

**POLICY BRIEF 6**



# THE CONDEREFF PROJECT

"CONDEREFF - Construction waste management and demolition policies to improve resource efficiency" is an INTERREG Europe project that aims to accelerate policy work on construction waste management and demolition (CDW), improving resource efficiency in partners' countries.

Accordingly, the project aims to support the development of legislative frameworks and strengthen the capacities of public authorities in regulating C&D waste management, public procurement practices, landfill restrictions, recycling facilities, public perception, awareness and acceptance.

To achieve these objectives, the project will exchange experiences and practices, as well as studies on C&D waste, on how project partner regions can move towards adoption and greater exploitation of best practices and measures applied in the field of waste management. The overall objective is to transfer lessons learned to regional policies and action plans.

## POLICY BRIEF OVERVIEW

The CONDEREFF project brings together 8 partners from 7 countries to exchange experiences and practices on how to move from existing procedures in the management of CDW to the adaptation and greater exploitation of best practices and measures applied in the field.

This policy brief reports on the best practices identified in the context of Activity A4.1 "Identification of good practices". More specifically, the partnership has created categories of best practices according to the standards proposed by the European Commission in their Demolition, Construction Waste Management protocol (EC, 2016). The aim of this policy brief is to present exemplary practices of each category, to highlight the lessons learnt from all cases, and to provide recommendations for future use in other EU countries.



# CURRENT STANDARDS FOR C&D WASTE MANAGEMENT IN EU

These standards are obtained from the guidelines set by the European Commission according to the Demolition Construction Waste Management Protocol.

**Identification and waste characterization:** This standard constitutes a fundamental part of successful C&D waste management, defining the type of each C&D waste produced and indicate what is to be done with such waste.

**Separation at origin:** This standard defines the processes of separation and decontamination of C&D waste to increase its recyclability potential.

**Transparency, tracking and traceability:** This standard defines the measures required to increase the confidence of the recycled building materials.

**Transport/Storage:** This standard defines the transport of waste and the containers/storage bags used.

**Processing:** This standard ensures that materials will be classified and processed according to their economical or environmental value.

**Reutilization:** This standard re-specifies the purpose of use of the material ensuring that the material are appropriate for its new use.

**Recycling:** This standard defines the recycling capacity of different material.

**Quality:** This standard ensures that the products are environmentally and technically suitable for use.

**Applicable policies:** This standard identifies the creation of adequate regulations, enforcement, control, incentives in government procurement and awareness raising.

**Government Procurement:** This standard defines the measures in the use of recycled materials in competitions for work subsidized by administrators.

**Awareness:** This standard defines the tools to simplify processes and carry out awareness raising camping.



# CATEGORIES FORMULATED BY THE CONDEREFF PROJECT

The CONDEREFF consortium formulated categories according to the standards proposed by the Demolition Construction Waste Management protocol and collected the best practices of C&D waste management from partner's countries in each of these categories.

## **Category 1 - CDW IDENTIFICATION-SEPARATION-CHARACTERIZATION**

*This category includes good practices carried out mainly in the early stages of the work by construction/demolition companies.*

## **Category 2 - CDW TRANSPORT-TRACEABILITY-STORAGE**

*This category includes good practices mainly carried out by waste transport companies*

## **Category 3 - CDW PROCESSING-REUTILIZATION-RECYCLING-RECOVERY-QUALITY**

*This category includes good practices carried out by companies in charge of recycling or reusing construction and demolition waste, as well as by companies in charge of guaranteeing the quality of these processes and products for their new uses.*

## **Category 4 - CDW POLICIES-AWARENESS**

*This category includes good practices carried out mainly by public administrations.*

# BEST PRACTICE ON CDW IDENTIFICATION-SEPARATION-CHARACTERIZATION (Category 1)

**Title: Methodology/process sheet for reuse of construction products (resource audit).**

## Description

The objective of this methodological sheet is to propose a diagnostic approach of the materials used in constructions, to identify reliability and residual performance and to determine its capability for reuse. The main steps of the process are as follows:

- Characterization of the product(s) to be reused.
- Definition of the initial field of use.
- Identification of residual regulatory or employability and sustainability performance with respect to "initial employment" in view of a "future employment" within the same use and the same or different field of employment.
- Identification of the methods of proof that can be proposed to ensure the reliability of residual performance (depending on the stresses placed on the product in its "initial use").
- Precautions to be taken when removing, transporting, reconditioning and reusing the product.

## Benefits

**Environmental:** This methodology promotes reuse, which is at the top of the treatment hierarchy according to the framework directive on waste management.

**Energetic:** Reuse is a process which aims to extend the lifespan of materials and components. Reuse of materials and components results in a decrease to energy consumption as they are significantly more durable.

