

lipor



WASTE PREVENTION

Waste Prevention Working Group

ACTIVITIES 2018



Vila do Conde
Câmara Municipal



FOREWORD

In Europe, we currently use 16 tones of material per person per year, of which 6 tones become waste. Although waste management continues to improve, the fact remains that waste production has been growing (except for the period of economic crisis experienced by most countries).

The EU approach to waste management is based on "waste hierarchy" which establishes a sequential priority order in the waste policy definition and in waste management operationalization and, Waste Prevention is the main priority identified in this policy.

Thus, considering Prevention relevance in waste management, LIPOR within its Integrated Waste Management and its Circular Business model, develops three key issues: processes change to eliminate waste at production, waste reduction at source enhanced by mentality changes and products reuse as a way of save resources. So, we believe that the best waste is that which is not produced!

Reflecting this commitment, LIPOR's Strategic Plan 2015-2020 promotes a set of projects and initiatives to mobilize communities, municipalities, organizations and other stakeholders. The fundamental lines are composting (home and community), food waste, life cycle analysis, monitoring, awareness raising and communication of good practises. In addition, LIPOR has participated and organized European Waste Prevention Week (EWW) in its geographic area, since its 1st edition in 2008.

Considering waste prevention importance in a sustainable waste management, LIPOR's positioning about PERSU 2020+ review is clearly oriented towards a strengthening of a Prevention Policy that reflects its strategic relevance as a fundamental component in the implementation of Policies by European Commission, such as the Circular Economy Package.

Also, the United Nations 2030 Agenda that guides the global priorities for Sustainable Development, has defined one of the Sustainable Development Goals (SDG), as "Ensure sustainable consumption and production patterns" - Goal 12.

If we take as reference important studies that suggest a demographic increase of 9 to 10 billion inhabitants in 2050, an increase in natural resources extraction, a reduction of critical raw materials and an increase in waste production, a sustainable economic growth will not be possible, unless we implement Strategies based on the principles of reduction, reuse, recovery and reintroduction of resources in economy, keeping them in circulation as long as possible and, we have no doubt, that this is possible with a strong commitment to Prevention.

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2018 IN REVIEW...

LIPOR and its Associated Municipalities, have been acting as catalysts for change, through a set of policies, programs, and actions that promote LIPOR's advance towards a more sustainable future



15 422 tons of diverted waste

900 Stakeholders



30 000 involved People

3 239 tons of CO₂e avoided emissions



Execution Degree Prevention Activities Plan 85%

BIOWASTE

SUSTAINABLE GARDENS

Mobilizing citizens towards sustainable green spaces maintenance is crucial. This attitude promotes biodiversity, reduces maintenance costs, as well as phytopharmaceuticals consumption, biowastes production and increases natural green spaces!



10 Institutions recognized by good gardening practices!

Citizens and technicians **training** is fundamental for the change to happen!
27 training sessions.



Partnership with **Tribunal Judicial da Comarca do Porto** by offering **130 native trees and bushes** in the scope of “**FUTURO – Projeto das 100.000 árvores**”.

Participation in ReVerSe Project in partnership with Vila do Conde Municipality and schools in the Municipality.



BIOWASTE

URBAN GARDENS

Urban gardens play a vital role in cities, not only by restructuring spaces but also by promoting biodiversity. Sustainable food, well-being, community spirit, family economy and social inclusion are also key factors.



2 Workshops: Whole urban garden vegetables cooking | Tips for Urban Gardening

More than **300 families** were trained in Organic Farming, in the scope of Horta-à-Porta Project



ADCE's Urban Garden (Espinho) in 2018, cultivated over **40 fruits and vegetables varieties**, representing about **420 Kg** of food.

Urban Gardens monitoring showed that more than 95% of the plots are in use.



Urban gardens improvement is one of the key requirements. In 2018 two studies were developed: Biowaste production in an urban garden plot | Evaluation of heavy metals concentration in the soil and fruits and vegetables of urban gardens in Porto district (in partnership with FCUP).

