

Macerata District  
(Italy)



Bushat District  
(Albania)



Kamez District  
(Albania)

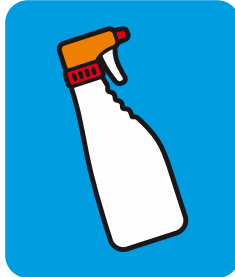


Bar District  
(Montenegro)



# HANDBOOK OF GOOD PRACTICES

## PRACTICAL GUIDELINES FOR WASTE MANAGEMENT





*This project promotes the exchange of good practices and innovative technics within local Authorities with the purpose of minimizing the environmental impact of the urban solid waste management.*

*This process also represents an opportunity of improvement, acknowledgment and reciprocal exchange.*

# **HANDBOOK OF GOOD PRACTICES**

## PRACTICAL GUIDELINES FOR WASTE MANAGEMENT

# INTRODUCTION

This publication has been conceived and realized with the notable contribution and the precious cooperation of all the partners of the project IPA Adriatic CBC Programme BWS, with the purpose of enhancing several specific environmental themes.

In fact, education and awareness of the present and future generations on the theme of sustainable development and separate waste collection is very important.

Everyone should be aware of the importance of waste collection and of its separation according to the different materials contained; above all, it's of utmost importance the fact that garbage can be recycled and, as a consequence, can be re-used.

This can bring to an eco-sustainable awareness, avoiding the creation of landfills and the depletion of raw materials, that, as we know, are not endless.

Certainly, easy daily expedients are useful to preserve and evaluate our environment (separating, composting, avoiding disposable objects and so on...)

Thanks to everyone, waste can quickly be transformed from problem to real Resource.



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(Albania)



Kamez District  
(Albania)



Bar District  
(Montenegro)



Macerata District  
(Italy)



COSMARI  
(Italy)



(Italy)

# EU DIRECTIVES: reduction and prevention

With a view to breaking the link between growth and waste generation, the European Union has provided itself with a legal framework aimed at controlling the whole waste cycle from generation to disposal, placing the emphasis on recovery and recycling.

**ACT: Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste** (This Directive repeals directives 75/439/EEC, 991/689/EEC and 2003/12/EC).

## SUMMARY

This Directive establishes a legal framework for the treatment of waste within the Community. It aims at protecting the environment and human health through the prevention of the harmful effects of waste generation and waste management. In order to better protect the environment, Member States should take measures for the treatment of their waste in line with the following hierarchy which is listed in order of enforcement priority:

- prevention;
- preparing for reuse;
- recycling;
- other recovery, notably energy recovery;
- disposal.

Member States can implement legislative measures with a view to reinforcing this waste treatment hierarchy. However, they should ensure that waste management does not endanger human health and is not harmful to the environment.

## Contest

Generation of waste is increasing within the European Union. It has therefore become of prime importance to specify basic notions such as recovery and disposal, so as to better organize waste management activities.

It is also essential to reinforce measures to be taken with regard to prevention as well as to the reduction of the impacts of waste generation and waste management on the environment. Finally, the recovery of waste should be encouraged so as to preserve natural resources.

On the subject of waste, European and National directives have fixed as main goal the reduction of non-recyclable waste which must be disposed in landfills or treated; at the same time, they focus on the re-use of raw materials, through recycle, transforming waste from source of pollution to source of wealth.

According to new European directives on the separate waste collection, the most important news is the theme of waste reduction and prevention.

In particular, two main points can be underlined in the choices of the European Union:

- article 9 of the Waste Directive orders that the European Commission shall submit, between 2011 and 2014, a series of reports on the management of the waste cycle introducing also proposals for waste reduction targets;
- article 29, on the other hand, requires that, by 2013, Member States establish National waste prevention programmes. They shall set out measures to decrease waste quantity and quality impacts.

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However, Directive does not introduce at this step targets for the “quantity” reduction but a series of measures to apply for the reduction and prevention. Final goal is the so-called “dissociation” within 2020 of the economic growth from the waste generation growth. For this reason, national programmes shall represent a useful and concrete incentive for waste producers to reduce the quantity of waste as well as to improve the quality of their products.

A real novelty: the European Directive does not talk about separate collection, but of recycle and treatment for re-use. In other words, the Directive identifies in the goal (recycle) and not in the means (ways of collection) the focal point of its strategy to minimize the quantity of unsorted waste.

**This means that there shall be a change from a strategy exclusively based on the quantity of separate waste to different forms of incentive aimed for the final result of separate collections or recovery of materials in different phases of treatment:** a more realistic vision which prefers a quality approach to challenges for a better management of the waste cycle and strengthens the concept of waste as a “resource”.

