



Municipality of

Vari

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RECYCLING IN THE MUNICIPALITY OF VARI-VOULA-VOULIAGMENI - THE BEGINNING OF THE CIRCULAR ECONOMY APPLICATION

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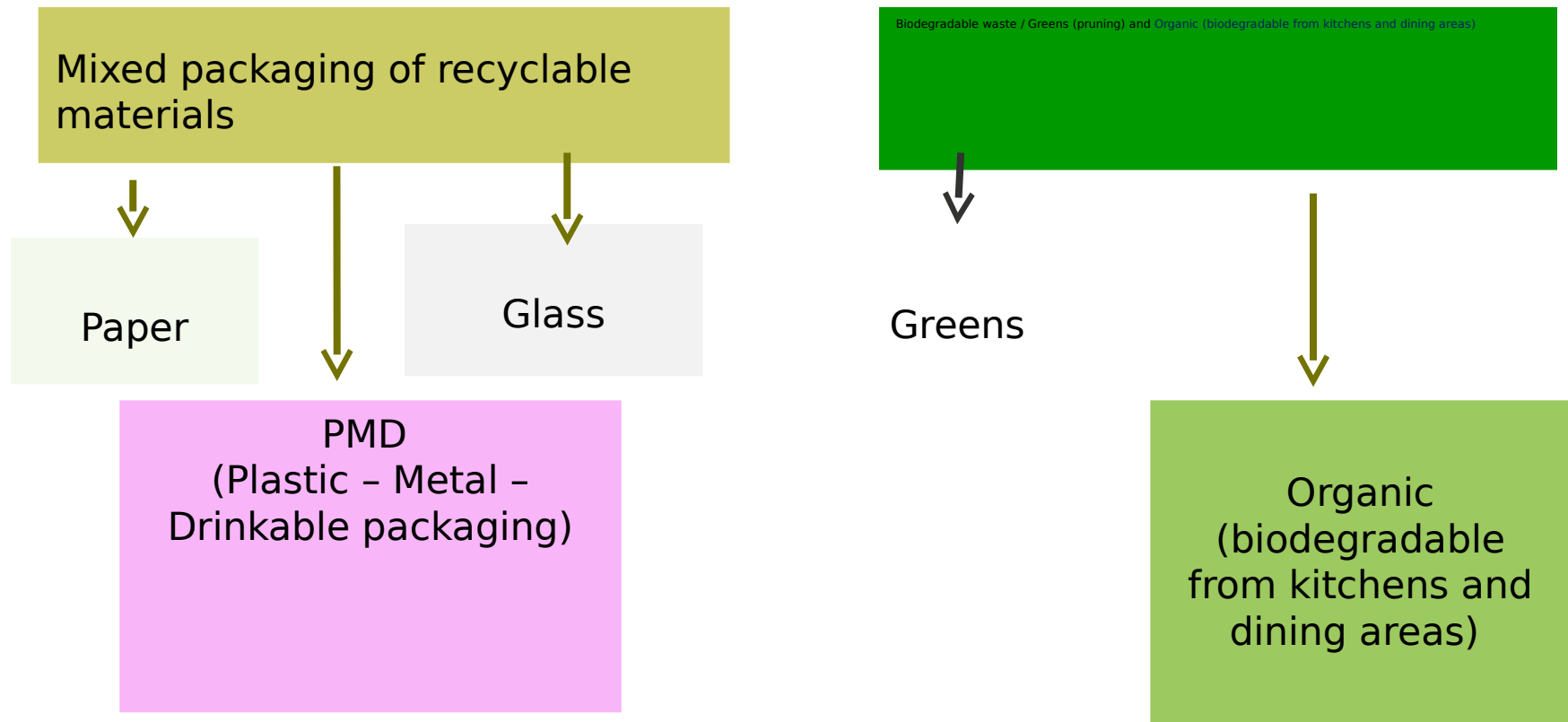
26/6/2019

7th International Conference on Sustainable Solid Waste Management
HERACLION, GREECE



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Separate Streams - Screening at Source





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Impementation Area





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Separate Collection of Recyclable Packaging Material - Sorting in Source



2



3



4



5



6





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The process of rewarding (Benefits to citizens)



- The Municipality of VVV will distribute to the citizens bags with bar code .
- The citizens will fill the bags with recyclable materials that will be collected by Municipality Door to Door

- The barcode will be “uploaded” on a platform that identifies the person who is the owner of the bag and benefit points will be assigned.

<https://benefit-as-you-save.eu/partnership/municipality-of-vari-voula-vouliagmeni-2/>

<http://www.3v-bas.gr/#/landing>





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Biodegradable waste / Greens (pruning)

VVV municipality will continue to collect from sidewalks with open vehicles, with or without a grab, and loader





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SEPARATE SELECTION AND COLLECTION Greens and Organic / Biodegradable Waste The production of VITA - GREEN and VITA - GREEN plus

The NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS - DEPARTMENT OF CHEMISTRY (Prof. Dinos Chassapis) is the scientific advisor of Municipality of Vari - Voula - Vouliagmeni for the collection and cutting green (20 02) and biodegradable wastes (20 01 08, 20 02 01, 20 03 02,) to 0,5–3 cm pieces, mixing with the biocatalyst and other nutritional and supportive substances at the facilities of WATT SA, in order to produce biocatalytic peat alternative soil substrate.





