LIFE Project Number

LIFE11 ENV /DE/495

Final Report
Covering the project activities from 01/09/2012 to 30/11/2015

Reporting Date

28/02/2016

LIFE+ PROJECT NAME or Acronym

Clean Air

Data Project

Project location	Germany
Project start date:	01/09/2012
Project end date:	31/11/2015
Total budget	3,398,810 €
EC contribution:	1,686,635 €
(%) of eligible costs	

Data Beneficiary

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List of key-words and abbreviations

AECC	Association for Emission Control by Catalyst
AGV	Automated Guided Vehicles
AirClim	Air Pollution & Climate Secretariat
AQD	Air Quality Directive
BMUB	Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit
BUND	Bund für Umwelt und Naturschutz Deutschland
BVG	Berliner Verkehrsbetriebe
CAAG	Clean Air Action Group
CEPTA	Centre for Sustainable Alternatives
CIVITAS	City-Vitality-Sustainability
CNG	Compressed Natural Gas
DPF	Diesel Particulate Filter
DUH	Deutsche Umwelthilfe
EBC	European Biking Cities
Ecocouncil	The Danish Ecocouncil
ECT	European Container Terminal
EEB	European Environmental Bureau
EEV	Enhanced Environmentally friendly Vehicle
EMITEC	Emitec Gesellschaft für Emissionstechnologie mbH
EP	European Parliament
EPA	Environment Protection Agency
GRPE-REC	Working group on retrofit emission control devices
HEAL	Health and Environment Alliance
HJS	HJS Emission Technology GmbH & Co. KG
IAA	Internationale Automobil-Ausstellung
IAPH	International Association of Ports and Harbors
IASS	Institute for Advanced Sustainability Studies
ICCT	International Council on Clean Transportation
IFEU	Institut für Energie- und Umweltforschung Heidelberg GmbH
IG BAU	Industriegewerkschaft Bauen-Agrar-Umwelt
IMO	International Maritime Organisation
IWT	Inland Water Transport
LDV-RDE	Light Duty Vehicles - Real Driving Emissions
LEZ	Low Emission Zone
LNG	Liquefied Natural Gas
MAHA	Maschinenbau Haldenwang GmbH & Co KG
MEP	Member of the European Parliament
NABU	Naturschutzbund Deutschland
NEC	National Emission Ceiling
NECA	NOx Emission Control Area
NGO	Non-governmental organisation

NRMM	Non-road mobile machinery
PM	Particulate Matter
REC	Retrofit Emission Control Devices
SCR	Selective catalytic reduction
SCRT	Selective Catalytic Reduction Technology
T&E	European Federation for Transport and Environment
TÜV	Technischer Überwachungsverein
UBA	Umweltbundesamt
UNECE	United Nations Economic Commission for Europe
VCD	Verkehrsclub Deutschland
VCÖ	vcö - Mobilität mit Zukunft
VDV	Verband Deutscher Vekehrsunternehmen e.V.

2. Executive summary

The Clean Air Project started in September 2012 and ended in November 2015. Nine environmental non-governmental organisations from six European countries worked together to reduce air pollution in European cities. The idea of the project was to implement best-practice for air quality in the transport sector and spread the knowledge about these successful cases and their impact in the reduction of harmful air pollution to relevant stakeholders to improve their level of knowledge for decision making.

For making the goal operational adequate sub-goals had to be determined:

- The project connected different political levels, especially the European, national and the local level, for performing advocacy to stimulate changes of the political framework at the right level and for supporting the exchange about solutions between the levels.
- Core of the project was to initiate, support and facilitate the implementation of best-practice in the transportation sector in cities.
- The best-practice-cases or best-practice-aspects of measures were edited for different target groups and communicated in different forms.
- One goal of the communication was to mark hidden potentials for additional air quality measures in cities. The project showed in practice that there is still a potential of measures that could be taken in cities to make contributions to hold the European limits of air quality.

The measures of the project to make contributions to these goals were developed in the project application. The actions of the partners in the application of the Clean Air project can be summarised under the following headlines:

- Capacity building for environmental and consumer protection organisations
- Improve the basis for decision making
- Model projects to improve air quality in Europe
- Monitoring
- Communication and dissemination towards European citizens
- Communication and dissemination towards stakeholders

2. 1. Key deliverables and outputs

The structure of the following presentation of key deliverables and output of the project follows this structure of main fields of action.

Capacity Building for environmental and consumer protection organisations

In 111 Workshops representatives from more than 106 associations and institutions were trained to get the knowledge to use **law as an instrument** to enforce measures **for clean air**. One key success was the sentence of the German Federal Administrative Court in Leipzig on 5th September 2013, saying that NGOs in Germany have the right to sue, when limits of European environmental law are not met. This makes it much easier to bring these failures to court. Before only individuals that could proof to be affected and were still affected over the whole period of the years of the court case had the right to sue. A handbook for the initiation of legal actions was published and distributed to 270 organisations.

Improve the basis for decision making

In Germany a fixed **circle of** 20 **experts** from industry, testing institutes, local authority representatives and associations met once per month for discussing current air quality issues, possible solutions and planning of common activities. This circle influenced e.g. the decision of the German Government to start 2015 again the support program for the retrofit of cars and light lorries. The program has a total volume of 30 Mio. Euro for a capacity of 100.000 possible retrofits. Strict emission levels for air pollutants were added to the criteria of the ecolabel "Blue Angel" (Blauer Engel) for environmental friendly construction machines. It will enter into force 2016. A new Blue

Angel label was introduced 2014 for retrofit DPF that guarantee a long-lasting reduction of emissions of diesel-soot.

All partners did active advocacy work regarding the **National Emission Ceilings (NEC) directive** to convince members of the parliament and national governments to include binding and ambitious targets in the NEC-directive. The vote in the EP at the end of October 2015 added biding emission targets for 2025, but an exemption of enteric methane. The NGOs will keep on demanding ambitious and binding targets in the next steps of the process.

The emission limits of inland waterway ships, diesel railcars respectively locomotives and construction machines are regulated in the Regulation for **Non-road mobile machinery** (**NRMM**). One partner participated in the responsible GEME meetings (Commission's Stakeholder Working group on NRMM) and realized numerous activities in cooperation with other partners on European level. The European Commission published a draft for a new regulation that applies a particle number in many fields. If the regulation would be finally decided according to this draft, the bulk of new machines and vehicles will be equipped with a particle filter.

As the VW emission scandal made known for a wider audience that new cars are meeting the emission limits only in the laboratory, not under real driving conditions on the road. One partner has participated in meetings of the Commission stakeholder group on **Real Driving Emissions** (LDV-RDE working group) with the aim to develop a procedure verifying emission limits measured during test in the laboratory are respected in real life conditions. The EU-Commission decided on 19 May 2015 to introduce portable emission measurements (PEMS), the technical committee on motor vehicles decide on 28 October 2015 to allow Euro 6 diesel cars to emit over double (2,1) the Euro 6 limit from 2017 to 2020 and 50% plus (1,5) after 2020. The NGOs will continue their advocacy work for stricter limits.

