

CONDEREFF NEWSLETTER



CONSTRUCTION & DEMOLITION WASTE MANAGEMENT
POLICIES FOR IMPROVED RESOURCE EFFICIENCY

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Dear reader,

Welcome to the fourth edition of Newsletter series of the CONDEREFF project!

CONDEREFF is a European project funded by the INTERREG Europe Program that aims to share and disseminate best practices of waste management, reduction and recycling to stimulate and support their implementation in partners' territories.

In the following pages, you will find interesting materials describing the overall context and objectives of the project as well as information on the latest developments and events, and the upcoming ones.

Do not hesitate to subscribe on our newsletter channel at: <https://www.interregeurope.eu/condereff/>

We shall keep you informed about our progress and key outcomes through the project website, thematic events, and newsletters.

The CONDEREFF project team

CONDEREFF in brief

C&D waste streams represent **20-30% of all wastes generated in Europe**, reaching up to the two-third of the total wastes generated in some countries. Reuse rates vary across EU countries (10-90%). The Waste Framework Directive (2008) and the Construction 2020 strategy set a **70% recycling and reuse rate of CDW by 2020** and the Circular Economy Package also prioritizes CDW.



CONDEREFF aims to **strengthen regional capacities for increasing recycling and reusability rates of C&D waste** in the regions participating in the project.



The project brings together 8 partners from 5 EU countries which work together during the 5 years of the program to analyze the CDW context in the regions, understand the stakes and get a clear view about brakes and levers on which to play with to ease the implementation of solutions.

To cope with the objectives, it is needed to rethink the way products, materials and resources are designed, produced, used and disposed. Challenges are many: organizational, technical, logistical, cultural and economical, and call for investment in R&D,

new techniques and support of the overall value chain development.

From a planning perspective, the project is split into **two major phases**. The first, which has started in June 2018, focuses on studies & analysis, including policy learning, market potential for CDW, network mapping, tools and resources for monitoring, tracking management of CDW. The second, starting at the latest in June 2021, is about implementation of action plans and testing of solutions in territories.

News in French legislation

The French law on the fight against waste for a circular economy was published on February 10th 2020. It includes, among others, new obligations for construction and demolition waste. The main goal is the creation of an extended producer responsibility for construction products or materials of the building sector intended for households or professionals.

The goal is to ensure that C&D waste is recovered free of charge when it is collected separately and to ensure traceability of such waste.



Another measure allows reusable materials not to take the status of waste (materials as a resource). For this, they will have to be sorted directly on the site of rehabilitation or demolition by an approved

operator. The text also specifies that the sorting must be organized in 6 streams: wood, mineral, metal, glass, plastic and plaster. In addition, the content of the waste diagnosis is specified to promote reuse and recycling.

Finally, public procurement will now have to ensure the use of reused materials or materials from renewable resources in construction or renovation. This last point can be a very important lever for the development of reuse.

State of progress in Auvergne-Rhône-Alpes

The fourth semester is focused on two main activities for AURA-EE:

- Organizing a conference to promote a preventive building conception and the reuse of materials, in public procurement. Many stakeholders are being involved to share their experiences in the matter. Initially set to happen May 12th, the COVID-19 crisis has unfortunately impacted this event which is postponed.
- Preparing tailor-made trainings on C&D waste management to assist public bodies in writing their public procurement for rehabilitation or demolition of building, with a focus on reuse of materials (in cooperation with the Greater Lyon).

CONDEREFF at Austrian Re-Use Conference

“Golden key to Circular Economy” - this was the motto of the 7th Austrian Re-Use Conference on 30 January 2020 in Graz. Top-class presentations, animated discussions and artistic interpretations of repair provided a thoroughly inspiring day.

Re-Use is currently in high demand at the political level both in Austria through the new government programme with the participation of the Green Party and in Europe through the European Green Deal. Against this background, this year's Re-Use conference attracted 140 participants.

The need for solidarity

In his keynote speech, University Professor Ulrich Brand, Institute for Political Science at the University of Vienna, placed re-use in a larger context. He stressed the need for a transformation from an imperial to a solidarity-based way of life and a new understanding of prosperity. Ms. Margit Schratzenstaller-Altzinger of the Austrian Institute of Economic Research (WIFO) gave a vivid summary of the WIFO study on instruments for the promotion of repair services. Mrs. Juliane Theresa Müllner, staff member of the Ministry of the Environment, provided the background and explanations regarding the objective of the European Single Use Plastic Directive.

