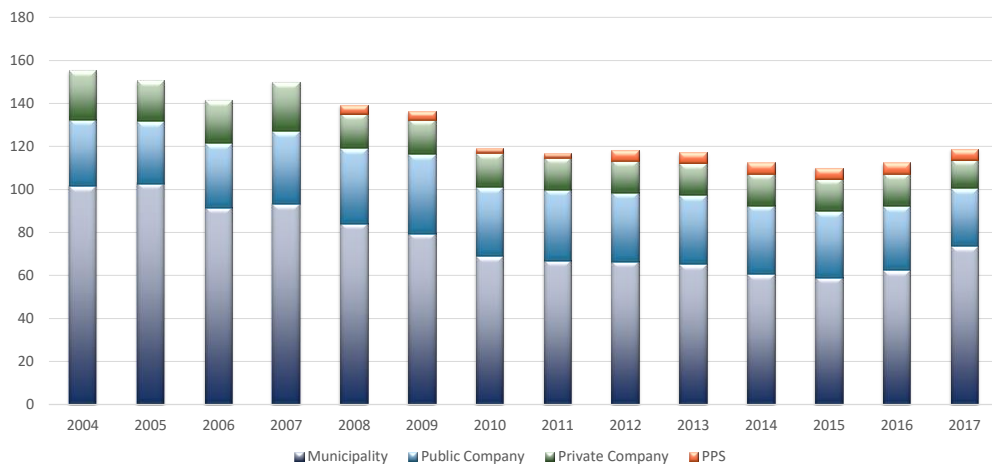
Forms of organisation



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Actors

Number of Waste Management Companies

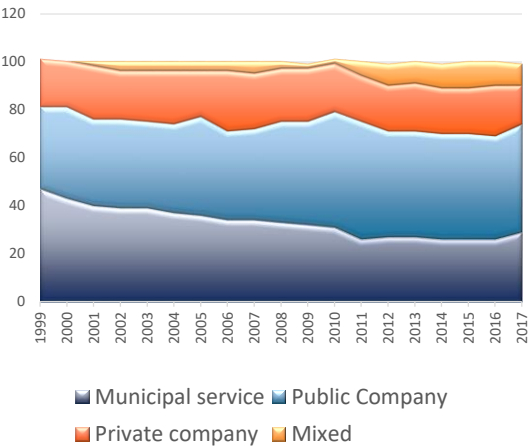


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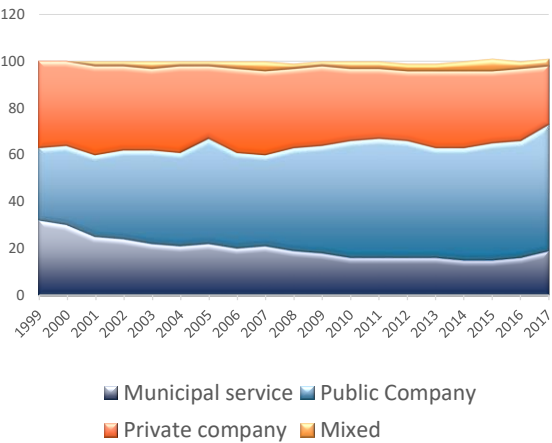
Organization of waste collection