Model projects to improve air quality in Europe

Inside the **shipping** sector the awareness rises that regarding environmental aspects the shipping sector is lagging behind other transport sectors and that the environmental image is at stake. Therefore it was welcomed that the Clean Air project organised workshops and discussions among others about available technology, costs and the political framework. All in all 330 experts took part in the six workshops; the outcome of the discussion process is documented in the manual "Clean Air in ports". The change in practice started, e.g. several new cruise ships are equipped with SCR and Scrubber, first ones with particulate filter, in Hamburg started onshore power supply (OPS) from a barge in June 2015, OPS at Cruise Terminal Altona is planned for 2016, all 22 diesel driven harbour ferries (8 million passengers/year) will be retrofit with DPF and Kat in the next years, Rotterdam ordered 22 electric automatically guided vehicles (AGV) for the ECT Delta Terminal.

In Slovakia the focus of activity was training in ecodriving for reducing CO2 and air pollutants at the same time by saving fuel. In ecodriving trainings 24 trainers got trained, the Slovak national chamber of driving schools integrated ecodriving into its internal quality standards and the ministry of transportation prepares a revision of the driving school law including eco-driving principles. Over 20 Million readers, listeners, viewers were reached by the project information on air-quality protection and ecodriving in Slovak media, In addition the criteria for EU-funds 2014-2020 were influenced by the partner to make them available for measures against climate change and for air quality.

Key aspect of the work in Hungary was to initiate the **modernisation of the bus fleet** to reduce the emissions. So far 150 new EEV buses, 135 Euro VI, 37 CNG and 28 hybrid-buses were put into operation in Budapest. The City authority announced more tenders for the procurement and rent of further 114 Euro VI buses. The City of Budapest added two new zones where a parking fee has to be paid. It has to be underlined that the partner achieved this under worsening working conditions, because the Hungarian government openly obstructs the work of NGOs.

The emissions of **buses**, especially NOx- and soot-emissions, enhance locally the concentration of pollutants in the air. Therefore the project was engaged in reducing harmful emissions of public transport through the modernization of bus fleets in Germany, Poland and the Czech Republic. Round

Tables on Public Transport took place in Germany, Poland and the Czech Republic. The outcome of the discussions with stakeholders was compiled in guidelines. To motivate administrations, public bus companies and other stakeholder a conference "Clean Air in Cities" was organised on September 4th 2014 in Berlin. More than 20 experts from Poland and the Czech Republic met in Berlin with German counterparts to discuss about air pollution, the role of public transport, technical measures to reduce emissions of buses and recommended measures in cities like Low Emission Zones. Berlin was a very good example, because BVG (Berlin public bus company) refitted 100 buses with SCRT in 2013/2014; additionally 202 buses will be refitted after the end of the project. On May 11th 2015 the discussions were continued at an event in Warsaw. **Low Emission Zones** are an improved instrument to accelerate the modernisation of the fleet, resulting in the reduction of emissions from the transport sector. At the conference in Berlin in September 2014 and at several other occasions the project showed the positive outcomes and the necessary changes of national laws to stakeholders from administrations and politics. These activities for a **transfer of measures** had some success. The Slovak Republic revised the air protection law in September 2015 and created the laws that are fundamental for the introduction of LEZ. The project supported a draft that was brought into the Polish parliament. Unfortunately the draft did not find the majority of the votes. Nevertheless the capital of the Czech Republic, Prague, will introduce a LEZ at 1.2.2016.

The German NGOs of the Clean Air project were active expanding the **LEZ** in **Germany** and to enhance their effectiveness. At 1st July 2014 the biggest LEZ in Germany (Ruhrgebiet, a fusion of 13 cities in North Rhine-Westphalia with more than 850 km²) has introduced the strictest emission standard possible additional 25 other LEZ since 2013 tightened the emission standard as well; since 2013 9 new LEZ has been introduced in Germany. The partners of the project accompanied this development with press releases and giving information to media and administrations in Germany and abroad. The project could motivate the German state of Baden-Württemberg – to bring a proposal for the introduction of a blue label for vehicles in the national political process in Germany. The blue label shall be given to vehicles with low emissions of NOx. This would enable to keep vehicles with higher NOx-emission out of NO2-hotspots by using the existing rules of the LEZ.

In the "**European Biking Cities**" network six cities actively participated. Three of them have the highest modal share within their countries; the other three are ambitious national climber cities. A concluding brochure with inspiring good practice examples of cycling promotion was presented on a panel at the world's leading cycling conference, the Velo-City in Nantes in June 2015 and has been spread widely at the conference, by email and social media through European networks. For the very first time e-cargo bikes were presented at the 2014 IAA commercial vehicles fair, which received broad media coverage. Cargo bikes were included in the German government's action programme on climate protection and action plan on goods traffic and logistics. The German environment ministry will financially support measures for enhancing the bicycle infrastructure in cities as demanded by the project. Motivated by the project the IASS in Potsdam will study the relations between bicycle traffic and air quality. The project's broadest and best media coverage was about the fast growth of cycling in the Spanish EBC partner city Vitoria-Gasteiz. The city's 2014 mobility survey showed cycling almost doubling in three years to the new Spanish record level of 12.3%.

Copenhagen was presented as a **model city for air quality** in the brochure "Clean Air Copenhagen" with 5000 copies. It combines descriptions of the model aspects of Copenhagen with information on ultrafine exhaust particles. These issues were discussed at two Workshops in Berlin that had 42 participants and in the Danish parliament in Copenhagen with 122 participants. To raise public awareness public measurements with invitation of the media were organised in Copenhagen, Milan, Prague, Brno, Bratislava, Berlin, Dresden and Vienna. In Vienna in addition a video was produced and published in social media. All in all the media resonance of these activities was outstanding.

Two well-received panel discussions on air quality problems caused by traffic were organized in Austria in December 2012 and January 2013 in Vienna. The former mayor of London Ken Livingston was keynote speaker on 23 January. An impressive audience of 125 representatives followed his presentation. The event induced a discussion on congestion charge and "City Maut" in Austrian media.

Inland waterway ships are a source of emissions in oblivion. Therefore the project tried to bring public attention to this sector. For this purpose nine ships were awarded with a label to be sootfree and a publication clean and sootfree inland navigation published. The project achieved that on European level a spotlight was put on the emissions of **inland waterway ships**. Some partners participated in the process of starting an EU-LIFE Project. The project CLINSH (Clean Inland Waterway Shipping) applied for LIFE+ funding in 2014. Due to procedural difficulties, the project did not receive funding in 2014, but partners aimed at a new application in 2015.

The outcome of the sootfreee cities ranking were presented in Brussels. It shows different results of air quality policies in European cities and gives cities and the public a first impression of the scope of successful measures. Ten guidelines for different issues in transport were distributed to more than 100 municipalities and to Eurocities, CEMR and ICLEI.

On November 21st and 22nd 2013 the Astrale LIFE monitoring team organised an international **LIFE+ Platform Meeting on Alternative Future Urban Mobility** in Berlin. The Clean Air project supported the meeting by a presentation of the project and organizing political e-bike tours on issues of transportation politics in Berlin (e.g. Low emission zone, bike- and car-sharing, bike lanes and bus lanes). On several other events Clean Air cooperated with the Life+ project "PRO KLIMA: Efficient mobile air conditioning systems with natural refrigerants".

