

## Collective Awareness Platform for Tropospheric Ozone Pollution

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#### **List of Abbreviations**

APP Application

**CAP** Collective Awareness Platform

**NEC** National Emission Ceilings

NGOs Non-governmental organization

PQA Plataforma per la Qualitat de l'Aire

#### **Executive Summary**

#### **Description of the work**

This report presents the **results of citizen empowerment for a "collaborative learning process" achieved during the second year of the project**; actions, dissemination materials, participation in workshops and all activities realized in 2017 **concerning the "air pollution" topic** are presented with a particular attention to the number of people involved and to the citizens and stakeholders sensitized not only in the three testbed areas but also at national level in the participating countries. For this reason this report shows also a detailed list of the national activities and the empowerment strategies achieved.

#### **Objectives**

The main objectives of the deliverable are:

- Describe the general citizen empowerment for the collaborative learning process done during the second year of the project;
- Show the detailed citizen engagement empowerment actions for collaborative learning in the Spanish, Austrian and Italian areas during 2017.

#### **Main Highlights**

- 4 International Conference attended by project partner in order to promote Captor project
- 19 Workshops and conferencse in testbed areas and in urban areas
- 5 Actions done by the captor partners
- 11 reports on air pollution and focus to discuss about solution and advocacy

#### 1. Introduction

One of the most important goal of the Captor project is to realize activities useful to involve people to fight air pollution; it is also important to empower their activism for suggesting changes and solutions to the public authorities.

A first phase of these activities was focalized during the project on the involvement and empowerment of people in a **collaborative learning process in the areas most affected by ozone pollution**; to involve all the citizens in the learning process about air pollution, the awareness and the information must be stressed and significant changes in behaviour will be achieved.

#### This report will be focused on:

- a) The activities and the channels used by local facilitators (mainly the NGO partners of the project, supported by research partners) to create a collaborative learning process in the testbed areas between volunteers and stakeholders, and;
- b) The tools and the strategy used to achieve these objectives.

#### 2. Activity report and materials realized for international events

In 2017 the first activity done by Captor partners was the participation in the **DSI Fair Rome** (February); the event allowed to share and learn from Collective Awareness Platforms for Sustainability and Social Innovation initiatives. Captor partners promoted the project with a stand in the Exhibition area and with the presentation "**First outcomes from the CAPTOR project on raising awareness and finding solutions to the air pollution by the** *CAPTOR* **project coordinator (UPC), in a workshop about the Collective Sensing and Action.** 

This moment of networking and comparison among different projects at European levels has been useful to verify the Captor approach and confirmed the matching interests of others NGO's and scientific stakeholders. The Captor stand with the exhibition of a sensor and a panel with the information about the project and its citizen science approach was, during the 3 days, much appreciated: some Italian journalist interviewed the member of the staff participating at the fair<sup>1</sup>.



Figure 1: Captor presentation at DSI Fair Rome, February 2017

<sup>&</sup>lt;sup>1</sup> https://capssi.eu/dsi-fair-2017-on-rai-national-television-in-italy/



Figure 2 Captor staff member interviewed at DSI Fair in Rome 2017

In March 2017 Captor was present at the Citizen Science Day in Vienna's Natural History Museum; the Natural History museum of Vienna provided a stand for the Global 2000 and ZSI, where they presented the Captor device and facts about ground level ozone. The reaction of the people present was very positively surprising: they were very interested and often asked a lot of very specific questions such as: "How is ground level ozone affected by humidity? How exactly does this pollutant harm? Why don't we get any information on high ozone levels even though it is so

harmful?"

evaluate Furthermore to awareness raising, the Captor team presented a poster with some questions and everybody could share their opinion about this topic. To express the citizen science aspect of the project, the team provided detailed construction manual and showed the App with the data collected in Spain during the calibration period.



