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ECODESIGN: news on research projects & legislation in the EU

INTRODUCTION

The ECOSIGN project has created an Eco-Innovation Skills Alliance in four European countries (Slovenia, Spain, Romania and Italy) with the aim of addressing the lack of knowledge of designers coming from three economic sectors - food packaging, electronic goods and clothing/textile- in Eco-design (design for the environment: is the integration of environmental considerations in product development).

For such reason, the ECOSIGN team has created a quarterly Newsletter to exchange knowledge and information focused on those sectors in order to reduce environmental impact during the products life-cycle, including the use of raw materials and natural resources, manufacturing, packaging, transport, disposal and recycling.

Much more information about the Eco-design topic can be found on Ecosign website, Twitter, Facebook and Linkedin.

Ecosign project will end on 31 October 2018 with the main result to create a new joint curriculum and a training course for European Eco Designers that will add skills and competences to the designers regarding environmental technologies.

FUTURE OF EU ECONOMY IS GREEN

On December, 2nd 2015, the European Commission adopted an ambitious program about Circular Economy (http://ec.europa.eu/environment/circular-economy/index_en.htm, http://eur-lex.europa.eu/legal-content/IT/TXT/PDF/?uri=CELEX:52015DC0614&from=EN).

The program objective is arrange some initiatives that could act as the missing joining link in product lifecycles with benefits both for the environment and the economy. Furthermore, this way, consumers could choose more durable and innovative products, improving energy saving too.
The program will boost recycling and reuse in the entire lifecycle of the product: from production to its use and waste disposal, till the employment of the so called “secondary raw materials”. In this sense, the objective is to cut energy consumption down as well as to reduce greenhouse gas emissions.
in order to reach this goal, product planning and design play a fundamental role in determining environmental impact as well as in making recycling or fixing easier, in increasing its durability etc.
Future actions foreseen by the European Commission on this topic are:

- Publishing a Directive about Eco-design within 2016, that keeps into consideration product peculiarities;
- Measures aiming at fostering Eco-design, to promote fixability, durability and recyclability of products, along with energy efficiency;
- Offer of incentives that could stimulate the use of eco-friendly products, e.g. in food packaging, as well as supporting actions for the development of recovery and recycling programs;
- Quality standard development on “secondary raw materials”;
- Measures to boost the use of production waste obtained in one sector as a raw material in another one.

FOOD PACKAGING

Sustainable Food Packaging

EU researchers have developed an advanced food packaging system that reduces food waste and contamination, and limits the future environmental costs of packaging materials.

Global food wastage is estimated at 10% of total food produced, and a large part of this is caused by food spoilage in shops. Innovative packaging may hold the answers to reducing this waste and extending the shelf life of fresh foods.

The ISA-PACK project aimed to develop sustainable and intelligent packaging for perishable fresh food produce. Efforts focused specifically on packaging fresh steak, extending the shelf life and quality, enhancing safety and reducing food and packaging waste.

First, the project tested biopolymers produced by bacteria from biological waste as a replacement for currently used plastic films. They also incorporated antimicrobial compounds for longer shelf life, and scaled up that process to industrial scale.

Another major aspect of ISA-PACK led to the creation of printable sensors to monitor freshness and temperature over time. These were tested and validated on a meat packaging production line and through consumer surveys. One of the sensors was patented.

Finally, the project completed a life-cycle assessment as well as an economic and societal assessment for the products developed during its lifetime. This innovative packaging system reduces wastage, increases shelf life and improves food safety for European consumers.

For further information: http://www.isapack.eu

European Commission Aims to Amend and Tighten Rules on Food Contact Materials

At an international conference that took place in mid-June this year, Bastiaan Schupp, legislative officer at the European Commission./Depart. on Health and Food Safety, highlighted that the Commission will introduce new amendments to EU Regulation 10/2011 on plastic materials and articles intended to come into contact with food.

These amendments - the 6th and 7th - will come into force in the third quarter of 2016 and the first quarter of 2017 respectively and will include migration limits for three oligomers and aluminum and reduce the current limit for zinc. will likely include migration limits for three oligomers and aluminum, and will also reduce the current limit for zinc.

