

Vegetable Fair in the municipality of Viana do Castelo Rwanda prioritizes green growth on secondary cities Nudging at Virgin Atlantic – an application of behavioural sciences

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## FOREWORD

### Sustainable cities

Sustainability is a European orientation of reference and, over the last decade, it has been the subject of reflection regarding the public evolution of public policies within urban sustainability.

The concepts of sustainable development and urban sustainable development are strongly linked, implying a broad perspective encompassing the fundamental principles of development: economic, social, environmental, cultural and governance. Cities have the potential to give a significant contribution sustainable development, considering that an increasing proportion of the Portuguese population lives in urban areas. The valorization and strengthening of the national urban system, resulting from an efficient, balanced and hierarchical structuring of the urban territory are, therefore, fundamental conditions for the achievement of the goals and priorities established by Portugal and Europe, inherent in the 2020 Strategy and the 2014-2020 Partnership Agreement: promote the competitiveness of the national economy, social cohesion and sustainable development of the country.

The "Europe 2020" strategy was created as a partnership between the European Union and the Member States, with a set of goals focused on the priorities of a smart, sustainable and inclusive growth. Therefore, five major interlinked goals were established for the EU by 2020 in the fields of employment, research and development (R&D), climate change and energy, education and the fight against poverty and social exclusion. In this context, the Sustainable Cities 2020 strategy emerges, aiming to highlight a path to a territorial development centered on the cities and on the critical role that they play in the territorial structuring, development and cohesion. The implementation of this transversal strategy depends on the active involvement of the various agents that intervene in the city and on the valorization and strengthening of the national urban system.

#### COMPETE 2020

http://www.poci-compete2020.pt/documentacao/detalhe/CidadesSustentaveis

## SUSTAI

## SUSTAINABLE NEWS

### Awareness in the Planalto Beirão

## Association of Municipalities of the Planalto Beirão Region

Within the Framework of the national strategy for the waste sector set up in PERSU 2020, the Association of Municipalities of the Planalto Beirão Region (AMRPB) promoted, in April and May, a set of education and environmental awareness actions aimed at the school community and at the community in general. The activities focused on the theme of waste and had the goal of promoting good waste management practices and the adoption of environmentally responsible behaviors.

The "Environmental Education for Art 2016" project was held in April at the Aquilino Ribeiro Basic School, in the municipality of Viseu, and had the direct participation of 113 students. The project started with the realization of theoretical workshops and thematic workshops (educational dance, dramatic expression, music expression and plastic expression) to the participating school classes, with the project culminating in a final show. In the theater play, titled "Total Waste" the students were the key players, sharing the stage with professional actors, musicians and dancers, providing a show that allowed transmitting the message of adequate waste management in a very effective way to their families and to the community in general.

In May, "Educational Sessions in Schools" were promoted in 5 municipalities in the region (Santa Comba Dão, Penalva do Castelo, Seia, Sátão and São Pedro do Sul), with a total of 468 students. The educational sessions consisted in the promotion of two activities about waste management and selective separation, in particular a participatory session and an educational game. The activities provided leisure moments, learning and promoted a team spirit among the participating students, raising awareness about waste management as well as the importance of each person in the adoption of more sustainable practices.

The 3rd edition of the Planalto Beirão Day took place on May 20th, in the Urban Solid Waste Treatment Center facilities, in the municipality of Tondela. The activity was attended by 134 students, accompanied by teachers and school assistants from primary schools of the municipalities of Tábua, Sátão and Seia, seeking to acquaint the participants with the Association of the Municipalities of the Planalto Beirão Region and raise awareness for the environmental issues, promoting the adoption of environmentally responsible behaviors. As in the current year, the education and awareness rising actions will be streamlined over the next few years, aiming to reach the 19 associated municipalities.

#### <u>AMRPB</u>





### Fruits and Vegetables Market in Viana do Castelo

Municipal Services of Basic Sanitation of Viana do Castelo (SMSBVC)

In continuation of the "Shining Fair - Vianense Pride!" campaign, the SMSBVC promoted a set of communication and awareness actions for the traders and consumers who participate in the Fruits and Vegetables Market in Viana do Castelo, next to the Municipal Market.