News from the CONDEREFF-Partner Region of Styria

Ms. Ingrid Winter, head of waste and resource management in the Styrian region, presented the regional Waste Management Plan Styria 2019 and explained the vision "Circular Economy Styria 2050", which focuses on reuse and waste avoidance.



An important aspect here is the reduction of construction waste, which represents the largest share of the waste volume. For this reason, the CONDEREFF project was the focus of the presentation. The region of Styria published a guideline for construction waste years ago. It contains numerous instructions for the various actors involved in the generation of construction and demolition waste, on the one hand for planners and architects, for building owners, for construction and demolition companies and on the other hand for recycling companies and landfill operators. She called for the increased use of recycled

construction materials, which is a prerequisite for the conservation of resources. The reuse of construction elements is also an important aspect of waste avoidance and the further use of resources. This has already been incorporated into Austrian legislation, as any construction elements that may be required in the course of the demolition of buildings must be offered on the market.

Building sector and industry

Catherine Gillier-Krajc (Federal Real Estate Company) and Markus Meissner (Project BauKarussell) demonstrated that re-use innovations of an international model character are taking place in the Austrian construction sector by means of the joint project MedUni Campus Mariannengasse, where a new research and teaching centre of MedUni Vienna is being built.



Greta Thunberg in the performance of a local theatre initiative

Now you would think that the day had been quite dry. But on the one hand, the various perspectives on the topic provided variety and a look beyond one's own nose. And in between, Lorenz Kabas and Jacob Banigan from "Theater im Bahnhof", who approached Greta Thunberg in their appearance, provided a real storm of laughter.



Finally, a look ahead: The date for the 8th Austrian Re-Use Conference is already set - mark 28 January 2021 in the calendar!

Stakeholder Meeting in Rome

“Towards a new regulation of the recovery cycle of the resulting inert materials from construction and demolition activities. Experiences in Lazio Region”

The meeting was a new opportunity for catching the interests by local operators managing C&D waste. The speakers did report on CONDEREFF project's current and future activity results. The discussion was focused on:

- how to use public procurement as an engine for the efficient management of materials deriving from Construction & Demolition;

- problems and proposals for the improvement in waste management in building site. “The Roma Capitale case. The Municipal and Regional regulations in force”;
- the DECORUM platform as an integrated management tool for the realization of public works;
- the companies’ point of view on recovery of aggregates.

During the meeting the DECORUM platform functionality was shown (Demolition & Construction Recycling Unified Management), concluded by ENEA in 2019 with the main goal of developing a tool of support, control and training useful for all figures in the construction sector, centralized in management, accurate in technical, economic and environmental assessments and widely accessible throughout the territory to recreate a virtuous path that spreads attention on the interventions selective demolition.



Another topic discussed was the point of view of the economic operators, that sparked a strong debate on the urgent need to embark on a process of regulatory reform in Italy and in Europe to enable what allows the environmentally friendly C&D waste management and at the same time the expansion of a profitable business.

ENEA at Ecomondo 2019

CONDEREFF Project with ENEA participated at Ecomondo 2019, the biggest fair in Europe on green and circular economy.



Ecomondo offers a wide program of conferences, workshops and seminars aimed at presenting evidence and new trends, at national and international level, linked

to the circular economy in different sectors such as construction, packaging, electronics and automotive. ENEA’s staff, with a stand dedicated to ongoing projects - among which CONDEREFF - hosted and met numerous national and international stakeholders.



In the dedicated workshop “Raw Materials in European context”, Antonella Luciano held a presentation on urban mining perspective and how CONDEREFF

project will help local authority to implement action plans and intervention strategies for improving resource efficiency in construction sector.



ENEA at the working tables of the Italian Interdisciplinary Committee on Waste and Health

During the 4th semester of the CONDEREFF project, ENEA participated to the fifth and sixth meetings of the Italian Interdisciplinary Waste and Health Committee (CIRS). The fifth meeting was organized in Catania on December 6th - 7th 2019 while the sixth was held in Montegrotto on January 24th - 25th 2020.

The Italian Interdisciplinary Waste and Health Committee (CIRS) is a working group, expression of civil, technical and scientific society, open to qualified experts (almost 100) in various disciplines and professional fields, with the aim to produce an engagement among the two different knowledge on waste and health and to provide more holistic, integrated and reciprocal scientific/technical awareness. The committee works in close contact with institutional bodies (Ministry of the Environment, Ministry of Health, Higher Institute of Health, ISPRA, ENEA, CNR, etc.) also to have a possible impact on future regulations.