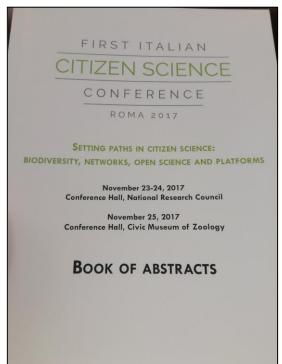
Figure 3: Captor presentation at CS Day in Vienna's natural history museum; March 2017

At the end of March Captor partners participated at the meeting about the "Declaration on designing



Figure 4: Captor participation at the meeting for the Emission Control Area in the Mediterranean Sea;
Rome March 2017

an Emission Control Area in the Mediterranean Sea" which took place in Rome; organized by an alliance of environmental organisations that adopted a declaration to limit air pollution from ships<sup>2</sup>. The alliance has been founded in 2016 and gathers mainly NGOs from Mediterranean region.



In November 2017 the Captor team participated in the first Italian Citizen Science Conference in Rome; a moment of discussion and analysis about the citizen science approach and his efficacy to stimulate the "changing" with a bottom up process.



Figure 5: Italian first Citizen Science conference in Rome, November 2017.

<sup>&</sup>lt;sup>2</sup> https://www.captor-project.eu/wp-content/uploads/2017/03/Declaration FINAL.pdf

#### 3. Activity in Spain

The *Plataforma per la Qualitat de l'Aire* (PQA) is the principal Alliance against pollution in Catalonia and just like during the first year 2016, the principal network for the promotion of project activities. The PQA members usually have a meeting every 10 to 15 days in Barcelona and have many work committees. This kind of organization and the "face to face" meetings, make it easy to realize and to organize the activities planned with the CAPTOR project.

In the following sections we present the most important initiatives that were implemented in the year 2017.

#### Workshops and conferences

In order to attract the interest of involved local communities and stakeholders, several events were organized to explain the project and to introduce the citizen science approach (see deliverable 4.2.). Also, in order to exchange knowledge and collaboration and expand alliances to fight ozone pollution, especially reducing their main precursors pollutants, Captor team members, and more specifically Ecoligstas en Accion staff, have taken part as speakers at many events:

- Xerrada: Com ens afectarà el canvi climàtic?. March 17, 2017. Ateneu vilanoví. Vilanova i la Geltrú (Spain).
- "What do we breathe?". March 24, Granollers (Spain). http://www.aragranollers.cat/noticia/48082/erc-convida-tomas-molina-i-ferran-civit-a-debatre-sobre-com-combatre-la-contaminacio
- El turisme, una indústria sense xemeneies? Entre els creuers i el canvi climàtic March 30, 2017. Barcelona (Spain).
- <u>Com afecten els creuers a la salut pública</u>. May 22, 2017. Centre Cívic Golferichs, Barcelona (Spain).
- The Tram's capacities as a response to social, environmental and residential demands. March 7, 2017. Jordi Girona 1-3. Barcelona (Spain).
- <u>Taula rodona "El frau del Diesel"</u>. May 11, 2017. C.C. El Coll C L'Aldea, 15. Barcelona (Spain).
- <u>Com afecten els creuers a la salut pública</u>. Maig 22, 2017. Centre Cívic Golferichs, Barcelona (Spain).
- Debat: "Sostenibilitat i ciutat: reptes de la Barcelona global". June 1, 2017. Auditori Edifici Mercè Rodoreda, Campus de la Ciutadella. Barcelona (Spain).
- Sessió informativa sobre la connexió del tramvia per la Diagonal | favb June 14, 2017. Carrer Taulat, 3. Barcelona (Spain).
- **<u>2es JORNADES de mitjans de comunicació independent</u>**. June 22, 2017. Espai Calabria 66, Barcelona (**Spain**).

- Xerrada a Gavà: Contaminació atmosfèrica. November 17, 2017. Sant Lluís 17, Gavà (Spain)
- <u>Cycle of conferences about air pollution and ozone</u>. November 15 and December 13. Biblioteca Montserrat Roig, Martorelles (Spain).
- "*Metropolitan conflicts for the quality of the air*". Presentation in the debate on socioecological conflicts related with the metropolitan metropolitan area. Organized by <u>Àrea metropolitana de Barcelona.</u> November 28, C/62, núm 16 18 Zona Franca, Barcelona.

