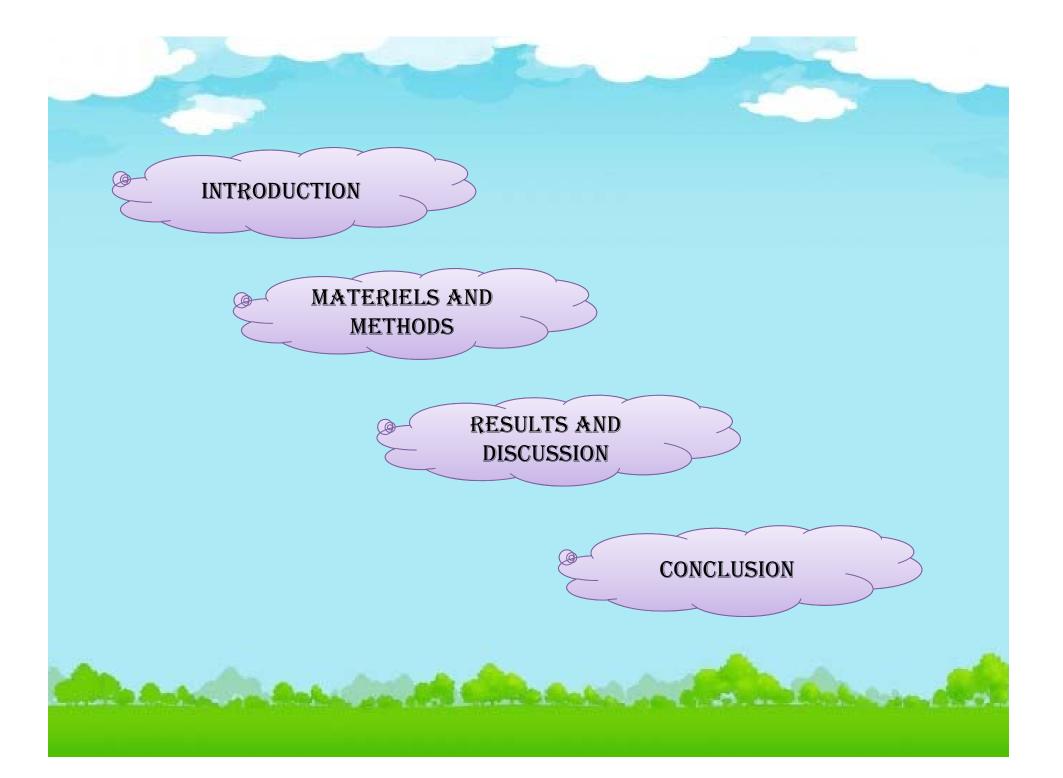
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Towards an energy recovery approach for household waste in the province of Khenifra – Morocco

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INTRODUCTION

The production of MSW does not cease to increase, hence the need to find a solution to eliminate them in a sustainable way.





Developing countries have problems in waste management. The major part is eliminated in wild dumps despite all the impacts related to this mode.