Organization of Municipal Waste collection
by % households



Organization of Municipal Waste collection
by % municipalities

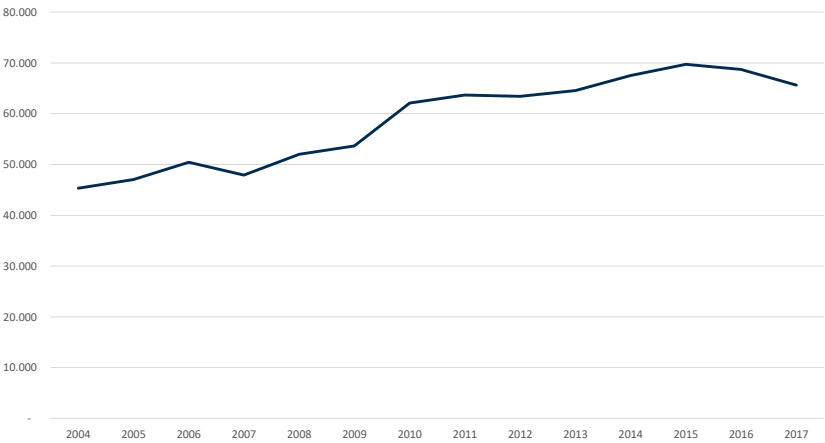


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Size of scale

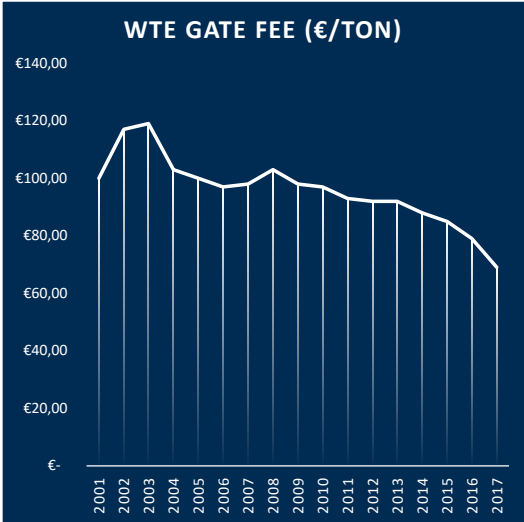


Average number of houtholds per company



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Financing Waste Management



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Municipal Waste Management

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Traditional collection system

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Residual- and bio waste:
Every other week



Paper, glass and textiles:
Street container

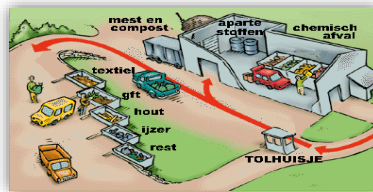


*Or with local
associations
(churches,
sportsclubs)*

Recycling rate: 50%
Residual waste: 250 kg / inh



Plastics: curb side collection or street
container



Bulky waste:
Recycling centre
(over 20 waste streams!)

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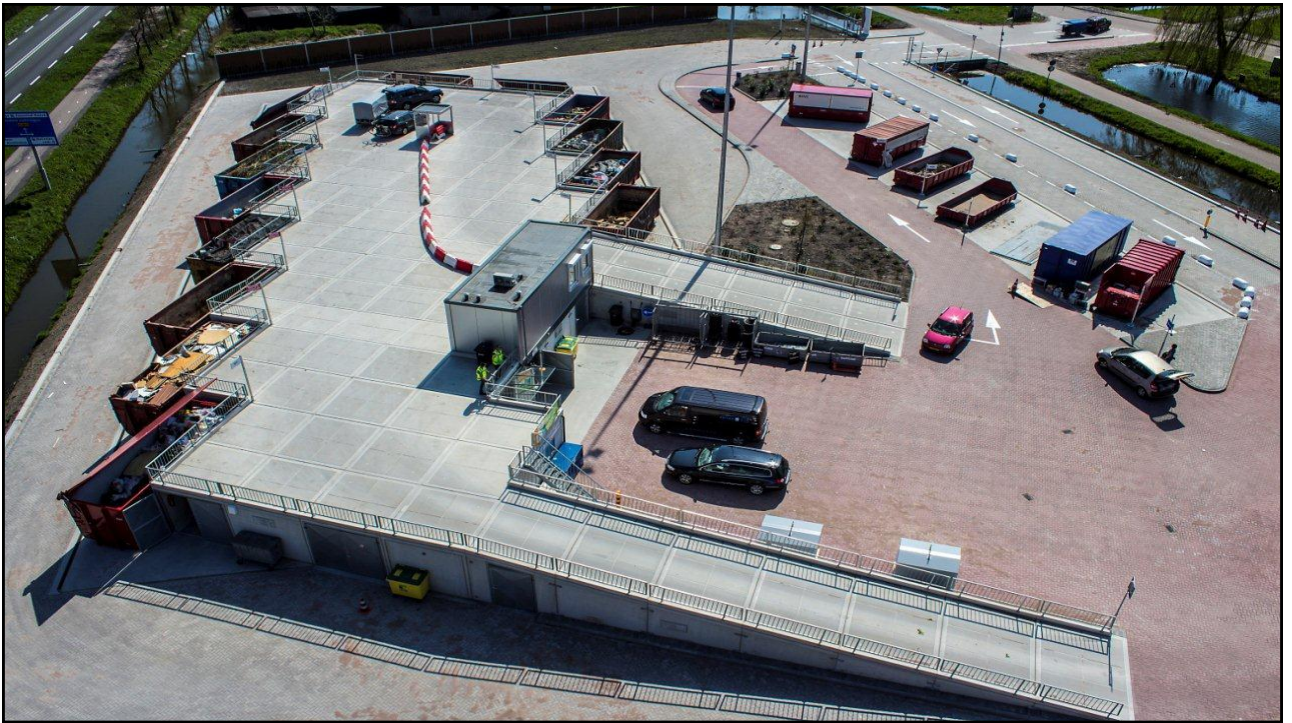
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Recycling Centres