Monitoring

For monitoring the impact a **yearly survey** was held in Germany asking municipalities about their control of **low emission zones**. Since the first survey the number of municipalities controlling the sticker obligation in a recommended way increased from 2 to 17. These cities check driving as well as parked cars, buses and lorries for their access permit, violations are fined. Twenty municipalities still refuse to control the access restrictions adequately and therefore got a "red card" in the press and PR work.

Communication and Dissemination towards European citizens

One central instrument for the distribution of information about the project is the project website **www.cleanair-europe.org**. The Clean Air Website had 57.000 page impressions and over 20.000 visits in total A quarterly newsletter informed about the progress of the project. It was sent to 395 subscribers.

For presenting the project a **short film** was produced which was watched more than 3.000 times. Additional films showed the main content of round table discussion. The project enhanced the media attention by organising **journalist trips**. The success case of **Victoria-Gasteiz** in Spain, that could almost double the share of bicycle traffic in only three years was made more known by the reports that followed the trip.

Communication and dissemination towards stakeholders

One main focus of communication towards stakeholder was to deliver information to **administrations** and **politics** on **European** and **national level** e.g. by writing joint open letters, publishing joint press releases, using direct contacts or disseminating information on twitter. Especially for the information of decision makers - including MEPs - we intensively used **social media**, and by that won a lot of multipliers MEPs as followers (e.g. Environment Commissioner Karmenu Vella, Air Quality Rapporteur Julie Gierling and the German environmental agency).

In the last phase of the project we intensified our press work to use the media attention for the **VW dieselgate** to inform especially about Real Driving Emission, the responsibility of type approval and the possibilities for cities to reduce NO2. A lot of tv and radio interviews were broadcasted and reports in newspapers and websites published.

2. 2. Summary of the main report

The Executive Summary gives an overview about the objectives, the key deliverables and outputs of the Clean Air project.

The Introduction gives a description of the background, problem and objectives of the project.

The Administrative part contains a description of the management system, the organisation chart of the whole project team, the evaluation of the management system applied, a brief description of the work of the Advisory Board and a list of its members. The chapter ends with explications about the monitoring of the impact of the project. Three relations are scrutinised, the impact of the project on stakeholders, on cities and on citizens.

The Technical Part gives detailed information on all the actions that were conducted in the project. The technical actions are followed by the dissemination actions. At the beginning of the report of each action the indicators of progress from the application are confronted with the achieved outcome in form of a table. The following text gives a short overview about the main acitivities in the action, the description and justification for necessary changes and the main outcomes.

The financial report includes the summary of costs incurred, comments the used accounting system and partnership agreement, followed by the auditor's report. The chapter closes with the summary of costs per action.

The Annexes start by the administrative annexes followed by the technical ones. The dissemination annexes include the Layman's report, the after-LIFE-Communication plan and other dissemination annexes.

The final report of the Clean Air project ends with the financial report and its annexes.

3. Introduction

Background

The EU long-term objective as outlined in the 7th Environmental Action Programme is to achieve levels of air quality that do not have significant negative impacts on human health and the environment. To protect the health of the citizens the EU ambient air quality Directive, AAQD (2008/50/EC), set binding limits for air quality, e.g. for PM and NO2, which have to be respected everywhere in the EU. Achieving the air quality standards requires a combination of local measures addressing particular air pollution hotspots, and reducing background emissions, e.g. by implementing the NEC-Directive.

Problem

Many cities in Europe still do not meet some of the air quality limits set out in the AQD. Therefore it is important to identify potential effective additional measures and to spread the knowledge about best-practice-cases. Some sources do not have the adequate attention regards their emissions, like sea-going vessels burning bunker fuels, inland water way ships or construction machines that are in general not even equipped with a diesel particle filter even though they are used at air pollution hot spots in city centres.

There is still a lack of exchange about best practice between cities. Many member states are not active enough in measuring, identifying sources and taking effective measures. Cities need support by measures on national level.

Objectives

The environmental issues addressed are air quality measures in the transport sector in cities and measures to reduce the background emissions. The hypothesis that there are still hidden potentials for air quality measures in the transport sector in cities was verified.

NGOs played a supportive role for the implementation of effective air quality measures. They initiated measures, informed stakeholders, built up public awareness and legal pressure for the support of effective measures, spread the knowledge about the best-practice-cases and informed about necessary political changes on different levels to support effective measures.

Expected results and environmental benefits

The expected results are the reduction of emissions of air pollutants, especially of PM and NO2. Progress and measures were demonstrated in many fields, e.g. city buses, high sea vessels, inland waterway ships or construction machines.

Expected longer term results

A multitude of the outcomes are reproducible in other cities and member states. Using the best-practice cases cities are quicker meeting the air quality limits, especially with support of the member states. The exchange should be supported by creating a forum for exchange between cities (events, database). The use of law as an instrument for air quality will enhance the pressure for effective measures.

4. Administrative part

4. 1. Description of the management system

For each of the actions to promote best practise, a beneficiary has been appointed as the main responsible for coordination. VCD is responsible for the dissemination activities as well as for the coordination of the project management and monitoring and evaluation. Every Associated Beneficiary appointed a project coordinator responsible for the project planning including project phases and activities. Furthermore, all beneficiaries implemented the necessary administrational set up, e.g. the creation of a cost centre for the project.

VCD as coordinating beneficiary is responsible for the overall project management. The VCD management team includes a project coordinator, a project controller, a project manager and a project assistant. The project got external support by Marion Hammerl, a consultant with long-time LIFE project coordinating experience. The management team and the coordinators of the associated beneficiaries form the steering group of the Clean Air project. The steering group of the project met six times during the project time, in the meantime Skype conferences every two month for the management of the project were organised. The results of the meetings as well as the Skype conferences are documented. Besides meetings, Skype calls and reporting we were in close e-mail contact with all the partner organisations and tried to clear all upcoming questions.