“Man’s livelihood comes from framing...”
(popular proverb)



BIOWASTE

FOOD WASTE

Food waste is one of the main fractions treated in waste recovery units. Reducing and extending food life-time are crucial actions to minimize the food waste problem. This horizontal problem concerns all of us, so the creation of synergies with environmental and social partners is a key factor.



10 Restaurants and catering establishments implemented Dose Certa program and methodology (partnerships with ITAU and Sinal Mais)

Embrulha. was implemented in **Porto and Matosinhos Municipalities** | **68 Restaurants** | **34 663 Packages** | **2,67 ton CO2** | **12,72 ton of recovered food**



Food waste reduction is also applied to **LIPOR's events** | **180 kg of donated food**

Extending food life-time is the aim of Zero Desperdício, a **network of food donation!**
29,04 ton of donated food!



Raise-awareness and educate citizens and technicians about sustainable consumption and sustainable food plays a fundamental role in minds changing. | **15 Workshops/Trainings** | **2 E-learning Trainings** (Lipor Academy/FCNAUP)



BIOWASTE

LOCAL VALORIZATION

Biowaste local valorization through home and community composting or green waste parks is essential to close organic matter cycle.

14384 composters are implemented in families, institutions, companies and schools.



6694 ton/year of local recovered biowaste.

Green Waste Park | Gorgolito Park
(São Pedro de rates | Póvoa de Varzim)

21 users deposited green wastes in this park.



Composting tailor-made solutions:

Electric Composter

(Hospital Magalhães de Lemos | Porto)

Electric composter treated **600,36 biowaste (kg)** produced at the hospital facilities.



BIOWASTE

LOCAL VALORIZATION

Composting tailor-made solutions: Community Composting

About **30 community composting sites** are active. In 2018, started a new approach to **community composting**. Currently monitoring and measurement methodology is being tested in a residential condominium.



Seminar “Biowaste: Today’s solutions and future perspectives”, focused in complementary strategies for Biowaste Prevention



Awareness-raising is one of the key factors | **83 activities**

Train to ensure that composting process meets technical requirements for the obtention of a quality compost | **105 Training courses/Workshops**



Process monitoring and **measurment of biowaste diversion** | **28% of families** with a composter received a **follow-up visit**



REUSE AND RECOVERY

PRODUCTS REUSE AND RECOVERY STRATEGY

One of the Working Group key areas was LIPOR's Products Reuse and Recovery Strategy .



The Strategy includes **six priority areas**, such us:

Reuse and Repair Networks; Mapping, development and promotion of second hand markets; Extending Products Life-time; Training; Communication and Awareness-Raising and Monitoring.

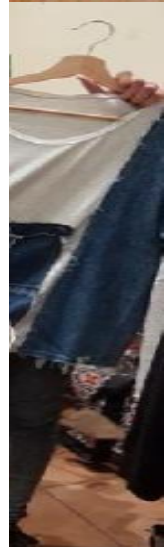


Execution Degree of LIPOR's Reuse Strategy 2018: 98%

Upcycling Lipor - Pilot-project which aims to **increase circularity of end of life materials** by making them available for upcycling practises | **Partnership with Era Uma Vez Upcycling Projects.**



Workshop in partnership with "Era Uma Vez - Upcycling Projects", in the scope of European Waste Week Reduction. The workshop aimed to promote Upcycling practises | Production of furniture through creative reuse of **60 kg of paper** (magazines).



REUSE AND RECOVERY

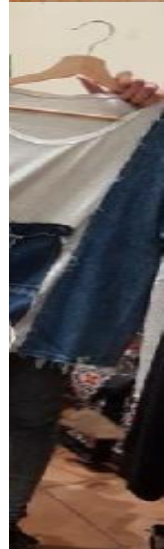
PRODUCTS REUSE AND RECOVERY STRATEGY



ESTRAEE - Cross-Border Sustainable Strategy for the Management of Waste Electrical and Electronic Equipment. ESTRAEE project is co-financed by the European Regional Development Fund (ERDF) | Lipor participates in the project which aims to boost the management of waste electrical and electronic equipment (WEEE) strengthening reuse and recycling at recycling centres facilities. For this purpose a EEE recovery centre will be installed in Formiga Recycling Centre. All the recovered EEE will be donated to social partners.