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AFVALLENDE GEDINGEN

Waste streams to be sorted:

- a. WEEE;
- b. Asbestos;
- c. A-wood & B-wood;
- d. C-wood;
- e. Soil, separated following legal classifications;
- f. Gas tanks, fire extinguishers, pressure equipment;
- g. Car tires;
- h. Roof waste;
- i. Expanded polystyrene foam;
- j. Mixed stone material, not being asphalt or gypsum;
- k. Gypsum;
- l. Gross garden waste;
- m. Hard plastics;
- n. Mattresses;
- o. Metals;
- p. Paper and cardboard;
- q. Textiles, not being carpet;
- r. Flat glass
- s/z.?

More than 18 types of waste!



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Ambitions

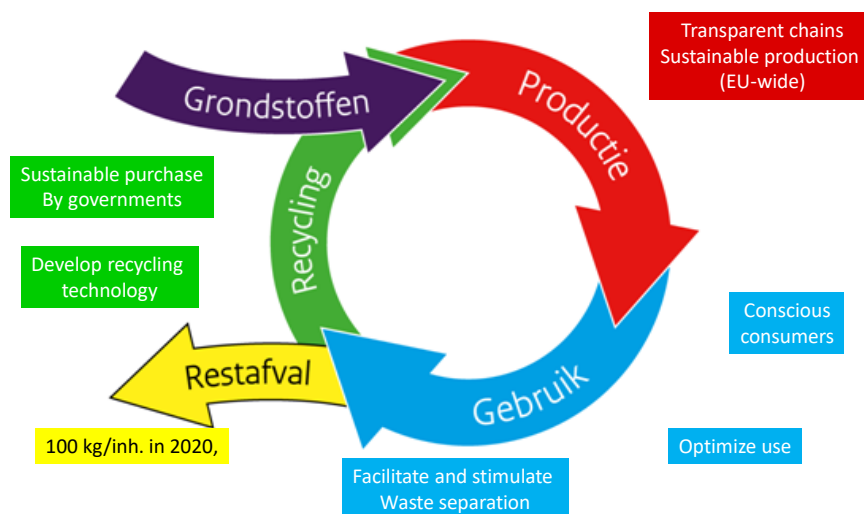


Close value chains, better separation and recycling of waste, less waste to final treatment.

- 2020: **75%** separate collection household waste
- 2020: max. **100 kg** per inhabitant per year (average)
- 2020: **halve** the amount of all waste for final treatment
- 2050: full **Circular Economy**

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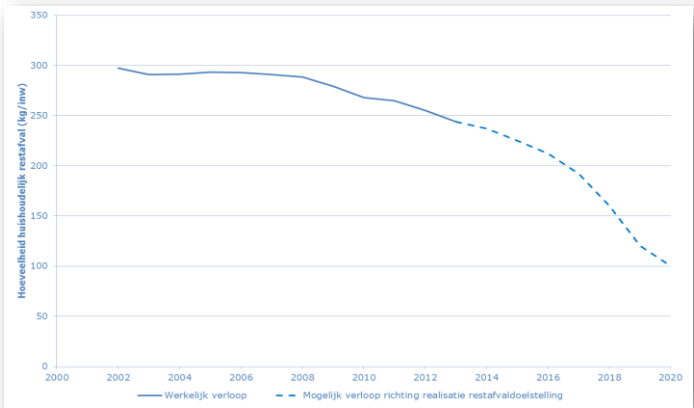
VANG (From Waste to Resource)