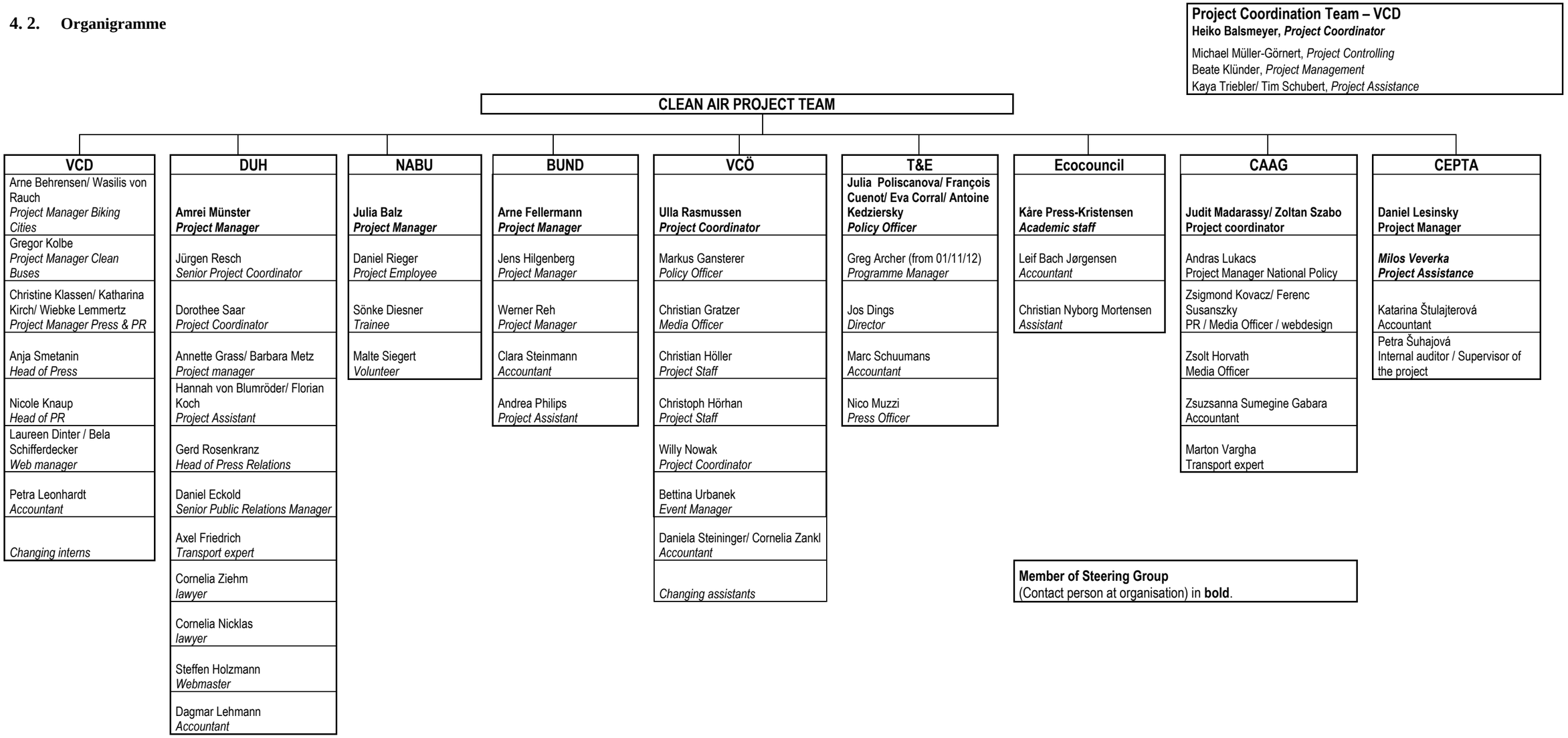
At the kick-off meeting, the steering group agreed on a quarterly internal reporting to have a sound overview over the projects finances. All associated beneficiaries fill in the statement of expenditure and send it to the coordination beneficiary together with scanned copies of signed time-sheets and invoices every three month. Technical reports with a review and an outlook were sent every six month by the associated beneficiaries. Furthermore they regularly provided input for the projects website and the newsletter. So a comprehensive overview about the project progress for the VCD was guaranteed. VCD always revised the reports (timetables, results, deliverables, budget) and provided feedback to the Associated Beneficiaries On January 9th and 10th 2013 the project steering group had its second team meeting in Brussels hosted by our partner T&E where all partners came together and discussed their actions. VCD as the coordination team tried to clarify all questions regarding the project planning and the accounting of the project and introduced the requirements for the Inception Report. The third Steering Group meeting was on September 12th 2013 in Vienna hosted by our partner vcö – Mobilität mit Zukunft. The Steering Group analyzed the first successes after one year of project implementation. A part of the meeting was scheduled for management issues like technical and financial reporting. The management team gave an overview on the current situation of the actions, the challenges and the budget. All challenges and potential risks as well as solutions were extensively discussed and next steps agreed. In the year 2014 the project had two project team meetings. The first meeting was organised in May 2014 by the Danish Ecocouncil together with the Coordinating beneficiary VCD in Copenhagen. The team evaluated the project progress and discussed how to organise the project work around the revision of the NEC directive. In October 2014 the project team got together in Budapest for a second meeting. This meeting was organised by the Clean Air Action Group Hungary and the VCD. This was a joint meeting together with the project's Advisory Board moderated by an external group facilitator.

The final project meeting was on July 7th 2015 in Berlin; here the team discussed the final reporting and the outcomes of the project. The day before was the final conference "Clean Air for European Cities" were the outcomes of the project and our demands to politics were presented. (see deliverable "Documentation on project team meetings end report " as annex no. 87)

Delivered reports:

- Inception Report; delivered: 31st May 2013
- Midterm report; delivered: 15th April 2014
- Final Report; 28th February 2016

4. 2. Organigramme



4. 3. Evaluation of the management system

To coordinate nine organisations from six countries is always a challenge and requires time and resources. All partners know each other since a long time and were working together in other projects such as the Sootfree for the Climate Campaign. This was very helpful for the Clean Air Project.

Furthermore it turns very helpful to have an external and therefore neutral expert who helped to structure the project management and contributes to identify the challenges from the project management point of view as well as finding solutions in accordance with the requirements of the LIFE Programme.

All Actions were facing challenges and most of them have been foreseen in the project proposal. The success of the actions depended to a high share on the political willingness and the attention given by the European citizens to the topic. All partners are NGOs without the possibility of direct influence. To influence politicians and citizens requires creativity, professionalism, persistence and resources. As NGOs we work with creativity, professionalisms and persistence, but since the economic crises in Europe, to get funding and assure the financial contribution for the project is even more difficult than in normal times – especially for the NGOs in Slovakia and Hungary.

The project was able to manage all critical situations and to solve problems such as the serious delay in the performance of the B2 action carried out by BUND. The atmosphere in the project steering group was always positive and constructive and all partners gave a positive feedback regarding the project coordination by VCD.

4. 4. Advisory Board

The Advisory Board includes ten experts from six countries. They have been recommended by the Associated Beneficiaries and the VCD. During the project the Advisory Board met three times. The Advisory Board is regularly updated about the project progress. They received the midterm report in April 2014 and three monitoring reports.

During the first meeting, the Advisory Board agreed to focus on a qualitative evaluation based on qualitative indicators. The indicators defined in the project proposal were revised by the Advisory Board and the most relevant for each action were selected for the evaluation of the project. (see deliverable “Documentation on Advisory Board meetings” as annex nr. 90).

The evaluation of the Advisory Board will be supported by the project team, responsible for the monitoring of the quantitative key data and indicators such as number of participants, number of press releases published or number of refitted busses.

The second Advisory Board meeting took place in Budapest in October 2014. In Budapest the Clean Air Advisory Board met the project team and gave feedback on the first monitoring report of the project. Short updates on project activities were given by the project team. The steering group members got in exchange with the participating Advisory Board members and pointed out where the Board members can support activities of the project.

The second Monitoring Report was prepared on the base of the Progress Report and was discussed by the Advisory Board on its third meeting which took place in May 2015 in Berlin. On this meeting the board got all relevant information to prepare its evaluation report. During this meeting, the qualitative indicators were reviewed.

The third and final monitoring report was prepared on the base of the final report.

