Interreg Italy - Croatia ECOMOBILITY
European Regional Development Fund
EUROPEAN UNION

Newsletter

NUMBER 1

May 2018

ECOlogical supporting for traffic Management in cOastal areas By using an InteLligenT sYstem

In this number

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Introduction

The aim of this first newsletter is to introduce the ECOMOBILITY (ECOlogical supporting for traffic Management in cOastal areas By using an InteLligenT sYstem) project, co-funded by the Interreg V Italy-Croatia CBC Programme.

ECOMOBILITY will foster the innovative traffic management system in the coastal areas by collecting the environmental data from monitoring stations located around the cities and streaming the information to traffic management bodies in real time thus capitalizing the main results of the POSEIDON project. The activities will be also focused on raising the knowledge about the shipping impact on the air quality and producing tools to be used in the cross-border area.

The budget is 830.000 euro and the project will last 18 months, from 1 January 2018 to 30 June 2019. The consortium includes Italian and Croatian partners: Ca' Foscari University of Venice (lead partner), Veneto Region, Institute of Atmospheric Science and Climate of the National Research Council (ISAC-CNR), University of Rijeka and City of Rijeka.

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The issue

ECOMOBILITY addresses a serious challenge of the Adriatic area, that is how to manage road and ship traffic in coastal areas

A serious challenge of the Adriatic area is how to manage road and ship traffic in the coastal areas, in order to preserve environment, still maintaining economic, commercial and tourist development. Coastal areas are of particular concern because they suffer a strong pressure do the urbanization process (which is mainly located in littorals), agriculture, industrial and transport activities. On the other hand economic and social exchange traditionally constituted wealth for the area and a way for growth and development.

Traffic management within ECOMOBILITY

An intelligent system will collect environmental data and will alert traffic management bodies when specific measured parameters exceed a set limit

Vehicles flow is often automatically controlled by using traffic sensors, in order to avoid congestion in rush hours and for security reasons. Information about traffic is also used as input for navigation systems, because it could be an important factor in the choice of a pathway in order to reach a destination. ECOMOBILITY adopted a similar approach, with the difference of addressing the issue from an ecological point of view. Within ECOMOBILITY an intelligent system will collect environmental data and will alert traffic management bodies when specific measured parameters exceed a set limit. In Venice and Rijeka, where ECOMOBILITY activities will be conducted, information on pollutant concentration are of public domain and are sometimes used in order to lead environmental actions for reducing pollution (for instance, in the municipality of Venice, traffic blocking when particulate matter exceeds the legal limit), but a direct link between monitoring activity and traffic controllers is still missing. ECOMOBILITY will allow traffic management controllers to be automatically informed of a critical area of the city, thus to intervene preventively with the most appropriate action. The approach adopted in ECOMOBILITY can be considered as an evolution of the simple traffic management based on the number of circulating vehicles, since what is measured is exactly what environmental measures, as traffic blocking, aim to influence.

Nanoparticle studies in ECOMOBILITY

The innovative character of ECOMOBILITY is also evident in the research activities focusing on the quantification of the shipping contribution to air quality. Previous projects already evidenced that fine and ultrafine particles are more influenced by shipping emissions than coarse ones, but a detailed study on this topic is missing. Within ECOMOBILITY the contribution of shipping to different sizes of particulate matter, including nanoparticles, will be conducted in the harbours of Venice and Rijeka using both chemical approaches and high temporal resolution measurements. To our knowledge this is the first time that such a careful comparing study is carried out.

Within ECOMOBILITY the impact of ship traffic to nanoparticles will be deeply investigated

The activities foreseen in ECOMOBILITY will be carried out in Venice (Italy) and Rijeka (Croatia)

For all the citizens - the App

The environmental information collected around the city will be also used as input for an application for mobile devices. The application will start as an additional utility supplied to people that already use coastal transport services, but actually it will be shared to all citizens in general.

The application will give information about the environmental status of the city in real time and will provide the carbon footprint for each planned trip, giving to users the opportunity of selecting the most eco-friendly mean of travelling or transporting goods between coastal localities.

Drivers will be informed about peaks of pollution in their planned pathway and will be allowed to select the greenest route to reach a destination by car.

The service will be available both on line and in multimedia totems located in the harbours of Venice and Rijeka.

Citizens will choose the most eco-friendly mean of travelling or pathway

ECOMOBILITY in brief

OUTPUTS	KEY POINTS
1. *Enhanced knowledge about the impact of shipping traffic to fine particles and nanoparticles* 2. *An intelligent system to support traffic management in polluted urban areas* 3. *A new service for passengers and citizen consisting in an application for mobile devices for planning ecological trips*	• *ECOMOBILITY addresses a serious challenge of the Adriatic area, which is how to manage road and ship traffic in coastal areas;* • *ECOMOBILITY gives to local authorities a useful tool to manage traffic in a more sustainable way;* • *Citizens, tourists and companies are encouraged in adopting eco-friendly behaviours using the application for planning ecological trips;* • *Developed tools are intrinsically durable and easily transferrable to other cities after the implementation of the project, since they use real-time data and they are not linked to a specific place or period of time.*

The kick-off event

The first meeting of ECOMOBILITY project was held in the Scientific Campus of Ca' Foscari of Venice (Venice Mestre) on 1st March 2018. The meeting has been very successful and outlined the specific project activities, confirming the commitment of all the participants to a close cooperation. The project manager explained the key points of the project and, subsequently, the various representatives presented the activities planned for the achievement of all expected products. The Project Steering Committee was set up, with the aim of ensuring the monitoring of all aspects of the project (quality of outputs, eventual deviations, financial aspects, communication activities).