The goal of the campaign was to promote the separation and correct disposal of waste in order to clean the enclosure at the end of each market, so that the result is of pride and satisfaction of all parties involved. The sensitization teams that worked during the weekly market aimed to raise awareness among merchants and visitors about the importance of working together to maintain the cleanliness of the market by distributing bags for the waste and clarifying potential doubts.

Thus, the SMSBVC aim, with the collaboration of all people, to reinforce a tradition of cleanliness and pride in the Fruits and Vegetables Market of Viana do Castelo, making it a national reference.

SMSBVC





### Communication, environment and behaviour

A scoping study on the links between public communication, environment policy implementation and behavioural science



## HIGHLIGHT PUB

The European Environment Agency has recently published a manual about the importance of communication in supporting the implementation of environmental legislation by encouraging public participation and the acquisition of environmentally responsible behaviors by the population. The design and revision of this publication was made by Formato Verde. The report is available for consultation at:

http://www.eea.europa.eu/highlights/ communication-tools-can-foster-greener-behaviour

## DID YOU KNOW THAT...

In 2014, the population living in urban areas accounted for 54% of the world's total population and this proportion continues to increase? It is estimated that, in 2017, even in developing countries, the majority of the population will live in urban areas.

World Health Organization



## Winners of the "Discovering the Oceans" contest

The "Discovering the Oceans" contest was a challenge issued for all young students, from Elementary and Secondary Schools, to present creative and original stories within the 7 Principles of Ocean Literacy theme, ending on March 31st.

In total, 24 creative and original stories from 12 schools from North to South of Portugal were submitted to the contest. The stories explored, in different ways, the 7 Principles of Ocean Literacy, and the young writer's commitment to the creation of the stories was clear in every one of them. Therefore, the "Discovering the Oceans" contest was the motto for more than 100 young students to focus on topics as diverse as sustainable fishing marine biodiversity, the importance of the ocean for climate regulation, among others. The contest has completed the selection phase of the winning stories, taking into account the following criteria:

a) Creativity;

b) Innovation;

c) Interpretation of the oceans literacy principles;

d) Proper application of the concepts;

e) Impact/awareness to the theme.

The winners were contacted by email and the final results were released in the social networks. After the choice and dissemination of the 4 winners, the stories were illustrated by national and international illustrators.

Formato Verde





## ARTICLE

# Ecomondo and key energy to meet the "green" challenge faced by the industrial world

From 8th to 11th November, the Rimini Fiera expo platform will increase the ability of its brands to cover all the lines indicated by the European regulations on environmental issues (water, energy, waste, etc.) from a business point of view.

Following two drivers: circular economy and climate change. The new Monitoring & Control and Material Handling, Lifting Solutions & Logistics sections are arriving.



A great platform with two main lines and a single objective: guiding enterprises towards the "green" revolution. ECOMONDO and KEY ENERGY (Rimini Expo Centre, (Italy) from 8th to 11th November) will take place on its twentieth edition, expanding the expo showcase under the banner of two key points: climate change and circular economy.

The organization mechanism of the huge Rimini event therefore takes off again from the great success achieved in 2015, when no less than 103,514 trade visitors attended (1.68% more than 2014). This figure also contains the planned rise of the foreign component, with almost 11,000 industry/trade members and 500 buyers from all over the world. Also worthy of mention were the numerous representatives from Iran and China, whose visits were organized along with the Ministry for the Environment.

Next to Ecomondo/Key Energy traditional expo sectors such as Waste – treatment and moving; Waste – recycling and services; Waste – collection and removal; Biobased Industry; Reclaim Expo; Global Water Expo; Air this edition will feature the outstanding new sections Material Handling, Lifting Solutions & Logistics and Monitoring & Control and a series of widespread experiences on the circular economy; plus, a focus on energy efficiency in industrial terms with White Evolution and applicative urban solutions in the Sustainable City area, which will be a sort of hub featuring tangible policies launched in the various contexts of efficiency, from energy to the building trade.