**Economic:** Reuse is generally labor intensive, so it can be used to create new job positions thus decrease unemployment.

## Limitations

The main limitation is the lack of confidence on re-used materials and components that can be alleviated through raising awareness campaigns. Another limitation is the lack of certification schemes for re-used materials in order to further promote their use.

## Recommendation for future deployment

To apply the methodology discussed in other settings, awareness raising campaigns and events should exemplify and demonstrate how this process can be applied, its benefits and drawback and the necessary institutional changes that should accompany its application.

# BEST PRACTICE ON CDW TRANSPORT-TRACEABILITY-STORAGE (Category 2)

## **Title: Waste collection in Municipality of Rome**

### Description

Waste collection services AMA S.p.A., allows citizens to dispose of their small quantities of demolition waste in “Isole Ecologiche”, a dedicated and fully equipped series of collection areas that are spread throughout the Municipality of Rome. These collection areas are designed for the collection of urban waste but they can also accommodate small amounts of “special” waste. At the moment, small demolishers, or artisans who carry out demolition activities, cannot dispose their waste in the Isole Ecologiche. However, the Municipality of Rome in collaboration with distributors of building materials try to implement simplified methods for the collection and management of waste deriving from the aforementioned activities.

### Benefits

**Environmental:** These measures increase the traceability and transparency of small quantities of demolition waste.

**Economic:** Multiple sites of collection allows small companies to manage C&D waste correctly at lower costs.

### Limitations

The complex regulations on waste management make it quite difficult to implement this new model of waste collection.

# BEST PRACTICE ON CDW PROCESSING-REUTILIZATION-RECYCLING-RECOVERY-QUALITY (Category 3)

**Title: ASVER consultancy firm**

## Description

ASVER is an engineering consultancy firm dedicated to quality control and technical assistance for all types of construction, both architectural and engineering, located in Massalfasar (Valencia).

## Areas of expertise

- In the water service test to check compliance with the Technical Building Code.
- In the plumbing pressure tests to check compliance with CTE-HS4 and the water tightness of the installation.
- In the control of concrete resistance in constructions.

## Benefits

**Environmental:** Reduction of environmental pollution through a) removal of dangerous waste(i.e. sulfur) from products and through the use of smaller and more accurate equipment (i.e. test tubes).

**Energetic:** The reduction of the size of the test tubes allows the reduction of the size of the chamber where the test tubes are kept, leading to a decrease in energy consumption. Compact storage of these tubes also leads to lower fuel consumption for transportation.

**Economic:** Fewer accidents at work due to the elimination of sulphur from products and reduced costs due to the lower energy consumption.

## Recommendation for future deployment

Regulations and bans on the use of sulphur and obligations to carry out all documentation electronically.

# BEST PRACTICE ON CDW- POLICIES- AWARENESS (Category 4)

## **Title: Guide for deconstruction and waste recovery**

### Description

OREE (FR) publishes a guide "How can we better deconstruct and recycle construction and public works waste?" that includes information and recommendations to promote good practices on waste management. The guide provides a holistic approach, covering all aspects of the regulatory framework regarding C&D waste management, from the national context to the specifics and offers operational good practices and know-how at different stages of the work site (before, throughout and after the project). In this guide, several case studies and recommendations are presented for different actors (contracting authorities, project managers, auditors, companies, local authorities).

### Benefits

**Environmental:** This guide gathers a large collection of C&D waste management practices in France, from basics to advanced technics, to establish effective processes and facilitate a shift in thinking of waste as a resource.

**Energetic:** Effective C&D material processes (low consumption and low flows of material and components performed by low tech equipment) lead to reduced energy consumption.

**Economic:** New jobs due to the introduction of new (or more) effective processes.

### Limitations

The guide can be used as an overview of the state-of-the-art practices in France. However, it does not go into detail in each topic addressed, rather provides link with experts that are more familiar with the topic.

### Recommendation for future deployment

The guide can be spread through awareness and training events, to support the toolbox of field actors and to create a list of contacts of the state-of-the-art practices at a national level.