Schéma de valorsiaation des déchets

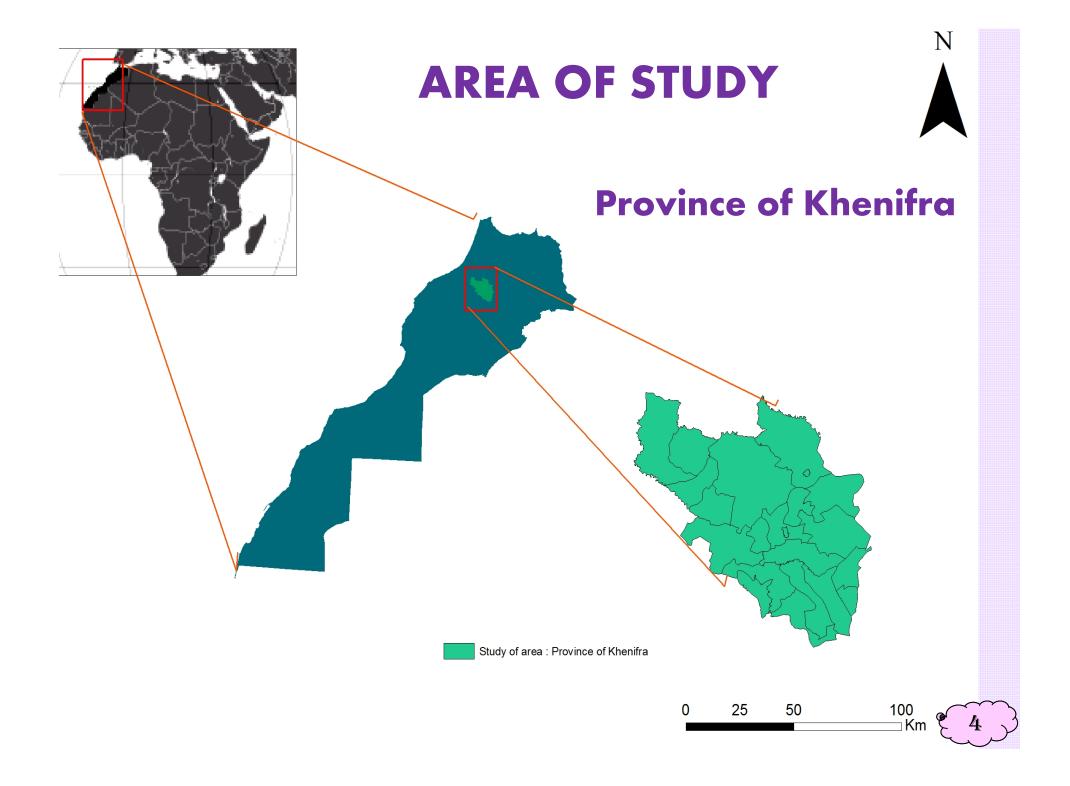


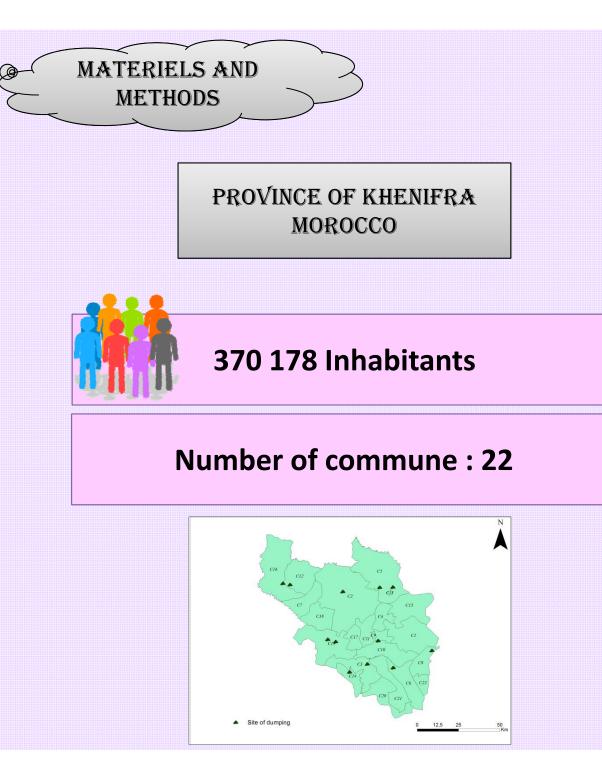
OB1 en double ?? Otmane Boudouch; 11/6/2017