(see deliverable “ Advisory Board Evaluation Report” as annex nr. 91)

Members of the Advisory Board:

Name	Function	Organisation
Willy Berends	European Policy	HJS Emissions Technology (Germany, DPF manufacturer)
Zsuzsanna Bibók	Air Quality Consultant	Hungarian National Institute for Environment
Dagmar Dehmer	Journalist; Issues: Environment, Climate Change, Africa	Newspaper "Der Tagesspiegel" (Germany)
Peter Lenďák	Executive Director	S-EKA, spol. s r.o.(Slovakia, Technical Services of Emission Control of motor vehicles)
Karl Ludwig Hüttner	Department Air Quality, Atmosphere, Climate	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Germany)
Dipl. Ing. Dr. Hans-Peter Hutter	Head of department	Institute for Environmental Health (Austria)
PD Dr. Mark Lawrence	Scientific Director	Institute for Advanced Sustainability Studies (Germany)
Martin Lutz	Head of air quality Management	Berlin Senate Department for Urban Development and the Environment (Germany)
Dr. Jens Christian Tjell	Prof. Environmental Chemistry	Technical University of Denmark
Guido de Wilt	Policy Officer	European Commission DG Environment

4. 5. Monitoring the impact of the project

Monitoring the impact on stakeholders

For the monitoring of the impact on the target groups, we created a questionnaire which is distributed in every workshop, conference or background discussion held within the project. For bigger events like workshops or conferences it is difficult to get all distributed questionnaires back but we got nevertheless a balanced feedback. In smaller discussions held in a more informal character it is difficult to ask the participants to fill in a questionnaire, here we got feedback from the organising organisation.

So far, the overall feedback for events held within the project is good; the participants who gave feedback evaluated the events on a scale from 1 to 6 (where 1 one is very good and 6 is very bad) with 2 on an average. Average answers of 93 and 88 percent show that most of the participants did receive useful information for the work of their organisation, company or municipality and think that the content of the event can be transferred to their country, region or city. A big part of the participants highlighted the good selection of speakers and the lively debates on Clean Air events. Over 90 percent of the participants would again take part in a Clean Air event.

Monitoring the impact on cities

For a monitoring of the impact of the promoted best-practise measures DUH is doing a yearly survey in Germany asking municipalities how effective they control their low emission zones. Since the first survey the number of municipalities controlling in a good way the sticker obligation is increased from two to seventeen. Here rolling as well as parking cars, buses and lorries are checked if they have the access permit and violations are fined. Twenty municipalities still refuse to control the access restrictions in an adequate way and got a "red card" for this attitude in the PR.

The European wide survey asked municipalities what measures they take to improve air quality. This survey was combined with the European City ranking done by BUND. Like a lot of the cities didn't answer or just sparsely answered DUH was not able to evaluate in an adequate way the results of the

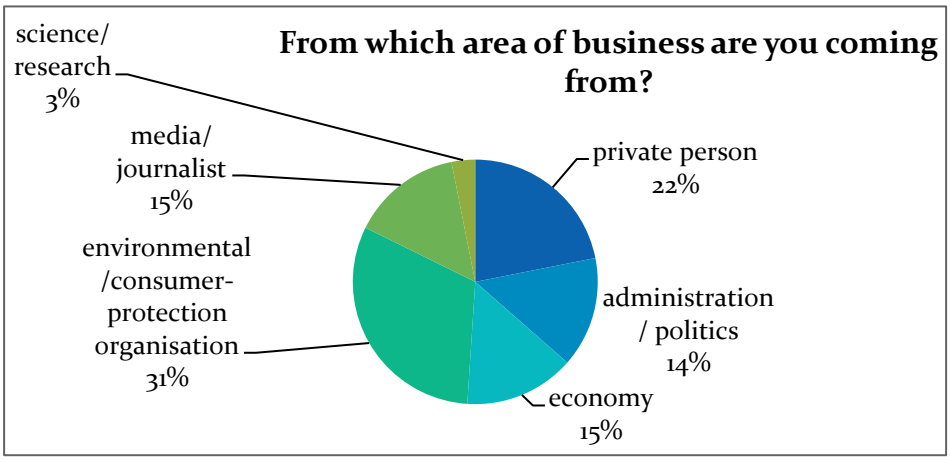
survey. After that bad data situation BUND took a big effort to reach the cities again and got the needed information in interviews so they were able to publish their city ranking in March 2015. The city of Zurich has emerged as the winner, thanks to a policy mix which includes a strong commitment to reduce pollution from vehicles, the promotion of cleaner forms of transport and low levels of air pollution. The runner-ups, Copenhagen, Vienna and Stockholm, also showed, it is possible to reduce the number of cars substantially and expand cleaner forms of transport, such as public transport, cycling and walking. At the other end of the ranking, Lisbon and Luxembourg finish in the last bottom two places for tackling air pollution in only a half-hearted manner.

Monitoring the impact on citizens

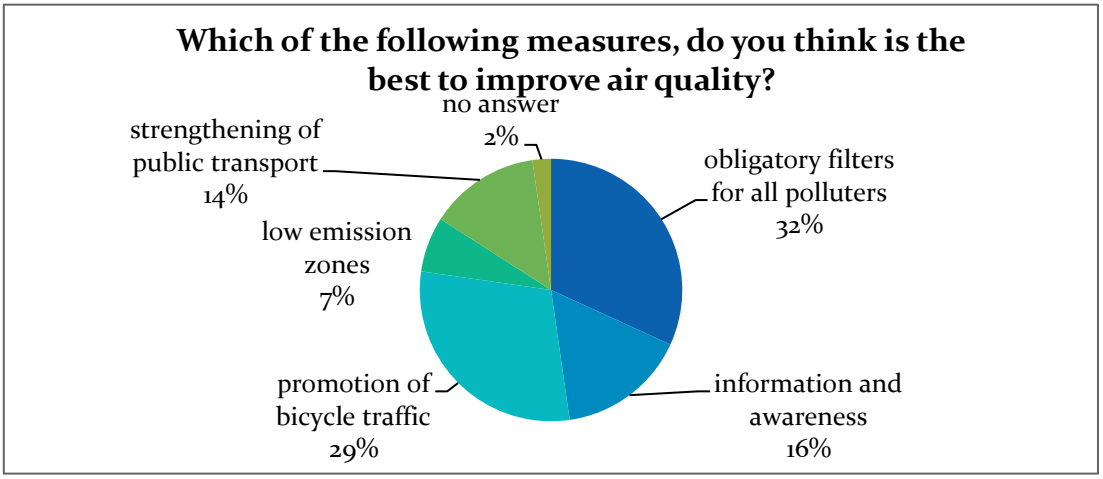
CAAG carried out a survey questioning the residents of Budapest about their opinion on bus transport and air pollution and their preferred ways to reduce these emissions. According to the survey 60% of the population in Budapest support the idea of creating more bus lanes and 61% of the population support the idea of giving priority to trams and buses at traffic lights. The outcome of the survey was used to argument in favour of keeping the bus lanes that the mayor of Budapest wanted to withdraw in autumn 2013.

For the website www.cleanair-europe.org we use a tracking system to get an overview on the interest of the user. A lot of visitors were interested in the news of the European Biking Cities project and in our press releases. Most of the visitors were from Germany. During the project 20.200 people used our website to find relevant information.

In order to identify the type and interest of the users of the website, visitors are asked to fill a short poll to know who uses our website. More than a half of the users of the website which took part in the survey are private persons or from environmental or costumer-protection organisations. So the biggest parts of the website users are citizens or organisations fighting for the environment or consumer rights. 80 percent of the users who took part in the survey got relevant information on the subject air quality on our website.