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RE-USE and RECOVERY strategies should qualify on the following actions:

- optimizing urban waste collection systems that shall be efficacious for their technical, economic and environmental profile;
- developing the waste recovery market by strengthening recovery industrial systems and markets of re-usable products and of substances coming from recoverable materials. For different kinds of waste, especially for packaging waste, some National supply chain consortia guarantee the responsibility of the economic operators, in accordance with the “polluter pays” principle and of the shared responsibility, to realize the fixed goals of recovery. Producers can take part in the consortia as well as users of the recovered material and the eventual recycler. Those consortia are specific for each kind of material and are aimed to organize the waste collection, recycle and restore according to criteria of efficacy, efficiency and best value. Their assets derive from duties paid by participating subjects and recovery activities. In accordance with 94/62/CE Directive on packaging and waste packaging, modified by the 2004/12/CE Directive, in Italy, CONAI (Consorzio Nazionale Imballaggi – National Packaging Consortium) has been established; packaging producers and users are obliged to participate. The aim is to guarantee the achievement of global goals on recovery and recycle of packaging waste as well as the essential link with separate waste collection managed by Local Authorities.

# THE WORLD OF WASTE

## **What does waste mean?**

Waste means any substance or object which the holder discards  
or intends  
or is required to discard

*(definition: EU Directive 2008/98/EC of 19 November 2008)*

## ***What does our waste contain?***

*The nature of waste is not easy to define because it depends on area, on citizens' wealth and education and on the industrial production of the place. The daily amount of generated waste per inhabitant is undoubtedly increasing.*



**WASTE FROM  
PRODUCTIVE  
ACTIVITIES**



**SOLID  
URBAN  
WASTE**



# PAPER AND CARDBOARD

Paper and cardboard, leaflets, newspapers, magazines, books, exercise books, flyers, paper bags, corrugated boards, clean food containers, detergent, pasta and shoes boxes and every other kind of box and packaging cardboard in general.

## ***GOOD PRACTICES***

- Reduce size and volume
- Dispose waste as clean as possible
- Do not dispose different material
- Respect disposal rules provided for collection service

## ***News***

To produce a ton of paper from virgin cellulose you need: 15 trees, 440.000 litres of water and 7.600 kWh of electric power, while to produce a ton of paper from recycled paper only 1.800 litres of water and 2.700 kWh of electric power.  
90% of newspapers is printed on recycled paper!

## ***Future life***

From the recovery of paper and cardboard, you obtain paper and cardboard used to produce exercise books, magazines, books, goods and new packaging.



# GLASS

Glass containers, bottles, glasses, every size of pots, jars and containers.

## ***GOOD PRACTICES***

- Do not introduce different materials like china and porcelain, mirrors, crystal or light bulbs
- Rinse containers and remove caps and lids to dispose separately
- Do not dispose different material
- Respect disposal rules provided for collection service

## ***News***

More than a half of glass bottles used to contain products are made of recycled glass.

A bottle can be reused at least seven times!

Glass is crushed, melted and reused! Glass recycling means melting it at a much lower temperature than the one used for raw material and saving energy avoiding heating sand, soda ash and limestone required for its production. Do not underestimate also the saving on industrial production and disposal costs.

## ***Future life***

From the recovery of glass you obtain glass to be used mainly to produce new bottles.



# PLASTIC

Plastic bottles for water, drinks, oils and juices; plastic caps, cans and dispensers for detergents, cleansers and shampoos, bags, envelopes and boxes for food and no-food packaging; films, food packaging, polystyrene, blisters and shaped rigid boxes.

All packaging with the wording PE (polyethylene), PP (polypropylene), PVC (polyvinyl chloride), PET (Polyethylene terephthalate), PS (polystyrene).

## ***GOOD PRACTICES***

- Reduce size and volume
- Dispose waste as clean as possible
- Do not dispose different material
- Respect disposal rules provided for collection service

## ***News***

Plastic was discovered only 100 years ago. It is a light and resistant material but it degrades very slowly. If not well managed, it can be very harmful for environment.

From recycled plastic it is possible to obtain new objects and clothing: benches and urban fabric, outdoor toys for children, flower racks and other items, pile sweaters and blankets.

Using 67 water bottles you can produce a quilt for double bed.

## ***Future life***

From the recovery of plastic you can produce numerous items: park flooring, car bumpers and objects in general.



# ALUMINIUM and STEEL

Trays and containers for food storage and freezing; tin foils, chocolate wrappings, yogurt covers, spray cans for food and for personal care; food tins (meat, vegetables, tuna fish, puppy chow); caps and capsules of oil, wine, spirit and drink bottles; tubes for food or cosmetics; metallic caps of glass jars; crown caps of glass bottles.

## ***GOOD PRACTICES***

- Do not dispose different material
- Respect disposal rules provided for collection service

## ***News***

These materials are extracted from very uncommon minerals and for their production a lot of energy is required!

The weight of 19 thousands aluminium cans for conserves is sufficient to produce a car.

To produce a coffee maker 37 cans are needed.

## ***Future life***

From the recovery of steel and aluminium it is possible to produce new objects: coffee makers, pans, bike bodies and other.