TEXTILE & CLOTHING

Automated sorting system for waste textiles

The Swedish Environmental Research Institute is developing a research project to create an automated sorting plant to ease high-quality textile recycling.

Every year 4.3 million tons of textile waste is used in the EU as landfill or incinerated. Over 120 000 tons of new textiles are injected into the Swedish market, but just barely 5 percent is recycled and only around 20 percent are gather for reuse. The goal is to eventually create sorting capacity for 45 000 tons of textile recycling.

The project will also test and evaluate new possibilities for how to collect textile and textile waste, as well as examine how targeted communication efforts can contribute to an increased textile collection.

www.ivl.se

Mitigation of microplastics impact caused by textile washing

Pollution of marine ecosystem caused by plastics is a problem that has become particularly relevant in recent years, mainly for two reasons: the direct impact these pollutants have on the environment and the possible effect on human health. The presence of plastics fragments has been hugely detected nearby shorelines.

Microplastics are plastic fragments smaller than 1mm and they represent one of the new and more alarming sources of marine pollution. There are several sources of microplastics: one of the most significant is domestic and/or industrial washing.

Mermaids project co-financed by European Program LIFE+ has the aim to contribute to mitigation of the impact on the European marine ecosystem of the microplastics produced during the washing of synthetic clothes.

More info at: http://life-mermaids.eu

Transforming textile waste into secondary raw materials

The Resyntex project, financed by the EU, aims to create a new circular economy concept for the textile and chemical industries by creating a strategic design for a complete valuea chain, improving collection of textile waste, enabling traceability of waste processing. Further information: http://www.resyntex.eu

ELECTRONICS & ELECTRIC SECTOR

Ecodesign and Energy Labelling Measures Covering Professional-use Refrigeration Equipment Enters into Effect EU-wide

From 1 July 2016, new Ecodesign requirements began to apply to business use refrigerators in the EU as set out in Commission Regulation 2015/1095 which was published in the EU's Official Journal on 8 July 2015. The Regulation establishes ecodesign requirements for the placing on the market of professional refrigerated storage cabinets and blast cabinets (Annex II), of condensing units (Annex V), of process chillers (annex VII).

Thereafter, later dates apply to further stringent Ecodesign requirements, as specified in Article 3 of the Regulation and respective annexes.

The equipment covered by Regulation 2015/1095 will, furthermore, have to disclose their energy efficiency levels and other parameters – such as cooling capacity – both online and in instruction manuals.

Organic electronics

The TRIPODE Project (Italy) developed by ENEA has recently received a 13 Bln Euro financing for a second cycle of activities by MIUR and Regione Campania. This projects aims to develop high performing OLED (Organic Light Emitting Diode), flexible photovoltaic cells and smart RFID (Radio Frequency Identification) labels. Organic electronic is printable on paper or plastcs. OLED can be used to realize flat, curved and flexible even transparent lamps for smart windows, while organic solar cells can be incorporated in sides of buildings, in fabrics or clothing articles.

According to a recent research conducted by IdTechEx these high-tech products have a market size of 26 Billions of USD that is expected to grow to 69 Billions of USD by the next decade.

ALL SECTORS

Belgium and the Circular Economy Model

From 2013 Belgium is developing a strategic long-term vision for a sustainable development and has therefore created and ambitious framework to manage the challenges posed by the Circular Economy. Treatments and Recycling of waste have become a way to improve companies' competitiveness and Belgium developed a technical expertise and network of companies in the sector of material primary transformation, collection of waste and innovative techniques of recycling and reuse of materials. Currently, about 35% of waste is Recycled, 15% started to composting, as much as 48% is converted into energy by incineration, and only 2% is landfilled.
Even in terms of circular economy, the Federal strategic vision is implemented at regional level, the Flemish Region and his "Vlaams program Materialenprogramma "(Flemish Program for materials), the Walloon Region and its competitiveness cluster Greenwin and the Brussels Region with NEXT its operational program. The most relevant Economic sector for circular economy in Belgium are: green economy, plastics, energy, textile, construction and mobility.

Partners of the Ecosign Project

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