On the website as well as for the newsletter we use polls to ask the user which of the promoted measures for clean air they think to be effective. The obligation to have filters for all polluters and the promotion of bicycle traffic are the preferred measures to improve air quality website users who answered our little survey.



To have a sound monitoring of the impact of our dissemination activities, all beneficiaries carry out a profound media monitoring. VCD provided a template for what information is needed and the partners collected the articles published in their countries.VCD is doing an evaluation of the media monitoring. In the reporting period the project released 44 press releases (10 in Germany and 34 in the partner countries) we registered 3850 media reports in six European countries. Off those were 1950 online articles, 160 printed and 210 broadcasted in TV or radio.

Within the action E3 Monitoring the impact of the project three monitoring reports were planned, all reports were written and were presented to the Advisory Board. The Advisory Board of the project wrote its Evaluation Report on this basis. (see deliverable “2. Monitoring Report on the impact of the project” as annex nr. 93 and see deliverable “3. Monitoring Report on the impact of the project” as annex nr. 94 and see deliverable “ Advisory Board Evaluation Report” as annex nr. 91)

5. Technical part (50 pages)

5. 1. Technical Actions

5.1.1 Action B.1

Capacity Building Workshops for European Environmental and Consumer Protection NGOs

Indicators of progress

Application	Actual
At least 15 participants in each of the 11 workshops	1. WS: 22; 2.WS: 28; 3. WS: 15; 4. WS: 9; 5. WS: 20; 6. WS 85; 7 WS:14; 8 WS: 7; 9 WS: 20; 10 WS: 26; 11 WS: 13
At least 150 feedbacks from participants (evaluation exercise and questionnaire)	91 feedbacks received and analyzed. Results are summarized for project monitoring in one table and evaluated by VCD within Action E.1.
10 associations using the information provided for legal activities in their own country	Representatives from 106 different associations or institutions took part in the Legal Workshops and use the information provided for legal actions in their own country. Some are very active and successful; others still need help and particularly financial support.
10 legal activities initiated in various EU countries and their impact on air pollution control upon successful implementation	During the project ten legal activities were initiated in Germany by DUH. Another legal activity started in Austria under the advice of the DUH and two more legal actions in Portugal and the Czech Republic started in 2015 with the support of DUH. In addition the DUH gave juridical advice to BUND, which successfully sued in Hamburg.
Improvements of air quality due to measures taken to improve the air quality in Germany (measured using data recorded by the UBA from measuring stations in the environmental zones	As a result of our legal activities the cities of Darmstadt, Offenbach and Aachen implemented a LEZ in 2015. In addition after the rejection of the appeal relating the legal action in Munich the State of Bavaria had to update the air quality plan with measures that are effective to meet limit values. The same decisions were also made by the courts concerning the legal cases in Hamburg, Reutlingen, Wiesbaden and Limburg. We only can estimate improvements after the implementation of these measures. Due to normal work proceedings in German authorities it takes a lot of time until air quality plans are developed and come into force. Due to this timeframe we cannot analyze concrete data for improvements of air quality by the end of the project. We will analyze this within the following years and summarize this at our website.
reduction of traffic related emission lead to 2 days less of exceedance	Before the start of the project, in 2011 the daily PM_{10} limit value of 50 µg/m^3 was exceeded on more than 35 days at more than 40 % of traffic measuring stations. In 2014 this was only recognized at 10 % of traffic stations. The implementation of air quality measures, especially the stricter controls in Low Emission Zones within this project had a very positive effect on the PM_{10} pollution. However, NO_2 pollution still remains a huge problem in cities.

Expected results

Application	Actual
Transferable workshop concept for capacity building workshops.	Distributed to partner NGOs in November 2012
Minimum of 15 participants per workshop, i.e. a total of 100 organisations will be informed and trained	The minimum of participants is fulfilled. Approximately 134 organizations are informed and trained by now.
Organisations taking part support the project with their local legal activities and at a European level. At least 10 legal cases will be initiated.	Some organisations support the project with their local activities. Thirteen legal activities were initiated or supported within the project period.
Guidelines in English with most relevant background information, conclusions, frequently asked questions etc.	Handbook published in English 15.05.2014. German guidelines published on 31.09.2014.
Minimum 150 organisations will receive the guidelines	The guidelines were distributed via mail list of the *Sootfree for the Climate* Campaign, the *Clean Air* project and Client Earth. We sent out the German guidelines to regional and local environmental groups and citizen's initiatives. The second edition will be printed and distributed to the EU Commission, local authorities, NGOs and citizens. So more than 150 organisations receive the guidelines.
European organisations EEB, T&E (Transport & Environment), DUH, BUND, NABU and VCD inform and motivate their partner organisations in legal questions and motivate them to become active in their own countries	EEB distribute the invitations to the Workshops through mailing lists regularly.
Number of lawsuits	24 lawsuits were initiated or supported
Number of measures implemented as a result of lawsuits	We are waiting for the implementation of measures and have discussions with cities about the timeframe and the conditions. Introduction of LEZ in Wiesbaden, Mainz, Offenbach, Darmstadt and Aachen; expansion of the LEZ in Reutlingen; revision of air quality plans in all cities were decisions already were made.
Number of articles and reports about the lawsuits	75 media clippings have been published online, in Radio or TV or printed. In addition we published articles in professional journals DUHwelt 4/2012 Frischluftfreunde fordern europaweit Recht und Ordnung, DUHwelt 1/2014 Europa verschenkt Chancen auf bessere Luft, DUHwelt 2/2014 Dicke Luft in Städten, Recht der Umwelt, 12/2014, Regionale Schienen, 02/2015, Interview Luftreinhaltung DUH Website 07/2015,

	DUHwelt 4/2015

DUH organized the **kick-off meeting "European legal actions"** on September 26th 2012. The workshop was attended by 24 people from 14 different environmental organizations and allowed a very good information exchange and kick-off to build a network of lawyers and NGOs from different EU Member States. We handed out a survey prepared by Alan Andrews to all participants to identify obstacles to bringing in legal action in European Member States. All participants and other lawyers of our network for clean air were asked to fill in the survey. So, we reached more than 50 organizations from different European countries. Representatives from NGOs and lawyer in Italy, Slovakia, Portugal and Hungary and the German lawyer Remo Klinger informed about the national legislation and previous legal actions initiated in their countries. On the base of this first workshop experiences DUH developed a **transferable workshop concept for the capacity building workshops** by 1 December 2012.

The **second legal workshop** was arranged on January 9th 2013 in **Brussels** with 26 representatives from 19 different environmental organisations. The results of the survey were presented and an overview about the current legal situation of different EU Member States was given. Among other topics Mr. Marco Gasparinetti of DG Environment presented the Commission's role in enforcing EU air quality law.

The **third capacity building workshop** "European legal actions" was organised on April 24th 2013 in the Czech Republic. Fifteen representatives from eleven environmental and consumer protection organisations participated. The main aim was to improve understanding of the legal and political situation in the Czech Republic, Slovakia, Poland and Hungary, building on the basic information received through the survey. Through presentations by national campaigners and subsequent discussion, a number of possible future legal actions were identified. Alan Andrews presented the Client Earth's case against the UK government for failing to meet legal limit for air quality that was heard in Supreme Court.