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Ambition

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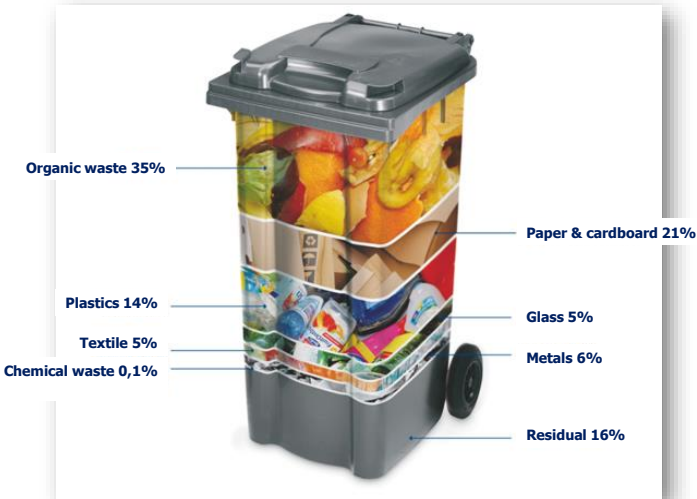


75% separate collection
100 kg residual waste per inhabitant.

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Potential

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AFVALLEN



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Getting there

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Financial incentives



Service incentives



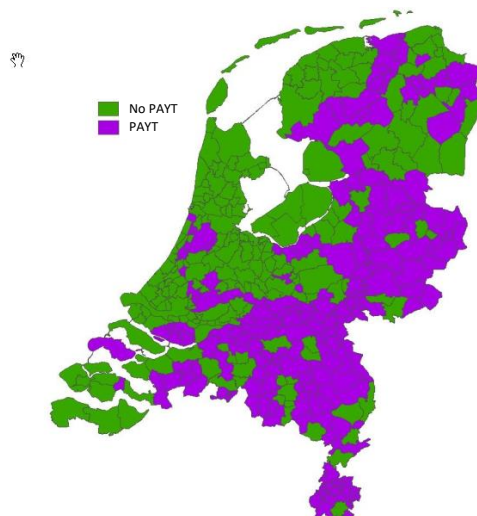
Communication



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Pay as you throw

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- 40% of municipalities use (a form of) pay as you throw
- Mainly rural, low density municipalities
- Commonly based on volume and frequency

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Example: Cash for Trash

					
Textiel	Plastic	Papier	Klein Elektrisch	Frituurvet	Metaal
€ 0,15 per kg	€ 0,15 per kg	€ 0,04 per kg	€ 0,05 per kg	€ 0,15 per kg	€ 0,10 per kg



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Example: ↑ Service Level

					
52 x year	26 x year	26 x year	12 x year	4 x year	Permanent
Organic waste	Plastic Beverage cartons & metals	Residual waste	Paper & cardboard	Books, electronic waste & Textile	Diapers

Municipality Peel en Maas: 28 kg residual waste per inhabitant / year

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Example: ↓ frequency for residual waste

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26 x year

Organic
Waste



12 x year

Residual waste



12 x year

Paper &
Cardboard



12 x year

Plastic, metals &
Beverage
cartons

Municipality Aalten: 48 kg residual waste per inhabitant / year

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Example: ♻️ Conversed collection