The former will be dedicated to machinery and equipment for the handling and lifting of materials, organic and inorganic waste, goods and people (it is worth remembering that from the 2015 edition the sector dedicated to waste handling and lifting was unified with the sector dedicated to recycling in the construction world, resulting in Inertech, a unique vertical project including the entire industrial chain: from the equipment for waste handling to components and recycling of C&D and roadworks material and their use).

The second expo area on the other hand will regard the monitoring of pollutants in the "Air and Water" matrices. This project was born from the need to exploit an indispensable component for all the activities that orbit round ECOMONDO, with the objective of becoming the key appointment for the Mediterranean Basin in this sector.

The qualified conference program, always one of the core features of the Rimini event, will focus on determined cultural promotion of secondary material and the circular economy. As always, the Technical Scientific Committees will be guided by Prof. Fabio Fava (ECOMONDO) and engineer Gianni Silvestrini (Key Energy). There is great anticipation for the contribution from Willy Verstraete, professor emeritus, world-renowned scientist and president of the International Water Association's Cluster for recovering resources from municipal purifiers. Verstraete's talk will be entitled "From 'waste' to 'used' water treatment plants: towards resource recovery facilities".

ECOMONDO and KEY ENERGY will be enriched and complemented by other high profile events: KEY WIND, the key Italian event for companies in the wind energy sector; H2R Mobility for Sustainability with large automobile brands their avant-garde models: methane and LPG fuelled cars and electric or hybrid models.

For further info or for complimentary ticket requests: mrkgestero@riminifiera.it; infovisitatori@riminifiera.it Web site: www.ecomondo.com – www.keyenergy.it

#### ecomondo, keyenergy



## **CURRENT EVENTS**

### Rwanda prioritizes green growth on secondary cities GGGI

Earlier this year, the government of Rwanda launched a document aiming to support the country's Green Growth strategy and serve as an implementation tool for its Economic Development and Poverty Reduction Strategy. The National Road Map for Green Secondary Cities Development in Rwanda was developed in partnership with the Global Green Growth Institute (GGGI).

The launch event included a panel discussion entitled "The Way Forward on the Green Urbanization of Secondary Cities in Rwanda", which provided a discussion of ideas and positions on the development of cities as centers of economic and social development. James Musoni. Minister of Infrastructure. emphasizes that the document provides for simple but concrete actions that facilitate the mission of moving to a green economy as an approach to the country's economic transformation. The Minister further emphasizes that the development of Rwanda's secondary cities as centers of economic growth with balanced development opportunities will enable sustainable livelihood and poverty reduction.

Following the launch of this document, GGGI and its partners in Rwanda will begin to build the necessary capacity to support the implementation of the actions contained therein, as well as prioritize the actions to be developed in investment plans and fundable projects.

<u>GGGI</u>



China plans to reduce meat consumption The Guardian

The Chinese Ministry of Health has issued new health recommendations advising people to consume between 40g and 75g of meat per person per day. This recommendation is part of a plan outlined by the Chinese government to reduce meat consumption by 50%, in a move the government hopes will help reduce global warming.

At the global level, 14.5% of greenhouse gas emissions come from maintaining and feeding cows, chickens, pigs and other animals – this sector is responsible for more emissions than the entire transport sector. In addition, livestock emit methane, a very potent greenhouse gas, while the harvesting of trees and the use of fertilizers release large amounts of carbon.

If the new guidelines are followed, the equivalent emissions of carbon dioxide emitted by China's livestock industry would be reduced by 1 billion tonnes by 2030.