The **fourth legal workshop** was held in **Vienna** on October 15th 2013. This workshop was attended by nine representatives of Austrian environmental organisations, institutions, citizens' initiatives and lawyers. The event focused on information exchange about the legal situation in Austria and the development of a strategy on how legal actions can also in Austria help to improve air pollution. After this Workshop some Austrian NGOs filed an "application for enactment of measures to comply with the air quality limits for nitrogen dioxide" against the Region of Salzburg where both the Austrian and the EU limit values for nitrogen dioxide are exceeded since many years. To support these activities we decided to support these Austrian NGOs with some finances for court costs and our judicial advice.

The fifth capacity building workshop was arranged on December 5th 2013 in London. Nineteen Lawyers, local air quality campaigners, consultants and representatives from British NGOs attended this Workshop and discussed the role of EU air quality limits and the ClientEarth's case in opposing projects which were likely to be detrimental to air quality. We organized this workshop to discuss a strategic and time efficient way to meet the demand of citizens asking about air quality in planning processes and legal possibilities. We intend to compile a practical guide who will equip campaigners and citizens to participate in EIA and other planning processes in order to ensure that air quality limits are given adequate consideration within planning and transport policy. This guide was developed by Mr. Ned Westaway and issued in 2014.

We combined the **sixth legal workshop** in **Bratislava** together with a larger conference about improving the air quality in cities and organized it with our Slovakian partner CEPTA. We benefit from the huge number of 85 attendees from different European countries, e.g. Poland, Slovakia, the Czech Republic and Hungary. Alan Andrews talked about "Legal aspects and how NGOs can take action". Axel Friedrich, technical expert for the Clean Air project presented "how to get the relevant information: Inventory" and Dorothee Saar reported about LEZ as an effective instrument. The representatives of the European Commission, the Ministry for the Environment of the Slovak Republic, as well as independent experts presented their contributions.

The **seventh capacity building workshop** was organized on 16 September 2014 in Paris with the friendly support of Ile-de-France Environment and Friends of the Earth Paris. 14 representatives of NGOs, local campaigners and lawyers attended this workshop and discussed EU air quality legislation and the possibilities to take legal action. In addition we evaluate the possibility to start legal actions by using crowd funding platforms, like "citizen case".

On 1st October 2014 we organized the **eight legal workshop** in Prague with the Frank Bold Society, which plans to start a legal challenge for new regional air quality plans in the **Czech Republic**. The aim of this meeting was to review the legal framework in the Czech Republic and to evaluate upcoming steps within the project.

On 13th October 2014 we organized a broader information exchange in **Brussels**. Twenty members from environmental organisations and lawyers attended the workshop. We received a very good update on infringement procedures by Miguel de Aragão Soares, lawyer working at DG Environment.

On 19th May 2015 we organized the **tenth workshop in Lisbon** with the support of the NGO Quercus. This workshop was the first meeting ever where representatives from regional and national administrations, responsible for the development of air quality plans, monitoring institutions and NGOs came together to discuss problems and solutions for air quality management. The DUH encouraged the attendees to adopt this concept of expert talks and develop a series of workshops were Stakeholders will meet regularly. Ms Boavida, from the Portuguese Environment Agency explained the national air quality action plan and how EU legislation is transposed into national law. Thus, **Quercus brings two legal actions** to national courts. Case one is delivered to the Administrative court of Lisbon on 9 March 2015 due to the delay of the phased implementation of HVO+Bus+E lanes in the main corridors of Lisbon and Porto that was set by air quality plans and execution programs. The second case started in June 2015. The objective is to call regional authorities to prepare and deliver two execution programs setting legally binding measures to comply with plans approved by national laws of June 2014. These legal actions aim to call public attention for air quality impacts and overcome the implementation barriers of plans and programs in Portugal. We are now waiting for the hearing of witnesses. Unfortunately we don't expect this to happen before the end of 2015 and probably will last in 2016.

The **final capacity building workshop** within this Clean Air project was held on 8 July 2015 in Berlin. We summarized previous legal successes as well as current activities and developed strategies forcing the "right on clean air" with a focus on damage cases. Representatives from environmental and consumer protection organizations as well as legal experts from different Member States participated. Scientific evidences are getting better so air litigation on damage cases would be effective in the future. We agreed to search for victims and any experts that draw the causal link to damages.

We decided to focus attention on those countries which the survey, workshops and subsequent discussions had identified as being most favourable to national legal actions: Portugal, Poland, Czech Republic and Hungary. We supported the development of legal strategies with lawyers and campaigners in these countries through advice via telephone conferences and email exchanges. The workshops have been useful in identifying possible legal action within Member States. Unfortunately, so far the project has not been successful in triggering new legal action in other Member States, due mainly to the considerable procedural, practical and financial barriers to access to justice in the various Member States. We are trying to secure additional external funding for national legal action, which if successful, will lead to greater demand for support.

On 5th September 2013 the **German Federal Administrative Court (BVerwG)** in Leipzig decided about the proceeding sued by the DUH against the state of Hessen for exceeding the limit values of 39. BImSchV. This leading decision gives NGOs the right to sue for each breach against Air Quality regulations based on EU law. Beside this, the DUH is conducting five other legal actions since the start of the Clean Air project. The first one is the appeal of the state of Bavaria, because of the decision of the Bavarian Administrative Court relating the persistent excess of limit values in **Munich**. After the state of Bavaria rejected the appeal to the Higher Administrative Court in the legal case filed by DUH concerning the ongoing breach of limits in the city of **Munich**, the judgment of the first instance became legally binding. The state of Bavaria has to implement measures that are necessary for a fast

compliance with limit values. The second one is the action filed by DUH against the state of Baden-Württemberg for exceeding the limit values of the 39. BImSchV in **Reutlingen**. In January 2015 the Administrative Court Sigmaringen decided in the **Reutlingen** case that the Regional Council of Tübingen has to update the air quality plan and to include measures to meet the limit values as soon as possible. The third legal action is the appeal of the state of Hessen for exceeding the limit values of the 39. BImSchV in **Wiesbaden**. In December the DUH readopted the lawsuit against the state of Rheinland-Pfalz for exceeding the limit values of the 39. BImSchV in **Mainz** because the city failed to implement effective measures. In November 2013 the DUH started a legal action against the state of Hessen, because of exceeding the limit values in **Offenbach**. On 30 June 2015 the Administrative Court Wiesbaden decided in the two lawsuits against the state of Hessen concerning **Limburg and Offenbach**. The air quality plans for both cities have to be updated with appropriate measures in order to keep the exceedance period as short as possible. The court makes clear that financial or economic aspects cannot lead to refraining from measures to comply with air quality limits. The concept must include all conceivable measures to reduce NO_2 levels. In addition the DUH advised the environmental organization Friends of the Earth Germany (BUND) which sued together with a resident of the high polluted Max-Brauer-Allee in **Hamburg** for continuous breaches of air quality limit values. On 6 November 2014 the Administrative Court of Hamburg decided that the city has to revise the air quality plan and implement effective measures to meet limits

The manual "**The Clean Air Handbook – A practical guide to EU air quality law**" was published on 15th of May 2014 and sent to NGOs within the legal and clean air network. In addition it is available online on the Clean Air legal and the ClientEarth website. The DUH translated the Handbook into German. The Guidelines were distributed to local and regional environmental groups and citizens' initiatives. It is also available for download on the Website. Both handbooks can be found in the Annexes (see deliverable "1st guidelines results capacity building workshops" as annex no. 4). We also provide a form letter for reducing the air pollution that affected citizens or environmental organisations can use to require the implementation of effective measures.