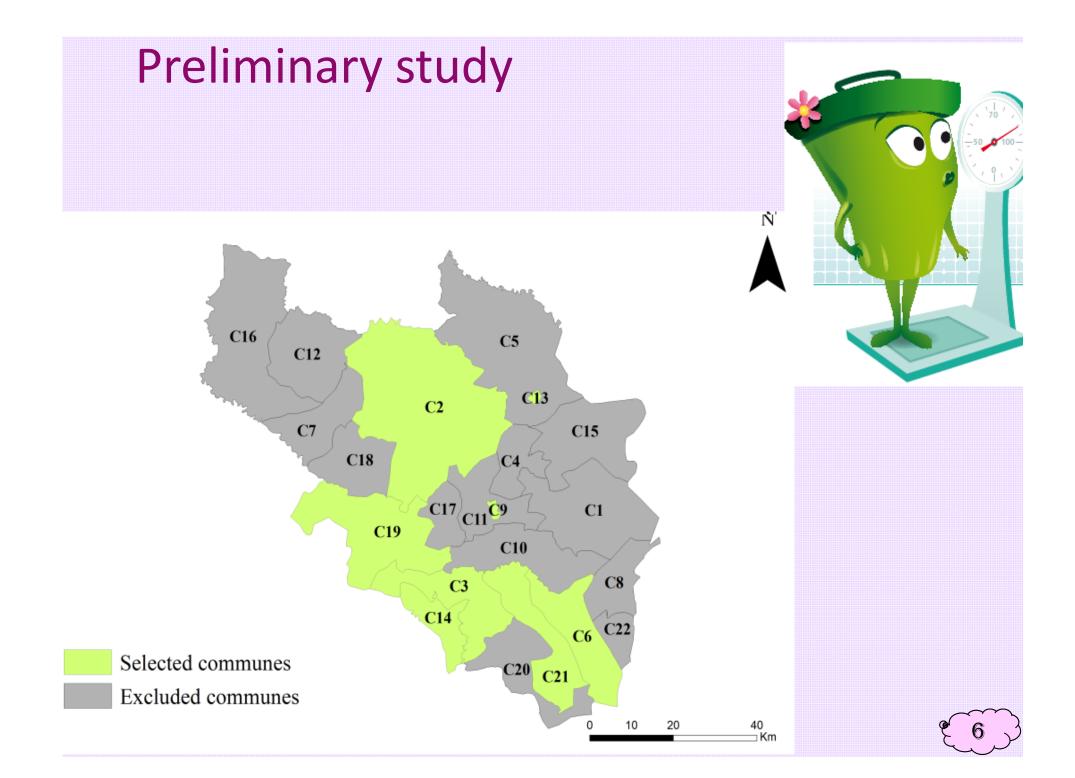
Morocco is not excluded from countries with problems in waste management despite the efforts made by the State

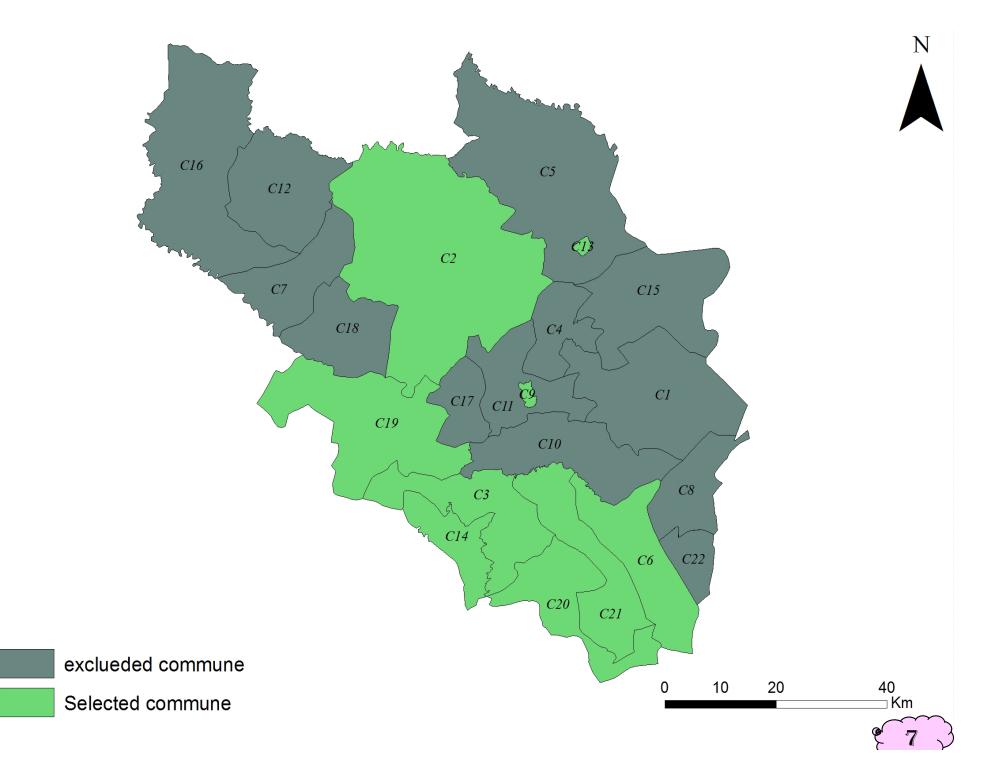
	Textes juridiques relatifs à la gestion des déchets au Maroc			
Population 2014	Production of MSW per year	Ratio de production	More fraction abandant	
33 848 242	6.5 Million T	0,76 Kg/inb/day	Organic materiel	