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SEPARATE SELECTION AND COLLECTION Greens and Organic / Biodegradable Waste The production of VITA - GREEN and VITA - GREEN plus

- 400 citizens have already use VITA-GREEN
- 200 citizens have already use VITA-GREEN plus





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Distribution of brown bins to local businesses



Municipal Area	Category of Enterprises	No of Enterprises	Brown Bin 60 lit	Brown Bin 120 lit	Brown Bin 660 lit	Brown Bin 1.100 lit
Vari	Restaurants, catering, taverns	19	19	22		
Vari	Hotels	1	1	1		
Vari	Supermarkets	2	1	1	2	
Voula	Restaurants, catering, taverns	15	15	18		
Voula	Hotels	4	4	4		
Voula	Supermarkets	1	1	1	2	
Vouliagmeni	Restaurants, catering, taverns	16	16	20		
Vouliagmeni	Hotels	5	8	12	4	3
Vouliagmeni	Supermarkets	0	0	0		
	Total	63	65	79	8	3



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Organic (biodegradable from kitchens and dining areas)

In each building (or every two buildings) a brown bin will be placed to separate organics at source. The bins will be 120 or 240 liters.

The contents of the brown bins will be collected from a municipal vehicle which will have the following characteristics:

1. It will weigh every bin
2. It will identify each bin and will transfer this information to a Municipality database

[Heraklion_export_26_11_to_6_12_18.xls](#)





SOLID WASTE IN VVV MUNICIPALITY (ELECTRONIC WASTE REGISTER 2016 - 2017 - 2018)

	CODE	KIND	QUANTITY (tn) 2018	%	QUANTITY (tn) 2017	%	QUANTITY (tn) 2016	%
1	13 02 05	Non-chlorinated engine and lubrication oils	2,05	0,01%	1,60	0,00%		
2	15 01 06	Mixed packaging of recyclable materials	3.606,12	8,85%	3.325,27	8,63%	3.313,00	8,78%
3	15 01 07	Glass packaging	45,52	0,11%	48,02	0,12%	41,30	0,11%
4	16 01 03	Tires at the end of their life cycle	4,57	0,01%				
5	16 01 04	Vehicles at the end of their life cycle	60,13	0,15%				
6	17 01 01	Concrete	805,90	1,98%	493,60	1,28%		



SOLID WASTE IN VVV MUNICIPALITY (ELECTRONIC WASTE REGISTER 2016 - 2017 - 2018)

	CODE	KIND	QUANTITY (tn) 2018	%	QUANTITY (tn) 2017	%	QUANTITY (tn) 2016	%
7	17 01 02	Bricks			127,10	0,33%		
8	17 01 03	Tiles and ceramics	34,30	0,08%	97,70	0,25%		
9	17 01 07	Mixtures of concrete, bricks , tiles and ceramics	62,00	0,15%			701,00	1,86%
10	17 05 04	Soils and stones			35,10	0,09%		
11	17 09 04	Mixtures of construction and demolition waste	415,57	1,02%	58,90	0,15%		
12	20 01 01	Paper and cardboard	2,63	0,01%				



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SOLID WASTE IN VVV MUNICIPALITY (ELECTRONIC WASTE REGISTER 2016 - 2017 - 2018)

	CODE	KIND	QUANTITY (tn) 2018	%	QUANTITY (tn) 2017	%	QUANTITY (tn) 2016	%
13	20 01 08	Biodegradable from kitchens and dining areas	14,65	0,04%				
14	20 01 10	Clothes	35,00	0,09%				
15	20 01 21	Fluorescent tubes and other mercury- containing wastes	0,46	0,00%	0,21	0,00%	0,20	0,00%
16	20 01 23	Discarded equipment containing chlorofluorocarbons			35,10	0,09%		
17	20 01 35	Discarded electrical and electronic equipment containing hazardous components other than those mentioned in 20 01 21 and containing hazardous constituents	415,57	1,02%	58,90	0,15%		



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SOLID WASTE IN VVV MUNICIPALITY (ELECTRONIC WASTE REGISTER 2016 - 2017 - 2018)

	CODE	KIND	QUANTITY (tn) 2018	%	QUANTITY (tn) 2017	%	QUANTITY (tn) 2016	%
18	20 01 36	Disposable electrical and electronic equipment, other than those mentioned in 20 01 21, 20 01 23 και 20 01 35	0,61	0,00%	0,38	0,00%	0,54	0,00%
19	20 02 01	Biodegradable waste / Greens (pruning)	4.937,52	12,12%	1.145,18	2,97%	266,74	0,71%
20	20 03 01	Mixed urban waste	30.711,87	75,39%	33.210,87	86,16%	33.402,53	88,54%
21	20 03 02	Waste from outdoor / flea markets			0,17	0,00%		0,00%
		<u>TOTAL</u>	<u>40.739,59</u>	<u>100,00</u> <u>%</u>	<u>38.544,2</u> <u>1</u>	<u>100,00</u> <u>%</u>	<u>37.725,9</u> <u>9</u>	<u>100,00</u> <u>%</u>



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<u>SOLID WASTE IN VVV MUNICIPALITY</u>			
	2018	2017	2016
Percentage of buried waste	75,39%	86,16%	88,54%
Difference between 2018 and 2016	13,15%		
Percentage of non-buried waste	24,61%	13,84%	11,46%



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WE CAN CHANGE !

Based on the composition of the waste is strongly possible

30% - 40% to recycle

30% - 40% to compost

20% - 40% to leave a safe residue





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**In line with the objectives of the current political
leadership of the Municipality
(Mayor Mr. Grigoris Kontantellos)**

1. See the big picture (Think Big)
2. Not only pilot projects
3. Implementation! Implementation! Implementation!



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Please visit the site
<http://benefit-as-you-save.eu>

THANK YOU !

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