Establishment of an Electrical and Electronic Equipment Recovery Centres network (CREW) | 1st centre is a partnership between LIPOR, ERP Portugal and Santo António Educational Centre

The project includes educacional, training, sustainability and social areas | **Recovered EEE are donated through SEMENTE – LIPOR’s Volunteers Association**



WEEE production is one of the greatest problems of modern society, so the extension of EEE life-time is crucial. In 2018 were recovered **383 kg of WEEE** (7 washing machines, 5 dishwashers and 10 small appliances).

6 trainings/awareness-raising events
12 trainees.

REUSE AND RECOVERY

PRODUCTS REUSE AND RECOVERY STRATEGY

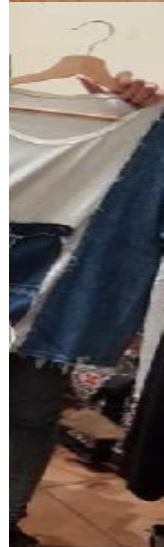


It is essential to assure that citizens know the available second hand stores and markets. In partnership with Associated Municipalities, **the main second-hand stores and markets in Lipor area were mapped and classified.** The information is available in Lipor's website.

“Recycled Vintage” - Lipor and Porto Municipality in partnership with Wageningen University carried out a study into the contribute of second-hand clothing markets to waste prevention in Porto | Second hand markets and stores have a great variety of products, but they are unknown by the majority of the population. The respondents mentioned the lack of information about this type of stores and markets, as well as their environmental benefits.



The lack of information regarding final destiny of separately collected used clothes (whether donation or commercialization) generates distrust, which limits its use. **The study found that 69% of the times the purchase of an used product replaces the purchase of a new one, in an equally satisfactory way.** The study also allowed to map the process material flows, revealing that most of the items are exported, reducing the positive impact that they would have if remained in national territory.



REUSE AND RECOVERY

PRODUCTS REUSE AND RECOVERY STRATEGY



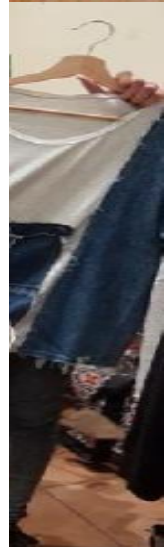
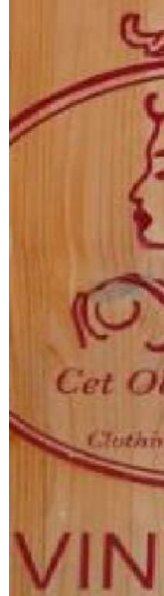
LIVROS4EVER - This initiative aims to **extend second hand books life-time**. The first spot directed to Lipor's employees and visitors, was installed in LIPOR's Headquarters Building and is now fully operational | This initiative promotes reading habits and the reuse of used books.

Reduction and Reuse indicators in Lipor's Waste Observatory - In 2018 was included the multimaterial fraction indicators: paper/cardboard; plastic; glass; metal; waste; wood; electrical and electronic equipment; tires and composites (ex: toys). The reported data refers to reused materials through Lipor's and partner entities projects.



Participation **Urban Resource Centres** interview in the scope of **Urban Agenda Partnership on Circular Economy (UAPCE)**, conducted by Oslo City - UAPCE Coordinating Member.

In the scope of Reuse and Recovery Strategy, a partnership proposal was presented to Porto Municipality and a first joint meeting was held.



COMPREHENSIVE MEASURES

LIFE CYCLE ASSESSMENT (LCA)

Life cycle concept is essential for sustainability, since it incorporates several aspects that allow an objective analysis of processes or services. LCA is a technique that evaluates environmental issues and potential environmental impacts (eg. resources consumption and environmental consequences of emissions) throughout a product's life cycle (from cradle to grave) .



“Life Cycle Assessment of Nutrimais Compost”, a two years project that will be concluded in January 2019.



The study began with environmental impacts evaluation of compost (Nutrimais) production process, in comparison with other composting scenarios and other final destinations of biowaste.

