

CIRCULARSEAS

NEWSLETTER #3

“Recycling... Doubts, beliefs and myths”

How to overcome the problem?

Pag. 2-5

“In a Conversation With”

For this Edition of our newsletter, we talked to two companies for whom sustainability is a concern. One of them from Portugal (Lavandaria D. Fernanda) and another from Spain (Ternua), who they told the CircularSeas team their story and what actions they have taken to become more sustainable and inspire others to do the same.

Pag. 6-8

7 tips to recycle better and faster!

Pag. 4

“CircularSeas 4th Project meeting”

After 12 months of research work in their separate teams, the complete International team of the Circular-Seas Project came together for a project meeting on-line.

The main focus of discussion is how to transform plastic waste into useful products for the Maritime Industries.

Pag. 9

“Recycling... Doubts, beliefs and myths”

How to overcome the problem?



In Portugal, Recycling has already entered most of the daily routines of all of us. However, some doubts, beliefs and myths remain that lead some citizens to not trust the entire process, from separate collection, through sorting centers to recycling industries, compromising Portugal's performance in terms of recycling targets. The questions "Can I recycle this or not?" or "What really happens to all the stuff we put in those recycling bins?" leave some citizens confused and are often still a critical factor for greater and better participation in recycling.

Myths like "Sorting waste is a waste of time; once collected, the different types of waste are mixed together again and they all go to landfill or are incinerated"; "There's no point in recycling, It all ends up in the same lorry"; "It is necessary to wash the packaging before putting it in the recycling bin"; "There are not enough containers for recycling" or "Recycling uses more energy than it saves" still persist, even 25 years after the creation of the Portuguese Integrated Packaging Waste Management System (SIGRE). Let us try to debunk those myths, contributing for an active, informed and truly committed recycling participation, forward to a sustainable and circular future.

Municipal Solid Waste (MSW) Management – a brief picture from Portugal

In 2019, the production of MSW in Portugal rose to 5 281 thousand tons. In terms of per capita, the value reached 513kg/inhab.year, which means, each citizen produced about 1,40kg of municipal waste, daily! A huge amount of materials wasted and sent to our bins.

The main management operations in Portugal had the following distribution: 33% for landfill, 33% for mechanical and/ or mechanical and biological treatment, 19% for energy recovery, 11% for sorting centers and 2% for organic recovery (composting or anaerobic digestion). It should be noted, compared to previous years, a stabilization of the amounts separately collected and sent for recycling, a trend that is not in line with the investments made to bring recycling bins closer to the population, resulting in a non-compliance with the goals established for Portugal in terms of waste management. Over the years, there has been an effort by the entities responsible for the management of MSW to improve the accessibility of citizens to the separate collection service, either by placing more equipment such as bring banks or through the densification of areas with door-to-door schemes (direct collection of materials from households).

In 2019, Portugal counted 55 455 Bring Banks distributed by all municipalities (on average, there is a Bring bank for each 180 inhabitants), 243 Civic Amenity sites (centralised sites for the separate collection of MSW and recyclables), in addition to several areas with door-to-door separate collection circuits.

Portugal has, in general, a good infrastructure network for recycling, with 30 sorting centers in operation, with sufficient capacity to process all recyclables materials currently collected (such as paper, cardboard, plastic, glass or metal). Obviously, the heterogeneity that country presents, as a result of its geographical dispersion, demography and socioeconomic conditions, is reflected in the network of equipment and infrastructure available, and in the differences observed between MSW management systems (SGRUs).

However, despite the positive evolution in improving accessibility to the separate collection, optimization of the efficiency of the installations in operation and the development of awareness campaigns, the results achieved in terms of recycling are still very far from the established European and National goals. In 2019, separate collection from plastic, metal packaging, paper and cardboard, and glass, presented a per capita of 48 kg/inhab.year, with a substantial margin of growth.

In conclusion, unsorted collection, and its negative impacts, is still prevalent (in 2019, around 4 million tonnes of mixed waste were collected, whereas the amount of recyclables materials reached almost 573 thousand tons. Again, there is a large opportunity to improve separate collection and sorting), preventing the recovery of raw materials, jeopardizing the fulfilment of the binding objectives defined in terms of recycling and strongly hindering Portugal's goal to achieve carbon neutrality by 2050 and an efficient and productive economy in the use of resources, based on the sustainable use of waste.