# LESSONS LEARNT FROM OTHER CASES PRESENTED 1/2

The best practices of the report **also provided a series of valuable lessons on C&D waste management. These are:**

## **Lessons learnt concerning CDW identification, separation and characterization (Category 1)**

- Recycled products are slightly more expensive than new/raw materials leading to a decrease in their demand.
- Specific materials may be more difficult to separate on site for individual treatment. This significantly reduces the percentage of materials that will be recycled and can be re-used.
- Limited space in construction sites for waste separation hinders the amount of waste that can be subsequently re-used or recycled.
- Low prioritization (i.e. budget allocation) in projects for waste separation and management results in low initiative for proper waste management.
- C&D waste is not perceived as a waste stream that requires immediate attention and treatment, thus its treatment is low as a priority.
- Limited area of coverage by the current C&D waste management systems leads to piecemeal and often fragmented data.
- Absence of a unified market for recycled C&D waste leads to low demand for recycled C&D waste.
- Absence of financial incentives for recycling C&D waste results in a lack of commitment.
- The current network of CDW treatment facilities is not sufficient to cover the total amount of C&D waste generated.
- Lack of specific landfills for CDW resulting in disposal of C&D waste to general purpose landfills.
- Lack of coordination and latencies in decision making between multi-stakeholder entities.
- Extremely strict or non-existent regulatory frameworks for C&D waste management.

# LESSONS LEARNT FROM OTHER CASES

## PRESENTED 2/2

### **Lessons learnt concerning CDW transport-traceability and storage (Category 2)**

- CDW treatment plants create tensions with local population due to the fumes and pollution generated, making it to a large degree undesirable.
- Household renovation waste cannot be traced effectively by municipalities often resulting in disposal with other municipal waste.
- The complex regulations on waste management impede the implementation of new models of waste collection.
- The process of certification is significantly more expensive than obtaining new materials

### **Lessons learnt concerning CDW processing-reutilization-recycling-recovery and quality (Category**

**3)**


- Technical difficulties over the ability to reuse concrete, mainly due to blockades in pipes and quality of water.
- Administrative constraints resulting in restrictions in on-site recycling.
- Professional experts' doubts in using recycled products for new buildings.
- Incapability to treat all the waste generated resulting in disposal of large volumes to general purpose landfills.
- Distances between construction sites and processing plants increase economic and energy costs.
- Limited availability of storage for waste materials undermines the process of waste management.

### **Lessons learnt concerning CDW policies and awareness (Category 4)**

- Limited individual initiative to implement proper waste management techniques largely depending on the willingness of people directly involved in the construction.
- Delays in administration of fines and non-conviction of CDW management violators' results in further abuse.
- Low to non-existent political initiative to tackle the issue of illegal waste leads to more waste pollution
- Minimum Environmental Criteria for public buildings are very complex (as they cover a very wide range of aspects of the building itself) making them difficult to implement.

# RECOMMENDATIONS FOR FUTURE DEPLOYMENT 1/2

## Recommendations for CDW identification, separation and characterization (Category 1)

- Establishing more exhaustive controls by municipalities on contracted work.
  - Establishing a set of minimum criteria (in terms of percentages of recycled waste) and provide rewards in exceptional cases when these are over-achieved.
  - Implementation of certificates in new buildings accrediting excellence according to Waste Management standards.
  - Regular inspections in waste management companies to ensure that recycling processes and volumes produced are in accordance with a set of criteria.
  - Implementation of mandatory audits (in the events of demolitions) that quantify the amount of waste expected to be generated as well as the minimum of material to be recycled.
  - Common regulations through collaborative projects that discuss the management model in other countries.
  - Correct legislation and corresponding budgetary contribution for implementation of relevant practices.
  - Dissemination of results from university studies and good practices to raise the awareness of the relevant parties.
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# RECOMMENDATIONS FOR FUTURE DEPLOYMENT 2/2

## **Recommendations for CDW transport, traceability and storage (Category 2)**

- Implementation of legal obligations for C&D Waste management plants.
- Place of bans on the use of specific materials (e.g. sulphur) or restrict the use and decrease the environmental footprint.
- Obligations to carry out all documentations by electronic means to create an online database.
- Application and adaptation of relevant guides to the evaluation schemes of each country.

## **Recommendations for CDW processing, reutilization-recycling, recovery and quality (Category 3)**

- Correct treatment of composite and other waste materials according to mandatory European Regulations.
- Use of agencies specialized in the environmental law and practices to accredit the processes of waste treatment and waste classification.
- Use of synergies between different sectoral companies to establish collaborative action plans according to the specific needs of each country.

## **Recommendations for CDW policies and awareness (Category 4)**

- Use of appropriate software to disseminate common practices and standardized documents across different countries. Viable extensions could also allow for the collection and transfer of data through public platforms.
- Further dissemination of good practices among all countries for collaboration and raising awareness.

# Get involved

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## About us

The CONDEREFF project brings together 8 partners from 7 countries to exchange experiences and practices on how to promote green growth and circular economy through sustainable constructions & demolitions (C&D) waste management.

CONDEREFF is an INTERREG Europe project and is co-funded by the European Regional Development Fund (ERDF)

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