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At your home



In your neighbourhood



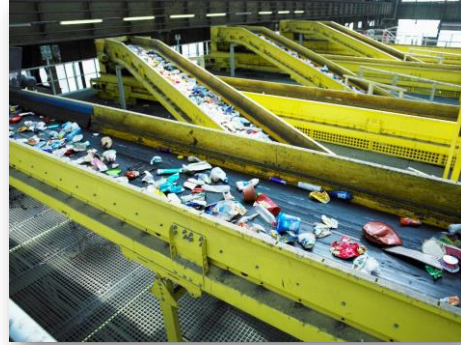
In your district

Municipality Dalfsen: 64 kg residual waste per inhabitant / year

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Mechanical Separation

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AFVALLEN



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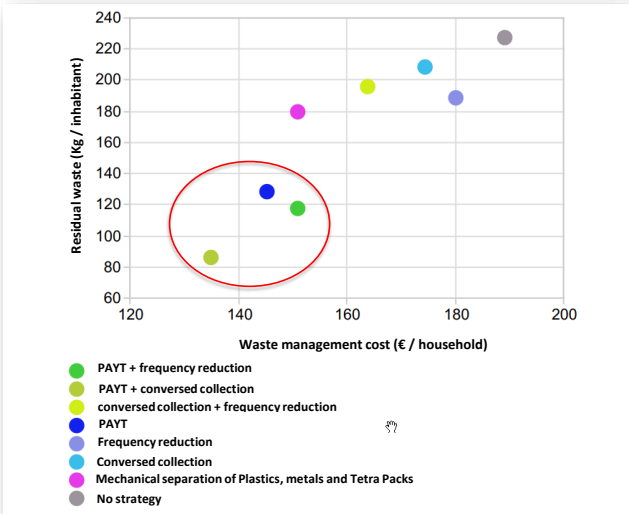
Coaching rather than communication

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Cost effectiveness of different strategies



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Packaging Waste Management

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EPR on Packaging

Framework Agreement



Afvalfonds
Verpakkingen



Ministerie van Infrastructuur
en Waterstaat

Since 2015:

Responsible not only for collection, but also for
transport and sorting of the materials.

Payed for several different kinds of plastics
which meet DKR specs and are sold to recyclers

afgesproken:

Materiaal	2013	2014	2015	2016	2017.....	2022
Kunststof	43	44	45	46	47....	52
Hout	27	29	31	33	35....	45

- De percentages, bedoeld in het tweede lid, worden onverminderd artikel 18 opgenomen in het Besluit.
- Partijen streven er naar om de percentages, bedoeld in het tweede lid, sneller te behalen, namelijk in 5 jaar. Partijen streven naar het behalen van de volgende percentages voor de periode 2013 tot en met 2017.

Materiaal	2013	2014	2015	2016	2017
Kunststof	44	46	48	50	52
Hout	29	33	37	41	45

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Trouble in Paradise

This agreement and our effort in the VANG program made quantity of
collected plastics explode. Since a couple of years, producers achieve
the goal of 52%. Suddenly we have lots of discussions about:



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Unequal Battle



Producers

Afvalfonds
Verpakkingen



100+ FTE
Budget: 200 million

Municipalities



<1 FTE
Budget: 0...

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The 10 Commandments



1. **EPR is the starting point** to achieve ambitious goals and to reduce non-recyclable packaging
2. **Municipalities are fully reimbursed** for the services they render
3. **Municipalities decide on the collection** system
4. **Long-term and clear contracts** are a necessity in order to be able to invest in collection, sorting and recycling
5. **Agreements** with different (public) partners in the value chain must be **simple, transparent and coherent**
6. **Separate collection** of packaging waste must be **logical and explainable** to citizens
7. **Collection of the total plastic share** (packaging and non-packaging) is needed in order to make the system explainable
8. **Household plastic packaging and similar commercial packaging** should be dealt with in a **similar way** and under the same responsibility
9. For the shorter term a **minimum ambition level** of all actors is needed to achieve the circular ambitions, as well as incentives to reach beyond the targets
10. For the longer term **100% circularity and 100% use of recycle** is the aim in 2050.

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Outline of an Agreement



- Collection of all plastics, metals and cartons: packaging and non packaging, recyclable and non recyclable.
- Municipal primary task: collection
- Only communicate to citizens which materials cause failure and should be kept out
- Quality checks, to learn how to do better
- Preparation of an outline for public companies to make a deal with Afvalfonds on sorting
- New sorting agreements which can be changed quickly to meet the demands of the recyclers

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