# ORGANIC WASTE

Vegetal scraps, grass, branches, leaves, leftover food like vegetables and fruits peels, egg shells, fish and meat scraps, tea or coffee dregs, bread, dust, pet litters, dirty paper napkins and tissues.

## **GOOD PRACTICES**

- Do not introduce other materials, hot and liquid foods
- Do not dispose using plastic bags but only biodegradable
- Respect disposal rules provided for collection service
- Do domestic compost(\*)

*(\*) it means to dispose own organic waste through a natural process which allows to produce a good soil improver for garden and pots. People owning a yard, a vegetable garden or a piece of land (more or less wide) can carry on this measure.*

## **News**

From organic waste you can obtain a non-harmful and environmentally friendly manure to give back to soil all substances that farming and cultivation take away.

## **Future life**

From the recovery of organic waste you can produce compost: a soil improver for agriculture.



# EXPIRED MEDICINES and FLAT BATTERIES

Expired medicines without their boxes which can be recycled as paper.

Alkaline disposable batteries, nickel-cadmium batteries, coin cells, mobile phone batteries and other electric equipment, accumulators for cordless, video cameras etc...

## ***GOOD PRACTICES***

- Do not throw out in the environment
- Do not introduce different material
- Respect disposal rules provided for collection service

## ***News***

Expired medicines and batteries, if thrown out and not managed with accuracy could eject dangerous and pollutant substances.

## ***Future life***

These materials do not have a second life but their collection can prevent damages to environment.



# BULKY ITEMS and WOOD-IRON FROM ELECTRIC AND ELECTRONIC EQUIPMENTS (RAEE)

Urban waste which for their dimensions cannot be collected together with other items: furniture, doors, chairs, tables, carpets, mattress, box springs, bulky equipment, drying racks, refrigerators, freezers, PC and monitors, washing machines, electrical appliances.

## ***GOOD PRACTICES***

- Do not abandon these materials in the environment
- Bring these items to local collection centre and dispose in the appropriate container
- Benefit from the service of bulky items pickup

## ***News***

This kind of waste, when destined to special treatment plants, allows to recover woods, metals, plastic, glasses and other materials.

Moreover, some of the dangerous components can be correctly treated and renewed avoiding problems for environment and health.

## ***Future life***

From the recovery of bulky items you can obtain iron, woods and other materials to be destined to specific plants. Raw materials obtained after separating the electric and electronic equipment are destined to specific plants to obtain new products. Metals, for example, are destined to foundries, wood to industrial production of wood panels, glass to glassmakers.





# USED CLOTHING

Clean and in good condition clothing, shoes, bags and linen.

## **GOOD PRACTICES**

- Do not introduce different material
- Respect disposal rules provided for collection service



## **News**

All items in good condition are bound to developing countries.

Other materials can be destined to some industrial lines to produce tar paper, insulating panels and similar.

## **Future life**

From the recovery of used clothing different campaigns can be launched to assist mainly developing countries.

# EXHAUSTED OILS

Cooking vegetable oils, oil for food preservation.



## **GOOD PRACTICES**

- Do not dispose hot oil
- Do not dispose other kinds of liquid

## **News**

If thrown out in the environment, oil is very pollutant.

## **Future life**

Thanks to a correct separated collection and to the following regeneration process, vegetable oils can be used to produce biodiesel, lubricants, animal feed and cleaners.



## Why reducing waste?

Reducing waste is important because it represents a compulsory step towards a more sober lifestyle. Earth resources are not everlasting and will soon finish off if we don't reverse the trends of consumption and wastefulness.

Succeeding in reducing the amount of disposable waste and of separated parts will allow to re-consider services, for example reducing the collection regularity and consequently its costs.

It is only required to take some easy measures and run them in the daily life!

## How to produce less waste

- buy rechargeable products, like batteries, cleaners etc. and use on tap machines (for house cleaning and food) which are available in small and big shops
- use reusable bags, baskets, big boxes or crates to pack shopping, avoiding disposable bags
- use pages already written on one side to take notes on the other side and at home or at office do not print documents if not really necessary
- drink tap water
- use washable diapers for children
- recharge ink-cartridge for printers and copying machines
- buy longer life appliances which can be maintained and repaired
- compost kitchen waste and reuse as garden manure
- give unwanted clothing to your family and friends or bring them to charities
- do not use disposable items
- choose sustainable products: with easy-to-recycle and eco-friendly packaging, locally produced without the mistreatment of workers promoting energy saving
- do not throw away products but reuse them for a longer life cycle

# Key words

## **Waste**

waste means any substance or object which the holder discards or intends or is required to discard.

## **Waste management**

waste management: the collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker.

## **Prevention**

measures taken before a substance, material or product has become waste.

## **Recovery**

recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes.

## **Recycling**

measure to recover and treat waste to obtain products, materials and substances to reuse for their original scope or other aims.



# **NEW SKILLS TO SUSTAINABLE WASTE MANAGEMENT**