In the second year the main actions were: development of Life Cycle Inventory; environmental impacts evaluation of compost (Nutrimais) production process; identification of improvement opportunities and proposed actions draft.



LCA of Cemetery Waste Valorization Process (1st LCA study) - the update of the study was concluded.



COMMUNICATION AND AWARENESS

LIPOR GENERATION +

Generation + aims to encourage good waste management practices adoption and sustainability increase in the target institutions. The project relevance, already recognized by the Ministry, motivates the constant search to find solutions for a better Environment.

EDUCATION | 230 registered Institutions | 117 have already been awarded with “Coração Verde”, of which 50 Institutions have received this award during 2018! Renewals of certification were also visible and took place in 21 partner institutions.



LOCAL |The partnership with Ermesinde Parish Council and Valongo Municipality is clearly focused in the local community.

“Street without non-addressed mail”, was one of the European Waste Week Reduction initiatives: In a street of Ermesinde Parish, people were invited to use the mail box sticker “Non-addressed mail”. It was possible to reduce paper waste in **83,6%**. This street was awarded as the first **“Street without non-addressed mail”** in Lipor area.



COMMUNICATION AND AWARENESS

LIPOR TV – THE CONSUMPTION COURSE

Sustainable consumption is a tool for involving population in the adoption of a more rational use of resources (in various contexts of everyday life).



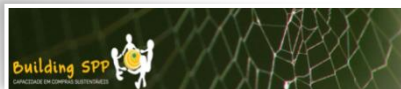
The sessions have been very productive, achieving its goals | **47 sessions** with **1704 participants**.

Although the planned itinerancy was not fully complied, EWWR of 2018 provide an opportunity to increase awareness-raising.



SUSTAINABLE PUBLIC PROCUREMENT

Lipor has undertaken a wide range of projects that reflect its real concern in terms of Ecological / Sustainable Public Procurement. “Green Purchasing” promotion is a strategic priority. Thus, ecological character specifications, as well as privileging the products included in the National Public Procurement Strategy have been gradually incorporated in tender procedures.



COMMUNICATION AND AWARENESS

SUSTAINABLE PUBLIC PROCUREMENT

FUNDO AMBIENTAL



3CIRCULAR LIPOR – LIPOR Circular Purchasing Centre | project co-financed by Environmental Fund, aiming to promote the introduction of circularity criteria in public procurement procedures. The following services have been developed and tested concerning their circularity: acquisition of catering services, cleaning services and construction of Information Technologies Building. The knowledge dissemination was accomplished through 2 seminars / workshops.

In order to carry out purchasing processes, a benchmarking analysis was carried out on best practices at a European level . Subsequently, after identifying the requirements that the products/services must meet to comply with high circularity standards, some suppliers were contacted to see if the market could offer the proposed solutions.



Contracts: 9,34%
(target 21%)

Spent value: 7,39%
(target : 16%)

Articles: 18%
(target : 24%)



Regarding Sustainable Purchasing indicators map, there was a decrease in the number of contracts/procedures, compared to the defined targets. The Extended Purchasing Processes led to a reduction in the number of procedures, generating a decrease in value (unit price) by the effect of scale, and administrative savings.

COMMUNICATION AND AWARENESS

EUROPEAN WASTE WEEK REDUCTION (EWWR)

The thematic focus of the 10th edition of European Waste Week Reduction was **Hazardous Waste Prevention: time for detox!**

The European Week for Waste Reduction (EWWR) is an initiative promoting the implementation of awareness-raising actions about sustainable resource and waste management during a single week. It encourages a wide range of audiences (public authorities, private companies, civil society as well as citizens themselves) to get involved.

EWWR took place from 17 to 25 de november and LIPOR was EWWR Coordinator in its geographic area, in which were registered **222 actions!**



“EWWR 2018 Training Course” - In order to motivate potential Action Developers and to support them in organising and implementing EWWR actions, a training was held. The session was attended by about **60 participants**.



Let's Clean up Europe!