#### **Actions**

On June 2017 the awareness campaign "Less Cars More Health" was launched in a press conference in the Journalists Association of Catalonia. The campaign concern the reduction of one of most serious precursor pollutant for Tropospheric Ozone and it aims at linking the problem of air pollution with every-day behaviours. This campaign is the result of analyses of the PQA members and the project partners about the effectives measures to reduce traffic in urban milieu. The campaign promote the reduction of the traffic produced by private vehicles by 30% in the Catalan capital that is need to comply with European laws. The campaign consists in collecting signatures and support from citizens to urge the institutions, led by the Barcelona City Council, to apply a Congestion Charge and a Low Emission Zone in the metropolitan area of Barcelona, which is one of the sources of precursors of ozone generation. These two measures had obtained satisfactory results in more than 230 European cities (<a href="http://www.menyscotxesmessalut.org/">http://www.menyscotxesmessalut.org/</a>). The signatures collected are 2.439 until December 2017. The CAPTOR project supports the videos produced and the dissemination materials of the campaign. The campaign was also presented in July 1st at the Girona Art Museum. Citizen's engagement has been enforced through social media, media activities, and events also through street actions.

#### **Solutions and Advocacy**

Ecologistas en Accion is participating in a network of European NGOs to address clean shipping, that on March 29<sup>th</sup> promoted the declaration on designating an Emission Control Area in the Mediterranean Sea. This collaboration has allowed to work on this topic with the *Plataforma per la Qualitat de l'Aire* (PQA) that in May 2017 presented their contributions to the Catalan Ports law at the Catalan parliamentary committee regarding air pollution (see Nou projecte llei de ports de Catalunya no regula la limitació i control de les emissions contaminants dels vaixells).

In June 2017 EEA presented the national 2016 report about air pollution: the report analyzed the data collected in 700 official measuring stations installed throughout the Spanish State. It presents exhaustive data on air quality, by autonomous communities and by polluting substances. Climate change, high level of traffic, fraud in car emissions and the government's commitment to dirty energies to the detriment of renewables, among the causes of a problem that affects the health of citizens, but also to the crops, forests and natural spaces.



Figure 6: National report about air pollution in Spain

**Ecologistas en Acciòn presented numerous observations to the** *National Air Quality Plan 2017-2019*, called the Air II Plan<sup>3</sup>, which is processed by the Spanish Government suffering from the same lack of ambition and definition as its predecessor, Plan Aire I, expired last December. The impression was that "The Air Plan II" tried to formally cover a legal obligation, which would explain the lack of definition of the plan and the proposed measures, as well as the absence of a participation process prior to its preparation, in such a topic socially and administratively sensitive, as complex as air quality.

The PQA participation in government advisory committees against pollution in Catalonia (Committees of the City Council of Barcelona and the Catalan Government, and Metropolitan area mobility Council) have contributed on possible solutions to reduce the air pollution and to improve the air quality in the area. *As a result, we can highlight the following outcomes* 

- Proposed solutions presented
- ✓ http://www.qualitatdelaire.org/2017/04/la-plataforma-per-la-qualitat-de-laire.html
- ✓ http://www.qualitatdelaire.org/2017/11/les-noves-mesures-de-restriccio-de.html

#### • Political impact

✓ Motion approved by City Council of Vic on ozone pollution (June 2016).

http://el9nou.cat/video/vic-demanara-a-barcelona-que-actui-contra-la-contaminacio-per-ozo/

<sup>&</sup>lt;sup>3</sup> https://www.ecologistasenaccion.org/IMG/pdf/observaciones-plan-aire-ii.pdf

#### 4. Activity in Italy

During the second year of the project, Legambiente, its Third parties (regional branches of Piedmont, Lombardy, Emilia-Romagna and Veneto) and local groups distributed on the territory, organized from the beginning of 2017 initiatives, communications campaign and workshops to stimulate the attention not only of the citizens but also local and regional authorities.