All the CIRS meetings are structured in parallel thematic working tables and plenary sessions where the results of the two-days works are presented and jointly discussed. There are 8 operational working groups, each one related to specific waste typologies and/or management phase (e.g. eco-design, re-use, recycling, energy valorization, hazardous waste management, final disposal). The working group on recycling is coordinated by Antonella Luciano (ENEA) and it has a dedicated focus on CDW management with the aim of identifying benefits and critical issues in term of saved resources, safe and efficient management, environmental and health impact.



During the fifth and sixth meetings Antonella Luciano specifically focused on the critical issues associated with CDW recycling and showed the results of public and stakeholders perception on CDW recycling as obtained from Activity 1.4 of the CONDEREFF project whose goals and activities were also presented to all the CIRS members during the plenary session.

2nd European Development Forum - Circular Economy

The 1st National dissemination event of the project in Greece took place in a hall of the Divani Hotel in Larissa on January 25th 2020 with the participation of the Governor and executives of the Region of Thessaly, Ministers and Ministry executives. It was part of the 1st Session of the 2nd European Development Forum on "Sustainable Rural Development, Climate Change and the

Circular Economy", with the aim to introduce goals of the Region in terms of public works and circular economy.



CONDEREFF Partners at EXCO'20 in Valencia

CONDEREFF Project with the Polytechnical University of Valencia and the Faculty of Building Engineering participated in the scientific exhibition EXCO'20 located at the International Exhibition CEVISAMA Fair in Valencia (Spain) on 7th of February 2020. This meeting is consolidated as an annual key appointment for all those who are interested in the development of the construction sector.



The conference was focused in different projects related to the sustainable development of cities and the sustainable design of buildings. There was exposed a Guide for the Design of Low CO2 Emission Buildings from the Università degli Studi di Salerno, an innovation project

known as Construction of the Barraca of S. XXI in Solar Decathlon Hungary from AZALEA Team of UPV and CÉLERE Cities: Sustainable Cities.



The event was a great opportunity to make the project known and raise awareness to a large number of architects, engineers and personnel related to field of construction technology and management.

4th Regional Meeting in Valencia

Thinking about the Toolkit

The fourth regional meeting in Valencia took place on 27th of February. In this semester UPV develops specifications for a prototype toolkit that will enable public authorities to plan and improve relevant policies and practices on the basis of the collected data and statistics on how to track and trace C&D waste generated; the meeting was an opportunity to obtain information for this purpose.

Stakeholders, especially from CDW management and treatment plants and from ecological associations such as the association of employers for the selection and recycling of construction and industrial waste or Mediterranean Institute for Ecological Studies, showed a high interest in this toolkit. The toolkit could directly interfere with their activities and help them deal with the intrusiveness in the waste management which makes this not being done properly. The meeting was a great sharing where everyone participated from their point of view to try in order to outline a first idea of the tool.

Firstly, a primary idea of the toolkit was presented to the stakeholders as a computer-based tool. After the interaction with public authorities, the initial feeling was they were willing to cooperate as long as this method doesn't imply them any big effort, so the toolkit was conceived as a very simple digital platform where each actor of the value chain can make their contribution without taking too much time.

According to all participating stakeholders, one of the main problems in Valencia with CDW management is that despite the fact that there are some national legislations for its regulation, these are not properly carried out by the companies or even by the public authorities of some municipalities. This is because in most cases it is enough to get some papers to have the authority's approbation even if the practices performed later are not the best

possible, so it could be that the problem is a lack of binding. This results in big amounts of C&D waste which is not duly processed and ends up being dumped in illegal spaces or landfills. This is also a problem in the regions of the rest of the partners.

The toolkit to be developed aims to eradicate these bad practices through a blind test in each step of the C&D waste course, from the projection of the building until their arrival at the waste treatment plant, in order to can get the closure of the project. This platform should also tend to reduce the amount of non-binding paperwork currently handled and make the process more transparent as well as to force each actor to meet its responsibility in the best way possible. Different specifications regarding the online platform or toolkit were discussed among all the attendances:

- Each actor of the value chain must have access to the platform in each step of the C&D waste transit.
- The main data to be introduced by each actor in the waste transit should be the name of the project, the tonnes and m3 of expected/transported/received C&D waste and their LoW code (the European List of Waste according to Directive 2008/98/EC and Commission Decision 2000/532/EC).
- The platform will not allow the continuation of the waste management if there is any discrepancy in the quantities specified in each of the stages. This must also include a section to justify deviations or modifications from what was foreseen from the projection of the work.
- There should be a database of waste treatment plant managers including the LoW code of each waste they are able to treat. This is an important point because the waste manager to be registered in the platform must comply with all legal requirements, which would prevent the intrusion from waste manager that aren't entirely legal.