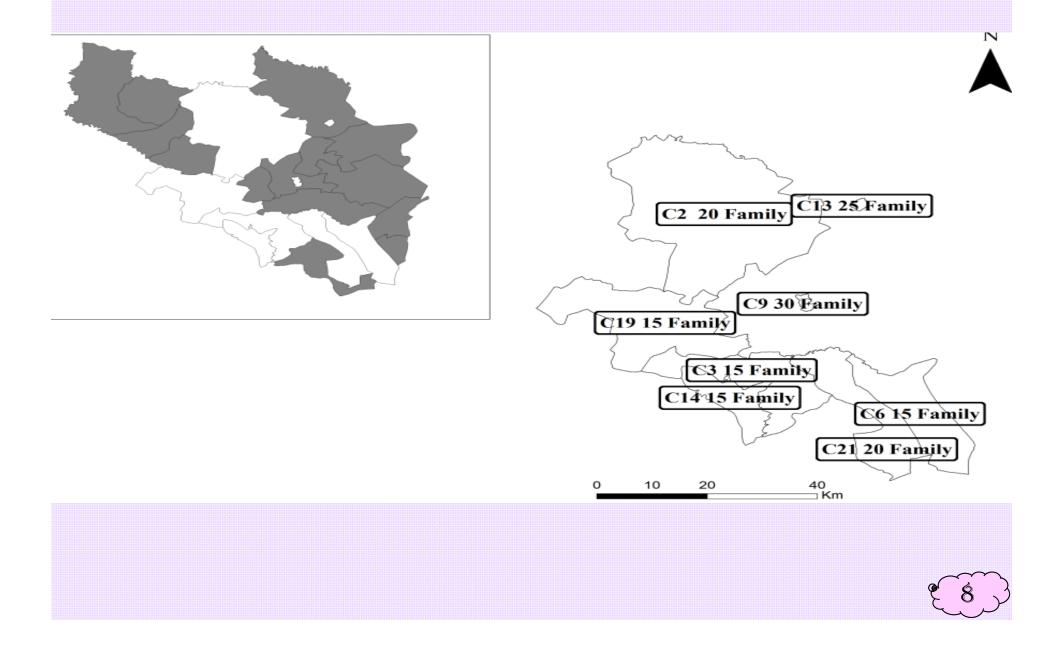






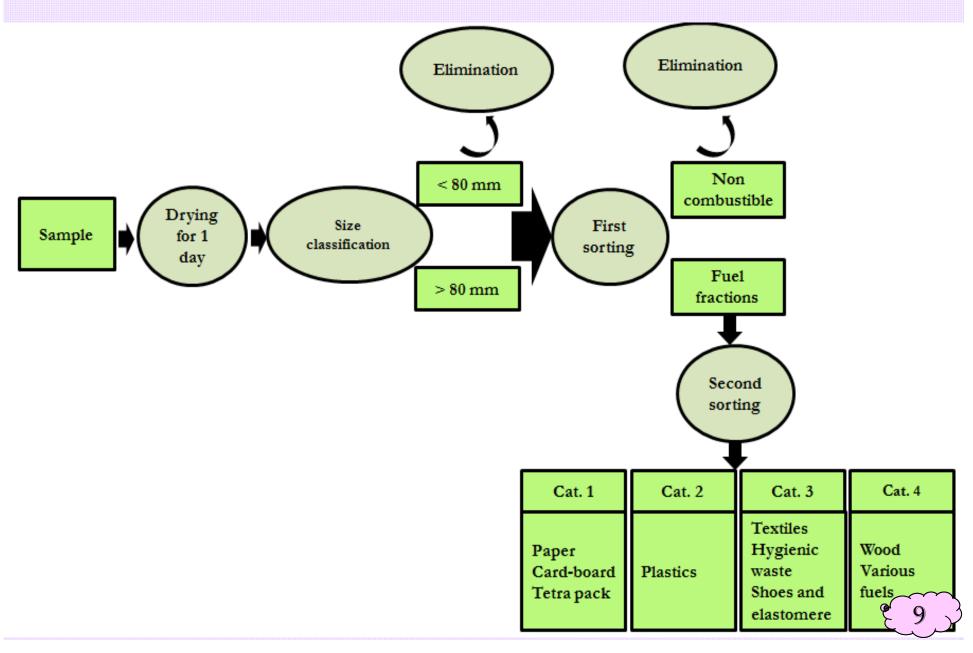


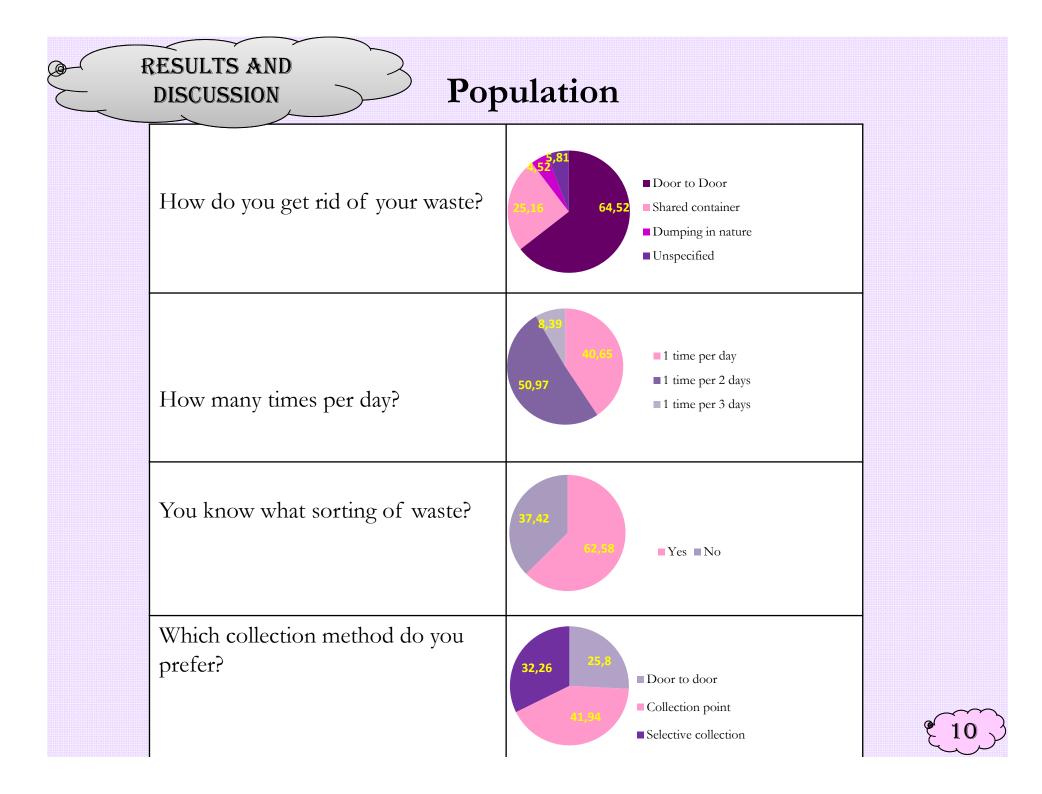
1 Surveys and questionnaires

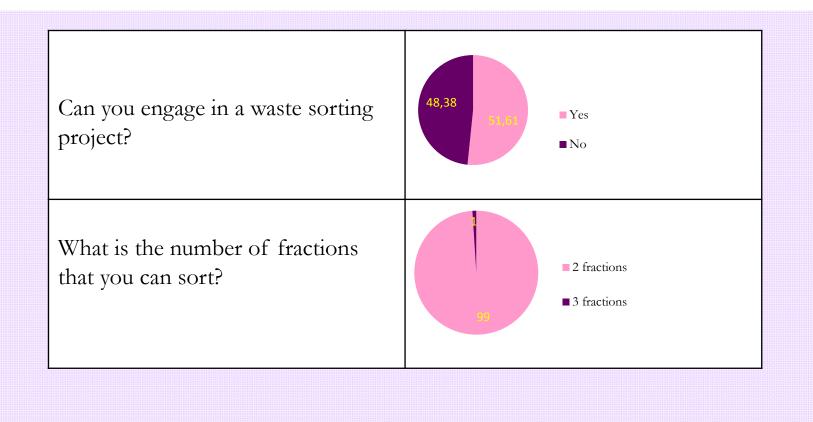


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C	ommune:	Date:												
c	ode of family:													
N	Questions		Resp	ponses										
1	Number of persons per household?													
2	How do you get rid of your waste?													
3	How many times per day?													
4	What is the most abundant fraction in your trash?													
5	You know what sorting of waste?													
	If YES, have you ever done a sort?				Nar	ne of commune:			Date:.					
	If YES, what is the fraction you are sorting?				Cod	le of commune:								
6	Do you practice composting?													
					3.70	Onesting	00	03		00	04.5	014	010	024
7	Which collection method do you confac?				N° 1	Question Do you know the law of waste management in Morocco	C2	C3	C6	C9	C13	C14	C18	C21
7	Which collection method do you prefer?						C2	C3	C6	C9	C13	C14	C18	C21