The Let's Clean Up Europe (LCUE) campaign is active throughout all Europe. Clean-up actions contribute to solving the littering problem, but also raise awareness about the amount of waste produced, the importance of waste prevention and waste reduction!

Between 01 march and 30 june took place LCUE, with a focus between 11 and 13 may. 8 clean up actions were registered through Lipor, although none has taken place in its influence area.



COMMUNICATION AND AWARENESS

COMMUNICATION PLAN

The dissemination of Lipor's and its Associated Municipalities Prevention Strategy, namely its projects, initiatives and their impact on waste management is fundamental for a better monitoring and knowledge of the developed work. It is worth highlighting the involvement in EWWR, as the main action of this plan. In this sense, a communication plan based on internal and external media was defined.

Internal: Intranet, Internal Newsletter, Corporate TV , E.News, LIPOR website (PT) and Mobile (Prevention area) |



External: E.News, Social networks , LIPOR website (PT+EN) e Mobile (Prevention area).

64,419 accesses to Lipor website (Prevention area)

Execution degree: 64,4%
(anual target: 100,000)



187 articles related to Prevention have been published!

Execution degree : 100%



WASTE PREVENTION TRAINING

TRAINING

Environmental training is one of the most important instruments to raise awareness of citizens and organizations, so that they can make conscious decisions. Environmental issues must be incorporated in the organizations strategies, becoming a relevant subject which is also beneficial to their image in the eyes of community.



Tailor-made training programs: Bio and Prevention

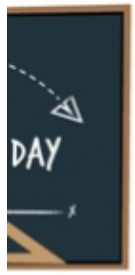
Classroom training (8 trainings | 290 trainees)

E-Learning (2 trainings | 35 trainees)

Weekly participation in "Terra à Terra" in Porto Canal TV show "Olá Maria".



186 trainings, in scope of the projects: home composting, organic farming, sustainable gardening and sustainable cooking (in partnership with the Portuguese Nutritionists Association).



FORMAÇÃO PARA A PREVENÇÃO

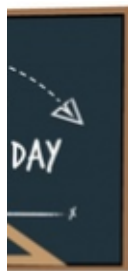
REU2ARTE – REUSE WORKSHOPS

Creative Reuse continues to be encouraged in many institutions, as well as at Lipor! The number of citizens interested in learn more about creative reuse techniques has been increasing. Creativity and imagination are keywords to extend materials life-time. The advantages of this process are huge, since it increases circularity, reduces raw materials consumption and promotes sustainability. A trend that is here to stay!



37 Workshops

2 066 participants



IN CONCLUSION...

Waste Prevention, plays a key role in LIPOR's and its Associated Municipalities integrated waste management strategy, in which circularity is the key word. Prevention, can take three distinct forms: quantitative prevention (reduction of produced waste quantity), qualitative prevention (reduction of hazardousness) and reduction of environmental impacts throughout the life cycle. Prevention includes reduction and reuse efforts and seeks to avoid waste production, contributing to the reduction of manufacturing, treatment and disposal costs, natural resources consumption and greenhouse gases emissions.

This report presents the main prevention projects and initiatives. In 2018 **Lipor's Prevention Activities Plan presented an execution of 85%**.

During 2018, the Prevention Group held 10 meetings.

In addition to the projects and initiatives mentioned throughout this document, other activities / initiatives were developed:

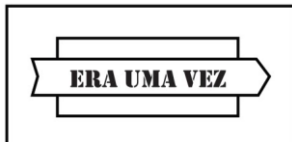
- Participation in the EWWR Coordinators Meeting held on 22 May in Brussels;
- Public presentation of preliminary results of the study "Evaluation of 2nd hand markets impact on Waste Prevention" carried out by Wageningen University on July, 14;
- Participation in webinars about EWWR project;
- Preparation of Prevention Activities Plan and Indicators Map in line with Lipor's Strategic Plan 2015-2020.

*Better information brings better decisions.
This is one of the keys to a more sustainable world!*

OUR STAKEHOLDERS



CITIZENS



The future of life on earth depends on our ability to take action (...) Surely we have a responsibility to leave for future generations a planet that is healthy, inhabitable by all species.

David Attenborough