All the following events were useful for the Captor project to increase awareness in citizens and public opinion not only on air pollution, but also on the causes that generate it and on the effects and impacts on the health. In this way it was possible develop a "collective learning process" and the objective of the project will be achieved quickly and with more intensity. Moreover, in all these initiative, CAPTOR project has been promoted as an example of how the citizens participation in monitoring pollution can be the key for their engagement in find solutions. The most important initiatives realised in 2017 have been the following:

#### Workshops and conferences

**Verona** (**Veneto region**) **22th October 2017** presentation of "LOOPER project", a participatory path, lasting three years, to address the problems related to air pollution; with the collaboration of Municipality, University and Legambiente Verona local group. The project will allow, through innovative tools and detection methods for the city, to monitor some environmental indicators related to air quality and noise pollution.

**Bologna (Emilia Romagna region) 8<sup>th</sup> November** public initiative on air pollution in the city with a focus on effects and solutions. <a href="https://www.legambiente.emiliaromagna.it/2017/10/30/bologna-sotto-la-k-delle-polveri-8-novembre/">https://www.legambiente.emiliaromagna.it/2017/10/30/bologna-sotto-la-k-delle-polveri-8-novembre/</a>

Pinerolo (Piemonte region) 16<sup>th</sup> November 2017 workshop named "Ambiente e Salute" with the participation of Legambiente national office to speak about air pollution in Italy. <a href="http://www.anapaca.org/wp-content/uploads/2017/11/Manifesto.jpg">http://www.anapaca.org/wp-content/uploads/2017/11/Manifesto.jpg</a>

Figure 7: Presentation at Pinerolo workshop "Ambiente e salute". Focus on air quality and ozone pollution. November 2017



Como (Lomabardia region) 25<sup>th</sup> November 2017 workshop named "Mal'aria: l'inquinamento atmosferico avvelena le nostre vite". Organized by Legambiente Como local group aims to promote

sensibility and awareness on air pollution item among citizens and stakeholders. <a href="http://www.quicomo.it/eventi/inquinamento-atmosferico-convegno.html">http://www.quicomo.it/eventi/inquinamento-atmosferico-convegno.html</a>

#### Actions



Demonstration of Legambiente's volunteers under the Emilia Romagna Regional Government during the meeting between Environment Minister and Regional Presidents of Pianura padana valley country (30<sup>th</sup> Jenuary 2017)

Figure 8: Legambiente volunteers during a demonstration in Emilia Romagna

https://www.legambiente.emiliaromagna.it/2017/0 1/30/dossier-malaria-2017/

The Legambiente Piacenza local group promotes a collection of extraordinary signatures on the 24<sup>th</sup> November 2017 to ask to the municipal administration for drastic measures in emergency situations that crossed their territory. The local group therefore asked all citizens sensitive to the health and well-being of the population, to sign and help the volunteers in collecting signatures until the Christmas period. At the end, they want to bring the signatures to the Mayor as "primary head" of public health.

 $\underline{https://www.legambiente.emiliaromagna.it/2017/11/24/piacenza-raccolta-firme-contro-lo-smog-24-novembre/}$ 

#### **Solutions and Advocacy**

Presentation at national level of the Report about air pollution in Italy in the 2016 (Mal'Aria di città 2017) was the 30th January 2017. The report proposed 10 solutions to exit from the air pollution and redesign the cities. The solutions adopted in the report are real experiences applied in some Italian municipalities, and they were useful to the Legambiente local groups, citizens and other NGO's to stimulate the improvement and the assumption of the same solutions in their own city. (https://www.legambiente.it/contenuti/dossier/malaria-2017)

The "Urban Ecosystem 2017" report is a focus about the sustainability and quality of life in urban areas; it aimed to promote and develop good practice useful to improve the air quality, transport and energy consume in the city centres. The data reported in the report are directly presented to the

municipality offices and a national event of presentation was done in Milano with stakeholders, Mayors and citizens. (<a href="https://www.legambiente.it/contenuti/dossier/ecosistema-urbano-2017">https://www.legambiente.it/contenuti/dossier/ecosistema-urbano-2017</a>)

"Pendolaria" is a national report about rail transport in Italy that underlines the ten worst railway lines in Italy in 2017 for commuters. A mobilization alongside those who every day take the train to go to work, at school or at university (about three million people a day) with the aim of making clear how important and urgent it is to improve public transport by rail in Italy. (http://pendolaria.it/le-10-linee-peggiori-2017/)



Figure 9: Pendolaria report, December 2017

#### 5. Activity in Austria

In Austria the Captor partners focused their activity on 2017 in a "collaborative learning process" useful also to find new possibilities to involve additional potential stakeholders in the realization of the instruments (Captor and Raptor) developed by the project. In this way they have studied and realized activities with the objective to enlarge the network of contacts to identify potential "offspring partners" as defined in the original proposal submitted.