7 8	Which collection method do you prefer? Do you have an idea about the final destination of your waste?				1	Do you know the law of waste management in Morocco What types of waste do you collect? What is the waste management method that you adapt?		Ci	C6	C9	C13	C14	C18	C21
	Do you have an idea about the final destination of your waste? Do you have an idea about the circular				1 2 3 4	Do you know the law of waste management in Morocco What types of waste do you collect? What is the waste management method that you adapt? What is the waste production estimate in the municipal center ?		C3	C6	C9	C13	C14	C18	C21
8	Do you have an idea about the final destination of your waste? Do you have an idea about the circular economy?				1	Do you know the law of waste management in Morocco What types of waste do you collect? What is the waste management method that you adapt? What is the waste production estimate		Ci	C6	C9	C13	C14	C18	C21
8	Do you have an idea about the funal destination of your waste? Do you have an idea about the circular economy?				1 2 3 4	Do you know the law of waste management in Morocco What types of waste do you collect? What is the waste management method that you adapt? What is the waste production estimate in the municipal center ?		G	C6	C9	C13			C21
8	Do you have an idea about the final destination of your waste? Do you have an idea about the circular economy?				1 2 3 4 5	Do you know the law of waste management in Morocco What types of waste do you collect? What is the waste management method that you adapt? What is the waste production estimate in the municipal center ? What is the mode of collection? Mave you had a selective collection experience? If YE5, What are the fractions collected?		G	C6	C9	C13			
8	Do you have an idea about the funal destination of your waste? Do you have an idea about the circular economy? Can you engage in a waste sorting project? If YES, What is the number of fractions				1 2 3 4 5	Do you know the law of waste management in Morocco What types of waste do you collect? What is the waste management method that you adapt? What is the waste production estimate in the municipal center ? What is the mode of collection? Mave you had a selective collection experience? If YES, What are the fractions				C9	C13			
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1 Characterization