The Guardian



### The European Environment Agency researches quiet areas in Europe EEA

In Europe, in addition to the other forms of pollution most commonly mentioned, noise pollution is a considerable challenge faced by the population. Transport and industry are the main sources of concern. In fact, despite a superficial approach to the theme may suggest that noise is less significant than other forms of pollution; prolonged exposure to noise can adversely affect human health and adversely affect ecosystems. European legislation aims to reduce noise pollution and also highlights the need to preserve areas that are currently affected. The Environmental Noise Directive (which considers ambient noise as unwanted or harmful external noise created by human activity, including noise emitted by means of transport, road, rail and air traffic and industrial activity) aims to reduce noise pollution, while at the same time highlighting the need to preserve quiet areas. These quiet areas can be found not only in rural areas, but also within some of Europe's busiest cities. The Directive defines a quiet area in open territory as a space, defined by its local or national authority, which remains largely undisturbed by traffic noise, industry noise or recreational activities.

The so-called quiet areas are an important component of the European sound landscape and can offer relief, far from noise pollution. In order to identify the quiet areas of Europe, the European Environment Agency has issued a new report providing a perspective on how these can benefit human and animal populations living in regions currently affected by noise pollution.

Today, outside of the cities, about 18% of Europe can be considered quiet, but 33% remains potentially affected by noise pollution. The report stresses that while action has been taken to protect quiet areas in the open, much remains to be done to reduce noise pollution and help protect human health and biodiversity.

#### <u>EEA</u>

World Bank Report analyzes impact of water scarcity on the economy World Bank

A new report published by the World Bank concludes that water scarcity, worsened by climate change, could hamper economic growth, boost migration, and trigger conflicts. The combined effects of growing population, increased incomes, and the expansion of cities may make demand for water rise exponentially as supply becomes more erratic. The negative impacts of climate change on water could be neutralized through the implementation of better policy decisions, with some regions potentially being able to improve their growth rates by up to 6% through better management of water resources. Improving water management can

prove rewarding. When governments respond to water scarcity by increasing efficiency and allocating up to 25% of water to more valued uses, such as more efficient agricultural practices, losses decline dramatically and in some regions may even disappear.

Policies and investments that can help countries to adopt more reasonable economic strategies for water and climate change include:

• Better planning for the allocation of water resources;

• Adoption of incentives to increase water efficiency, and

• Investments in infrastructures, for greater security in the supply and availability of water.

<u>World Bank</u>

EEA Report | No 14/2016

Quiet areas in Europe The environment unaffected by noise pollution



European Environment Agency

## The Impact of Water Scarcity on GDP



### New report offers a look at transport and mobility in Europe EEA

The European Environment Agency has recently published the Signals 2016 report, which looks at transport and mobility in Europe. The transport sector plays a key role in the everyday lives of all Europeans. In addition to the transportation of people, it is essential to consider the transportation of goods, clothes, and even waste, in a cycle that contributes to our economy and quality of life. However, increasing use of fossil fuel-dependent airplanes, cars and other means of transportation is contributing to the worsening pollution, endangering both the environment and the health of populations. The Signals 2016 report explores the different ways in which Europe's currently carbon-dependent transport sector can be transformed into a clean and intelligent mobility system. Consumption of fossil fuels, such as oil, is not only responsible for the emission of greenhouse gases and other pollutants, contributing to climate change, but also makes the European economy more vulnerable to price fluctuations and global energy supply.

The decarbonisation of Europe's transport sector will require a combination of measures, ranging from improved urban planning and available technology, to increased use of alternative fuels, innovative research, and stricter application of existing rules. Transforming the European transport sector into a clean and intelligent mobility system will be a daunting task, but it is imperative to take this step, taking into account the impacts of the current transport system on the environment and public health.