#### Workshops and conferences

**NICST' 2017 -** New and smart Information Communication Science and Technology to support Sustainable Development – Clermont Ferrand (France) 19<sup>th</sup>/20<sup>th</sup> June 2017. The key-note speech at the conference was useful to raise awareness for air pollution and to promote the different ways of engagement for citizens developed by the CAPTOR project. Participants from several universities inside and outside Europe showed interest in concept.

At the end of November Captor partecipated also in the *European Researcher's Night*, an event where scientists all across Europe demonstrate their projects to interested visitors. Captor was presented at Vienna's Researchers night in which, especially young students and pupils, showed interest in the Ozone measuring devices. The most asked question was: "Can I build one myself?"



Figure 10: Captor presentation at European Researcher's Night in Vienna, November 2017

#### Actions

GLOBAL 2000 and others environmentalist movements, few days before the National elections in Austria, call for decisive solutions to the global climate crisis, asking to the next federal government to take more attention and to implement the energy transition.

Actions for climate protection took place on 13 and 14 October: volunteers of GLOBAL 2000 set up panels with LED lights on Heroes' Square, which together formed the words "100% clean energy!"

These kind of actions are useful to inform and interest people about air pollution. https://www.global2000.at/en/node/5292





Figure 11: Actions for climate protection in Vienna, October 2017.

#### **Solutions and Advocacy**

The Austrian Environmental organization GLOBAL 2000, during the diesel summit occurred in Vienna the 21<sup>st</sup> August, **proposed a new mobility policy** "which relies on sustainable forms of mobility and makes the leap away from the obsolete combustion technology", criticizing the results of the diesel summit that let the car companies get away cheaply, instead of taking them into the obligations avoiding high health problem for the population. (https://www.global2000.at/en/node/5224)

GLOBAL 2000 published also an inquiry about what parliamentary parties said about air pollution in Austria, what parties have done in the last five years, and what topics are present in the election programs. This article allows to know which party is more sensible and active on the topic. https://www.global2000.at/luftverschmutzung

**Energie-und klimazukunft österreich** is a report written by GLOBAL 2000 in collaboration with WWF and Greenpeace focused on the possible energy scenarios for the objectives of 2030 and 2050, linked with climate change and air pollution.

It is a useful overview on new technologies and possibilities to have changes on energy uses and the related advantages.

https://www.global2000.at/sites/global/files/Energie\_und\_Klimazukunft\_Oesterreich\_2017.pdf



Figure 12: Report on energy and climate change

#### 6. Conclusion

At the end of the second year of the project, Captor partners gave more attention to develop activities and participation in conferences to raise awareness about air pollution items in citizens.

The feedbacks received from citizens and stakeholders, in terms of participation and interest, were satisfying.