Furthermore, the option of aleatory external audits on site was proposed, as support of the online platform in order to avoid the possible complicity or favourable treatment between the different parties using the platform.



Finally, a second phase of monitoring of the treatment C&D waste is also needed in order to promote the building recycled material. Some early thoughts to promote the use of recycled material between the building contractors

could be the application of tax incentives, better margins in the computation of waste to be introduced in the digital platform or get CE marking for recycled aggregates. In Spain, there are some kind incentives for big amounts of recycled material or penalty if the amount of waste to be treated is under the minimums. However, there is an intermediate legal gap where neither incentives or penalties apply. The companies try to get this point to meet required minimums despite being far from best practices. The attendances consider that it is much more effective to bridge this gap leaving only two options: to receive incentive if the things are well done or penalty if they are not. The assumption is that when doing things badly is not cheaper than doing them well, companies will start to change their ways of proceeding. This is also the fairest situation for companies that already do things right.

UPV is currently working on the development of the specifications in order to be able to develop the prototype of the toolkit by the next semester.

News from the Czech Republic

The depository of the Pardubice Museum

The construction is one of the largest projects in the Pardubice Region and won the construction of 2019. 11 sub-collections out of the available 38 will be moved to the depositories of the East Bohemian Museum, which is about 40 percent of the number of objects they own. "They will have better conditions than at the Pardubice castle", said the museum director Tomáš Libánek.



The metal-clad building has minimal windows because collections do not need light. The windows are oriented to the south only, where the museum staff have offices. The walls are built to absorb any higher humidity. On the other hand, when the building is dry, moisture will gradually be eliminated again.



The depository is standing one meter above the original surface, it is not basemented so that it is not endangered by the lower humidity. The construction company brought 1,000 meters of concrete recycled material to the site instead of the commonly used quarry aggregate. The construction is also shock resistant. On the roof is a green garden with grass and bushes.

Source: www.vcm.cz

Construction recycling - the first catalog of products and materials containing secondary raw materials in the Czech Republic

Catalog of products and materials containing secondary raw materials for use in construction, was prepared in cooperation with a number of institutions such as the Ministry of Industry and Trade, Czech Agency for Standardization. Ministry of the Environment, Czech Technical University, Soil and Waste Hygiene SZÚ, ČKAIT etc. This publication aimed at explaining to all key participants in the construction process in a clear and comprehensible way, why to use construction and demolition waste, which raw materials can be obtained during demolition, which materials can be recycled and how to properly recycle buildings. The author is together with the authors team Ing. Jana Pavlů.



The catalog is divided into several parts: basic terms, materials with potential use in building industry, products containing secondary raw materials, legislative regulations and standards and procedures of certification, test procedures and standards.

An important complement to this publication is also the portal Recycle Buildings !, which can be found at the

website: <http://www.recyklujmestavby.cz/> as stated by author Jana Pavlů in her editorial.

Recycled concrete produced from up to 100% recycled rubble

The Czech patent, Rebetong, developed by Skanska and Erc-tech, has the right potential and can change the construction industry on a global level. Material has similar material properties as concrete, instead of stones is used demolition rubble with the nano admixture. This new technology use Skanska as the first company all over the world. This technology allows to build new buildings after the end of their service life.

Rebetong can solve a huge amount of demolition waste that at the moment this waste ended up on landfills.



At the same time, it will relieve the environment by reducing the carbon footprint, for example by reducing the extraction and transport required to transfer aggregates from a limited number of quarries to a concrete plant.

Skanska is the first construction company to put the patented Czech invention into practice. Currently has the certifications and standards for transport concrete and prefabricated walls on which Rebetong is officially producing. The material is currently ready to become a fully-fledged part of the construction of family and apartment houses, foundation structures or even the underlying layers of roads.

Bohuslav Slánský, Head of Technical Development and Innovation at Skanska, said: „In order to be able to use up to 100% recycled material in concrete and to promote wider use, a new national standard must be developed. We initiated its establishment in the first half of 2019 with the support of the Ministries of the Environment and Industry and Trade, and the actual process started in October. We are an active participant and hope to release it by the end of 2020.“

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EDITORIAL

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