<u>EEA</u>



OSCE promotes a counterterrorism conference

#### OSCE



The Organization for Security and Co--operation in Europe (OSCE) has recently held a counter-terrorism conference. The conference was held in Berlin between May 31st and June 1st, and was attended by over 300 experts from around the world who discussed the prevention and fight against violent extremism and the radicalization that leads to terrorism. Within these topics, participants addressed the tools for dealing with the return of foreign terrorist fighters and possible ways to reintegrate them into society. The Conference also hosted a forum for exchange on international trends in the fight against terrorism, with a special focus on the role of youth and women. Preventing and combating violent extremism and radicalization have consistently been a priority of OSCE counter--terrorism activities over the years, with particular emphasis on the human rights aspects and the role of civil society. In the framework of the event, OSCE produced, with the collaboration of some of the experts participating in the conference, two awareness-raising videos that can be seen on the organization's YouTube channel at <u>https://www.youtu-</u>

#### be.com/user/osce/videos

#### <u>OSCE</u>

### Nudging at Virgin Atlantic – an application of behavioural sciences

#### Virgin Atlantic

Virgin Atlantic Airways, in partnership with the University of Chicago and the London School of Economics and Political Science, recently promoted a study in which it evaluated the implementation of behavioural change strategies - nudges - in fuel consumption and CO2 emissions resulting from their daily activity.

The study involved 335 flight captains and the data of 40,000 flights made during 2014.

The captains were divided into four groups, one of which corresponded to the control group (G1), while the others were subject to three different nudges: (G2 - Information) providing information on their performance in fuel efficiency and CO2 emissions during their operation; (G3 - Information + Goals) establishing concrete goals for this efficiency, accompanied by feedback on their performance; and (G4 - Information + Goals + Charity) in addition to goals and performance information, the nudge added the implementation of a monthly charitable reward incentive, assigned to a charity, for each monthly goal reached.

The researchers concluded that all groups had a better fuel efficiency compared to the control group, and groups 3 (G3 - Information + Goals) and 4 (G4 - Information + Goals + Charity) got the best performance.

In aggregate terms, 90% of the fuel savings and CO2 emissions avoided in the study stems simply from the subjects' knowledge that their behaviours would be (indirectly) observed (including the control group) in what is known as the Hawthorne effect (Observer effect).

The satisfaction study later implemented revealed higher job satisfaction rates in the intervention groups, with 81% claiming to continue to receive information on fuel efficiency and associated CO2 emissions.

Overall, the interventions saved 6,828 tonnes of fuel (equivalent to about  $\in 1.18$ m)

during the study period, avoiding the emission of about 21,057 tonnes of CO2. Behavioural change interventions - nudges - are very efficient behaviour change tools in the binomial cost-benefit given their low implementation cost and the high potential for social, economic and environmental benefits they can provide.

Virgin Atlantic

# **IDID YOU KNOW THAT...**

Overall, 14.5% of greenhouse gas emissions have their origin in the livestock sector - from raising and feeding cows, chickens, pigs and other animals? They are higher than the emissions from the entire transport sector.

FAO



## LAW

Decree-Law No. 34/2016, of June 28, establishes a regime for the protection of groundwater against pollution and deterioration

This Decree-Law establishes the regime for the protection of groundwater against pollution and deterioration, transposing Directive 2006/118 / EC of the European Parliament and of the Council. This document defines the methodologies to facilitate the comparability of thresholds by applying common principles for the determination of geochemical background concentrations. Information on pollutants and indicators for which thresholds have already been established has also been revised. The aim of Decree-Law 34/2016 is to ensure a better understanding and comparison of results, as well as the harmonization of methodologies for setting thresholds for groundwater at EU level.

Diário da República, 1.ª série — N.º 122



AGEND,

#### **4** 8-11 November 2016 ECOMONDO Rimini, Italy http://www.ecomondo.com/

7-18 November 2016 COP22 Marraquesh, Morocco http://cop22.ma/en#

29 November – 2 December 2016 Pollutec 2016 Lyon, France http://www.pollutec.com/

#### 6 December 2016

Apemeta Seminar "Contamination and Land Decontamination: The Importance of Climate Change" Lisbon, Portugal http://www.apemeta.pt/apemeta/ Home.aspx?r=30&a=16133&s=1

**13 December 2016** VI Waste Management National Encounter Lisbon, Portugal http://www.apemeta.pt/apemeta/Home. aspx?r=30&a=16157&s=1



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