



## WUWM Discussion Paper on Wholesale Markets and Environmental Protection

*Author: Michel Escoffier, FFMIN, France*

The aim of this note is to underline the importance of efforts currently being made within the wholesale market sector towards environmental protection.

At European level, wholesale markets are globally marketing around 33 million tons of fruit and vegetables every year, representing almost 40% of the total amount that is consumed yearly. Wholesale market customers are, in particular, independent stores and street markets, and both sectors require the outside organisation of either their produce supply, or their waste management.

Wholesale market efforts towards environmental protection are logically focusing on two main complementary aspects: waste management, in particular through recycling, and energy savings through the organisation of traffic flow.

### **Waste management**

#### ***Volume of waste managed by wholesale markets***

According to different WUWM surveys undertaken in 2004 and 2006, wholesale markets are managing waste that represents between 1.5 and 2% of the marketed quantities of fruit and vegetables, which is a total of **around 500,000 tonnes a year**.

The corresponding cost for wholesale markets is important, globally estimated at **40 million Euros a year**, or between 5 and 10% of the total yearly turnover of wholesale market authorities.

These quantities are at the same time very important and very limited - it depends on what they are compared with:

- a) The waste quantities managed by wholesale markets are obviously very limited when compared with global or national data. In fact, it represents only:
  - 0.1 % of the total waste of France, for example
  - 2% of total home waste in Mexico
  - 0.3% of the USA
  - 1% of Japan

- b) But the same amount of waste is very important when compared with the annual production of municipal waste all around the world: 510 kg per capita in France, 760 in USA, 310 in Mexico, and 410 in Japan.

In this case, the total amount of wholesale market waste is equivalent to:

- 1/3 of the home waste of Paris
- 100% of Washington DC
- Almost the same volume as a City the size of Bremen (for example)
- 55 to 60,000 truck loads of waste

## ***Waste treatment***

Very special attention is given by wholesale markets to the management of the waste they collect: **43% of collected quantities are recycled**, in particular cardboard, wood and organic matters, but also plastics and polystyrenes (fish markets).

This percentage is particularly significant when compared with the same data observed in France for total waste (18% when including biological treatment) and also the same data for waste from industries (80%). In this last case, the high percentage is explained by the homogeneity of waste generated by industries that clearly ease their waste management.

Un-recycled waste is basically dumped (land-filled) by 50% of markets, or incinerated (burnt) by 30%. Animal feeding may be another possibility.

## **Waste reduction programmes**

70% of markets already have, or are planning to soon have a waste reduction programme, in order to reduce or better organise the waste collection on their market.

## **Energy savings**

### ***Concentration of traffic***

The main objective of wholesale markets is obviously the organisation of produce flow of fresh produce to major cities.

*This organisation means incorporating important city requirements into the market structure, by using either large trucks and trains (less unfortunately but with many successful efforts underway to improve): these being the best economic and energy efficient ways to supply cities.*

Wholesale markets also ensure the organisation of supply to shops with small trucks and the future possibility of using electrical vehicles.

In other terms, the circulation of **50 000 vehicles a day is organised thanks to wholesale markets.**

## ***Incineration***

The burning of waste normally produces either electricity or heating energy. According to the international ratio (ADEME France), the incineration of 1 tonne of waste produce is equal to 0.26 MWh of electricity and 0.80 MWh of heating.

To apply such a ratio to the total amount of wholesale market waste is probably difficult because of its specificities. Nevertheless, it could be roughly estimated that when burning 30% of total collected waste (50 to 100,000 tonnes a year) wholesale markets are producing every year about:

- 20,000 MWh of electricity
- 80,000 MWh of heating

That is a quantity sufficient to supply a city of 150,000 inhabitants.

## ***Isolation of buildings***

Most of the 35,000 operators of the world's wholesale markets are marketing fresh products and, as such, are unanimously equipped with cold stores that are mostly operating in duly isolated premises.

A very special effort is currently being made, in terms of investment and operation, either by the wholesale market authority or by the operator in order to improve the effectiveness of business, in particular through isolation to reduce energy requirements.

## **Other environmental aspects**

The following issues are proposed as items for future consideration and discussion within the WUWM European Group and the waste management work team:

- Other harmful environmental concerns (or nuisances) such as noise, traffic, etc;
- Facilitating effective sewage and water treatments;
- Avoiding the dissemination of waste in public areas.