Dont practice composting

100%

B.M. is the must abandant factions

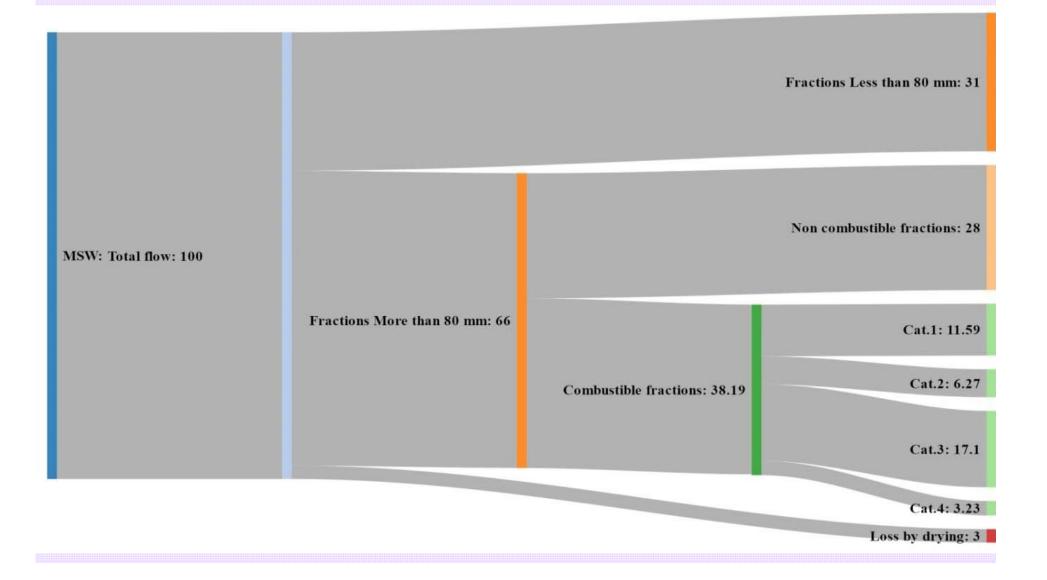
Any idea about circular economy



Communes

- 2 Communes / 8 who knows the law on waste in Morocco
- 1 commune / 8 which delegates collection to the private sector
- 6 communes adopts the door a door and 2 communes use the two modes
- No selective collection for all communes
- No ideas about SRF

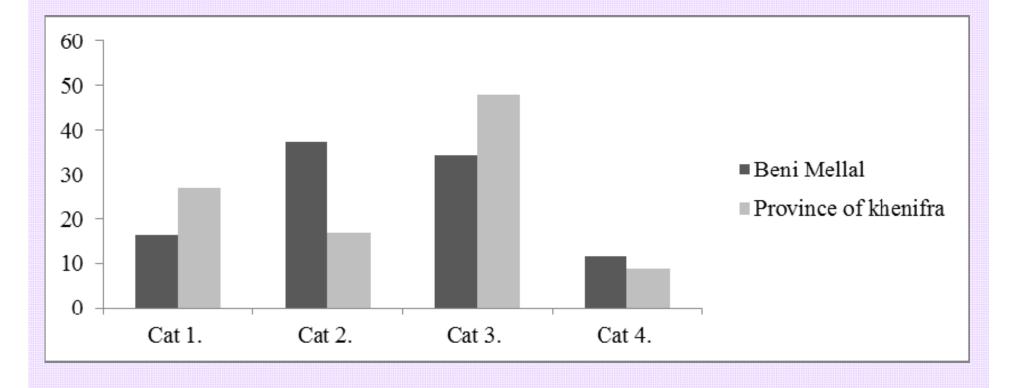
Characterization results



Discussion

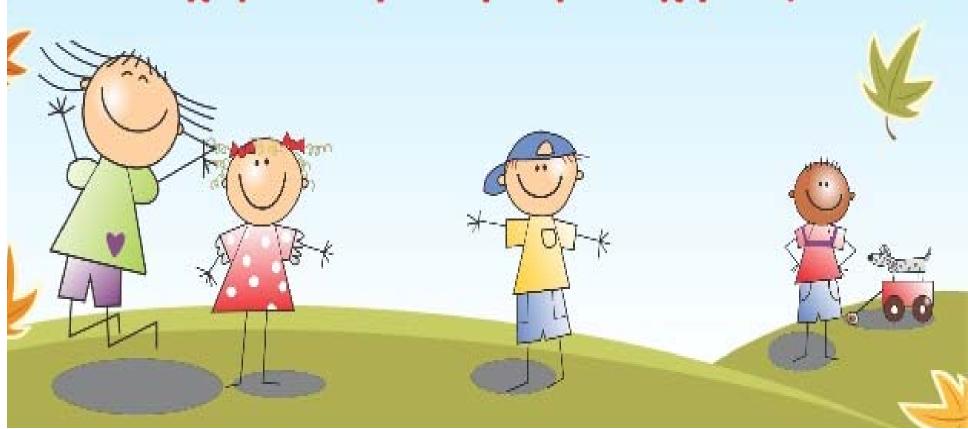
- The results of the population survey show that people are in need of awareness despite the small awareness they have
- On the other hand half of the respondents are ready to sort at source in two fractions
- The municipalities in their turn do not have enough consciousness about the management of waste
- The results of the waste characterization show that the fuel fraction has 38% initial flux

Comparison of the results of this study with those we have already done in city of Beni Mellal in summer times (figure 7) showed that waste is almost similar for paper, textiles and wood. On the other hand, this study showed that the plastics knew a decrease in amount : thanks to the stop of production and using plastic bags in Morocco since June 2016



Conclusion

It can therefore be shown that SRF production can be considered as a sustainable solution of MSW in the study area. In addition, the population has shown their interest to contribute to sorting waste into two fractions. Hence, the municipalities can organize itself with the associations to distribute two garbage cans per house, one for combustible fraction and the second for non-combustible fractions.



ευχαριστώ για την προσοχή σας