Recycling more and better... an easy and essential daily behavior

It is essential to demystify preconceived ideas and misconceptions about separate collection, betting on initiatives and actions that allow the citizen to stay on track when it comes to recycling and protecting the environment.

➔ *7 tips to recycle better and faster:*

- You do not need to wash the packaging before placing it in the bin
- You should flatten the packaging to optimize space in your recycling bin
- Food cans should be placed in the yellow bin
- Beverage packaging must go to the yellow bin
- Your pet's food bag should go to the yellow bin
- Broken glass cups cannot go to the green bin
- The Styrofoam must be placed in the yellow bin



LIPOR (www.lipor.pt), Intermunicipal Waste Management Service of Porto, founded in 1982 as Municipality Association, is responsible for the management, recovery, and treatment of the MSW produced in the municipalities of Espinho, Gondomar, Maia, Matosinhos, Porto, Póvoa de Varzim, Valongo and Vila do Conde. Lipor promotes and spreads good practices among the population and other stakeholders, always on a basis of great proximity and openness to the citizen, reinforcing the transparency of the whole process, sharing, and improving knowledge in a permanent commitment to a change in attitudes and beliefs.

Similar throughout the country, the recycling cycle begins when citizens put recyclable materials (plastic, metal packaging, paper and cardboard, glass) in the bring banks, or in the civic amenity sites or take part in the door-to-door separate collection. Then, dedicated single-flow or multi-flow vehicles ensure the selective collection of the different materials by forwarding them to the sorting centers where a more rigorous selection is made by type of material (eg. PET, PEAD, mixed plastic, plastic film, cardboard packaging for liquid food, ferrous and aluminium), through mechanical and manual processes. All the materials separated at the sorting lines are then pressed into bales and sent to the recycling industries afterwards. A strict bale inspection control plan is complied with, ensuring the quality of the materials shipped. Subsequently, recyclers use those materials to integrate them into the manufacture of new products (e.g: the recycled paper will be used to produce new paper, tissues, paper towels; the recycled plastic will be used to produce rugs, polyester clothing, picnic tables, new bottles; the recycled glass will be used to produce jars and bottles, fiberglass insulation materials). Important to note that some materials received by sorting centers are not recyclable or have no conditions to their recycling. It is therefore important to properly sort the materials, as the wrong stuffs could contaminate the other recyclable material or can result in the failure of the sorting lines.

To know how the LIPOR Sorting center operates <https://www.lipor.pt/en/recover/multimaterial-recovery/> or see <https://youtu.be/5U6uygiP54E>

To clarify any doubt or misconceptions about recycling, the **Lipor's Recycling polygraph** (<https://www.lipor.pt/pt/perguntas-frequentes/o-poligrafo-da-reciclagem/>) is a very helpful tool. Additionally, Lipor's website has plenty of useful and funny information, such as tips, stories, videos, and activities on Environmental Awareness to help citizens to reduce waste, improve recycling and keep protecting the environment. Discover and enjoy <https://www.lipor.pt/pt/sensibilizar/se-positivo/>

Lipor Waste Observatory (<https://www.lipor.pt/en/recover/lipor-waste-observatory/>) Communicating, controlling, and monitoring the operational indicators are the major goals to promote the engagement of the population and reach a sustainable waste management. By consulting this webpage, citizens can be informed with up-to-date and reliable statistical information on the management and treatment of MSW, reducing and reuse performance and avoided CO₂ emissions.



The **DATACENTER** is a tool for monitoring all the separate collection projects implemented. Obtaining detailed data, in a continuous and integrated way, makes it possible to act close to the citizen and keep him as part of any project, contributing to an efficient and optimized resource management.

Transforming the behavior of citizens, facilitating the adoption of small daily habits that contribute to sustainable and circular waste management is one of the main goals assumed by Lipor.



Recycle yourself (<https://recicla-te.pt/>) is the campaign that holds citizens about the importance of recycling, making each and every one responsible for the care of the planet.