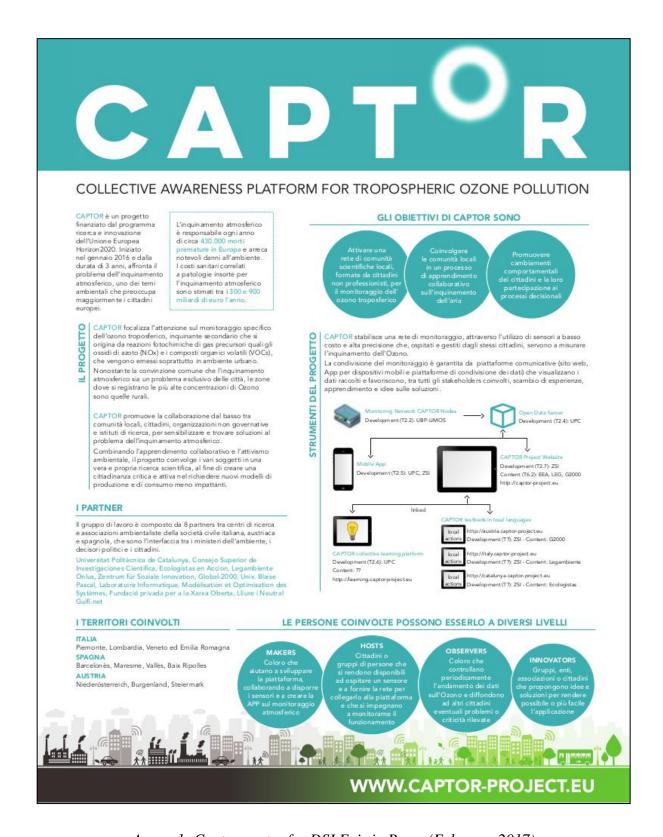
From these considerations, to improve these actions for the 2018 is central: collaborative learning process can be a very useful tool to increase the interest of people in this problem and to get them involved looking for solutions especially in the most affected areas.

Furthermore, to create a network with other ONGs and associations working in the area of air pollution, can be an important step, for the 2018, to improve the dissemination and the circulation of this topic. At the same time, all contact will be useful for offspring purpose (WP7).

Another important aspect of the next activities for the 2018 will be to enlarge in all the three testbed areas the network of contacts to involve "makers" partners and try to give a future and a concrete prospective at the aim of the project, once it will be finish.

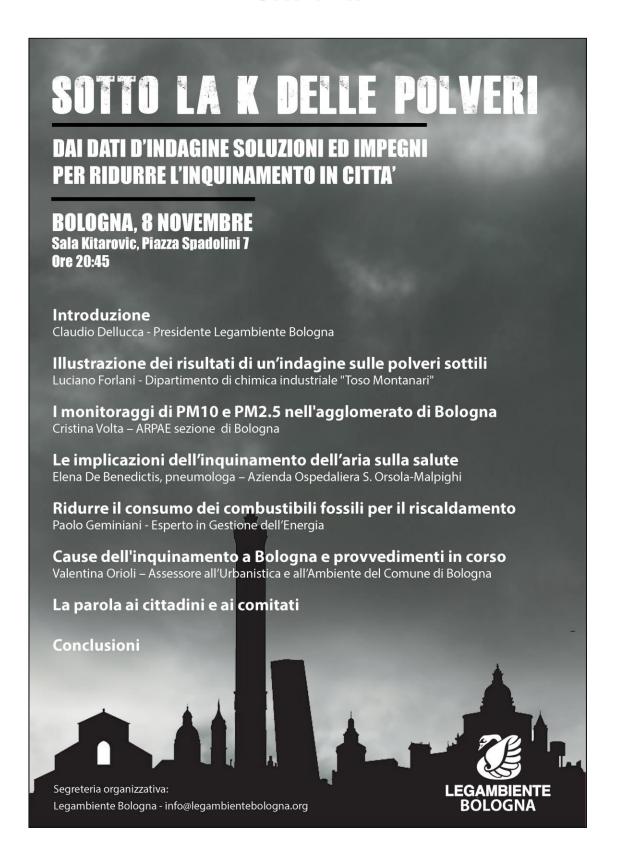
The last point for the next year regards the improvement of the national CAPs platforms: these tools are the core of the collaborative learning process, and it is necessary to improve the efficacy of the tool and the participation of people. For the next year, Captor partners are moving themselves to do more physical interventions and less digital, using also established channels, such as social media (E.g. Facebook), for online awareness raising and learning.

## **ANNEXES**



Annex 1: Captor poster for DSI Fair in Rome (February 2017)

Project funded by the European Union's Horizon 2020 research and innovation programme under Grant Agreement  $N^{\circ}$  688110



Annex 2: Bologna conference about "Under the smog" – data and solutions to reduce air pollution in the city



Annex 3: Pinerolo conference about "Environment and Healt"