We still have a challenging path ahead, very ambitious, but crucial for the future of our planet. It is essential to transform our behavior. Recycling is indispensable, but even more relevant is to consume less and better - just what is really necessary - and reuse as much as possible the materials we already have in our home, giving them new lives and functions. **Rethink, refuse, reduce, reuse, repair, recycle**, should be part of our daily routine. We all have a role to play in the push toward sustainability and protecting the environment and planet, a planet that we all live on. It takes time but if we start now, **We can change**.

Article by: Susana Lopes, LIPOR

In a conversation with

For this Edition of our newsletter, we talked to two companies for whom sustainability is a concern. One of them from Portugal (Lavandaria D. Fernanda) and another from Spain (Ternua), who they told the CircularSeas team their story and what actions they have taken to become more sustainable and inspire others to do the same.

Laundry business from Leiria sets an example of environmental responsibility and respect for the Planet.

Traditional both in the way they serve their costumers as well as in the way they care for each piece, D. Fernanda Laundry shows how you can start “small” but consciously. The Eco-friendly behavior adopted, but not advertised, by this family business exemplifies just that by demystifying the traditional approach through its actions and anticipating the advances taken by the industry.

There are several ecological behaviors that each person, as a responsible citizen, can exercise. D. Fernanda laundry, taking its first steps with a new management, sees these actions as a duty, and its practice as a way to encourage and inspire others to do the same. Since the beginning that the fight against waste was a priority through simple practices of recycling, supply of water through a dispensing system for employees, air drying clothes through “air currents” created, minimizing energy consumption, encouraging the return of hangers, among others. However, the new manager Frederico Santos felt that the environmental footprint left by the laundry could be reduced, especially in terms of the consumption of plastic films used in the packaging of clothes, system which they had always depended upon to ensure that the clothes arrive at their final destination in their best condition.

Combining environmental awareness with the willingness to use advanced technology within the sector, Frederico Santos sought to achieve a reduction in water and energy consumption by adopting an automatic scheduling of detergent dosages, thus guaranteeing the efficiency of the washes and the reduction of the number of washes of a given piece.



Also, in an attempt to decrease water pollution while increasing the efficiency of the washing, they replaced the regular detergents, for ones containing exclusively vegetal surfactants, inserted in refillable packages. These products are available to the costumers, who can benefit from a professional vegetable product, refillable by a system that the laundry will adopt in the short term.



Finally, perhaps one of the most impacting measures taken, the reduction of plastic use was accomplished by the creation of a washable textile bag with two purposes: on one side the customer delivers dirty clothes "the best days are with DIRTY clothes", and on the reversible side, the customer collects clean ironed clothes "CLEAN Conscience, it all comes out in the wash". The bags are available to the customers who can purchase or receive them as a gift. Certain that each gesture makes a difference, D. Fernanda's laundry hopes to set an example and inspire more and more people, because in the words of Frederico Santos "each action counts, each action is an inspired customer who inspires so many others".

Webpage: www.lavandariadfernanda.pt

The Ondarroat Node is located in the northern part of Spain, within the Basque region. There we find Ternua, a brand that has stood for sustainable innovation since its foundation in 1994.

They produce versatile, high performance and technical garments based on materials, fillings, and treatments that are respectful of nature and the environment. Their goal is to protect adventurous people with environmental awareness in their outdoor activities, while protecting nature at the same time.

The company is a pioneer in committing to circular economy and implements already a wide variety of recycled materials in its clothes, as for example plastic waste from sea, fishing nets, PET plastic, feathers, walnut shells or discarded textiles, among others. It was also one of the first European brands to eliminate toxic chemical substances (PFCs) for water-repellent treatment of its garments in 2016.

As in the Basque Region itself, the connection between mountains and sea is within the DNA of the company. Redcycle and Seacycle are two of the projects they carried out in collaboration with several fishing associations during last years with the aim of developing textiles for outdoor activities. In **Redcycle**, launched in 2015, Ternua recovered 12 tons of discarded fishing nets from the Cantabrian Sea and recycled them to clothing yarn.



Apart from pants and leggings for hiking, highly technical apparel was developed within the project, such as the Blackcomb Competition Mountain ski suit (**ISPO Award Gold Winner 2019**): <https://www.ispo.com/en/awards/ispo-award/2019/snowsports/-gold-winner/TERNUA-BLACKCOMB-SKI-SUIT>

The **Seacycle** project began in 2019 and since then, Ternua has collected marine plastic waste with three fishing vessels along the basque coast. These are mixed with household post-consumer waste from the yellow container to produce technical garments, used for their outdoor t-shirt collection:



Ternua has been supporting the CircularSeas project from the beginning and provided valuable contributions to Regional Business Case Workshops as a successful example of a company committed to sustainability.
Webpage: www.ternua.com

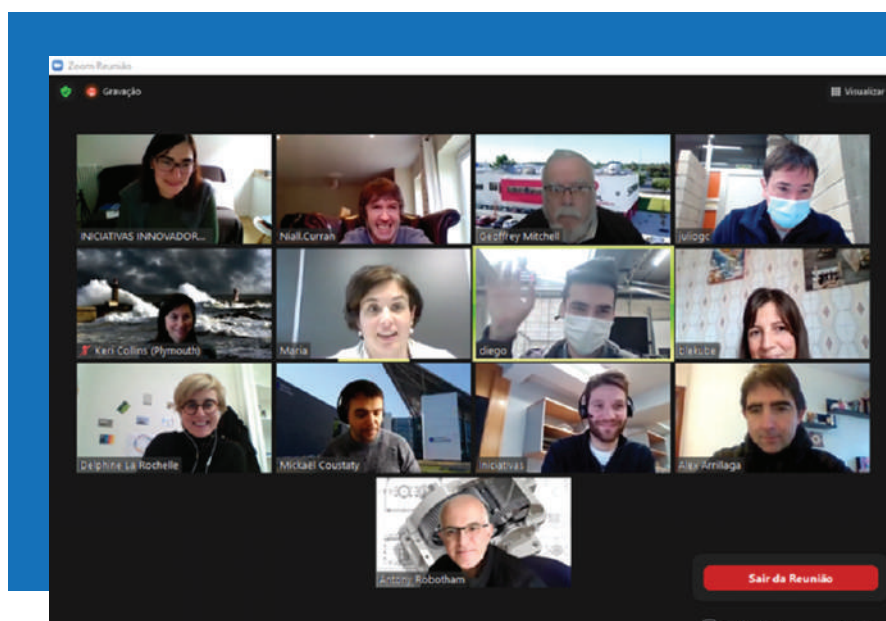
Article by: CIRCULARSEAS Team

CircularSeas 4th Project meeting held online on January 12th

After 12 months of research work in their separate teams, the complete International team of the CircularSeas Project came together for a project meeting on 12th of January on-line, with the presence of the representatives from Spain of Azaro Fundazioa, Leartiker S. Coop and Universidad de Vigo, from Ireland of Cork Institute of Technology from Ireland, from the UK of the University of Plymouth from Portugal of the Politécnic of Leiria, and from France of the Communauté d'Agglomération de La Rochelle, to share their ideas and results. The main focus of discussion is how to transform plastic waste into useful products for the Maritime Industries, which includes fishing, boat building as well as leisure activities such as diving, surfing and boating.

The novel feature of the CircularSeas project is that the 8 nodes are exploring how the power of 3d printing can add value to the plastic waste and encouraging the strong interaction of the stakeholders. This meeting drew together the results of stakeholder meetings held in each of the nodes of the project along the Atlantic coast. The meeting discussed plans for a transnational workshop to be held online in February so that stakeholders and researchers can fine tune the business plans for each node. The Lead Researcher of the CircularSeas project at CDRSP-IPLEIRIA, Professor Geoffrey Mitchell said "it was exciting to see how the stakeholders in each node had generated different concepts of the products to be fabricated from the plastic waste."

The CircularSeas project is co-financed by the European Regional Development Fund through the Interreg Atlantic Area Programme. It is based on 8 nodes located around the European Atlantic Coast. The CircularSeas provides a website, CircularSeas, available in Portuguese, English, French and Spanish so interested parties can see the project outputs as well as the contributions and activities of each the nodes around the European Atlantic Coast. Newsletters are available on a bimonthly basis.



The project started on 1 April 2019 and ends on the 31st March 2022. The project has a total value of €2M.

Contact us for Further Information.

Article by: CIRCULARSEAS Team