Besides the cooperation with Quercus we also work together with the **Czech Frank Bold Society (FBS)** bringing legal cases for a better implementation of air quality measures. We decided to support lawyer costs with project money. So in February 2015 the application to the court challenging the lack of action and delay in issuing a new air quality plan was brought on behalf of a private individual and a local NGO (Ĉisté nebe). After statements from the Ministry for the Environment and FBS, we are now waiting for the court decision. At the same time the Ministry of Environment postponed the finalisation of new Air Quality Plans by beginning of 2016. FBS will comment the strategic environmental assessment and facilitate the public participation for local partners. One new plans are finally adopted and become valid, FBS will analyse it and decide on follow up actions.

On 29th April 2015 the UK Supreme Court decided in a lawsuit filed by our partner lawyer organisation ClientEarth against the UK government concerning the ongoing exceedance of limit values. The UK has been breaching legal limits for nitrogen dioxide since 2010 in 16 different cities and regions. The judgment followed the CJEU landmark decision from 19 November 2014 and forces the next government to draw up new air quality plans by the end of 2015.

In June 2015 the EU Commission took action against Germany for breaching NO_2 limits, sending a **letter of formal notice**. The main source for NO_2 emissions in urban areas is the transport sector, namely diesel engines. The EU Commission reaffirms that measures such as the ban of diesel vehicles in urban areas and the promotion of hybrid or electric cars or other vehicles that can operate without emitting pollutants could make a significant contribution to solving problems. In addition it criticizes the long lasting fiscal promotion of diesel fuels in Germany. The DUH made a lot of press work and held discussions with representatives from regional and national administration, e.g. the Ministry for the Environment to evaluate measures that can be implemented to reach compliance.

In November 2015 DUH, supported by British NGO ClientEarth has filed a lawsuit against several German Federal States who need to do more in the area of air quality planning. The affected cities are Cologne, Bonn, Aachen, Düsseldorf, Essen, Gelsenkirchen, Frankfurt/ Main and Stuttgart. With this measure, the DUH intends to commit the Federal States in question to change their clean air plans.

The aim is to include all appropriate measures in the plans so that the limit values, which have been valid for many years, are complied with as soon as possible. The DUH has also applied for compulsory enforcement measures to be taken against the Bavarian and the Hessian Ministries of the Environment due to limit exceedances in Munich, Darmstadt, Reutlingen and Wiesbaden. The DUH is now requesting that penalty payments be paid by the two competent federal state ministries for failing to implement the judgements. This new wave of legal cases is an outcome of the Clean Air project and guarantees that we will continue the successful work.

By the end of the project DUH and ClientEarth updated the **Clean Air Handbook** with all court decisions that came up in 2014 and 2015 having an influence to legal actions before national courts in all Member States. (See deliverable "2nd guidelines results capacity building" as annex nr. 5)

We distributed press releases concerning all the court decisions and published articles in our project newsletters, on the websites and other journals. We had a good media attention and received many requests from press and citizens. Because of this very good media attention to this topic we decided to increase the intended number of press releases. The public relation well enhanced the acceptance for measures on air pollution control by the public.

Originally, DUH planned to hire Alan Andrews as lawyer for the project but Mr. Andrews was not able to move to Berlin after the final confirmation of the project by the EU Commission. As Mr. Andrews has a huge network in Brussels, built during his work on air quality issues and a long and broad experience in legal cases his work is very important for the success of this project. Therefore DUH agreed with Mr. Andrews to employ him as an external assistant until November 2014. Since then Mr Ugo Taddei, who is also legal expert at ClientEarth was working within the Clean Air project as external judicial expert. But Mr Alan Andrews still supported the legal actions within the Clean Air Project and provided his advice to the team in legal aspects concerning European air quality law.

As mentioned in the application DUH needs to employ an expert for technical questions and send out a limited call for tender. We got the best offer from Mr Axel Friedrich, a well-known international expert on transport and air quality. We had the chance to offer Mr Friedrich a desk in the office of the DUH, so he can work closely together with the project team and takes part in all project meetings. Therefore Mr Friedrich is hired with a contract for services and costs are included in personal costs.

In November 2015 the DUH supported by the British NGO ClientEarth has filed a lawsuit against several German Federal States who need to do more in the area of air quality planning. The affected cities are Cologne, Bonn, Aachen, Düsseldorf, Essen, Gelsenkirchen, Frankfurt/ Main and Stuttgart. With this measure, the DUH intends to commit the Federal States in question to change their air quality plans. The aim is to include all appropriate measures in the plans so that the limit values, which have been valid for many years, are complied with as soon as possible.

The DUH has also applied for compulsory enforcement measures to be taken against the Bavarian and the Hessian Ministries of the Environment due to limit exceedances in Munich, Darmstadt and Wiesbaden. Final judgements have already been issued there, but they have not been complied with. The DUH is now requesting that penalty payments be paid by the two competent federal state ministries for failing to implement the judgements. The law provides for a maximum penalty of 10,000 euros; this penalty can be repeated and also fixed on a per day basis. Decisions are expected within the year 2016. We had a lot of media attention after issuing a press release and received a lot of requests by citizens and NGOs.

Because of the organisation of workshops in different European countries we had to work while travelling and needed some Notebooks and mobiles more than a beamer and metaplan box which was originally planned within the proposal. Both are already new and well equipped.

5.1.2 Action B.2

Guidelines for local and regional authorities with competences to implement legislation

Indicators of progress

Application	Actual
- Minimum 30 participants in each of the workshops and 30 feedbacks from these participants	Throughout the project we organized two conferences and two workshops that together attracted a total of 144 participants. Additionally we've met individually with the city administrations of London, Luxembourg and Berlin.
- Up-to-date guidelines available on website. Minimum 80 readers per month and qualified feedback on guidelines	The guidelines are available on the project website in 7 different languages. To track downloads was difficult and we cannot proof the amount of readers per month but we received verbal feedback on the workshops and in meetings with the cities. We were pleased with the positive feedback.
- Network of experts and representatives of various institutions (min. 100 participants, min. 80 NGOs and local and regional administrations)	Broad network of city representatives, administrations, politicians, associations and NGOs that grew significantly as part of this project. Not exhaustive list of experts and representatives is attached.
- 100 local and regional authorities which use the guidelines (evaluation of feedback from workshops, network and website visitors, direct contacts to administrations)	Guidelines were sent via email to more than 100 municipalities. Additionally in the workshops the participants, among them many cities, were informed about the guidelines. We received verbal feedback on the workshops and in meetings with the cities. We were pleased with the positive feedback.
- 50 additional measures recommended in the guidelines are implemented (evaluation of feedback from workshops, network and website visitors, direct contacts to administrations)	We collected a non-exhaustive list of measures implemented in European cities. Within our work on the guidelines and the city ranking, we have analysed 23 air quality plans in 2015. The study confirmed our work on the exchange of best-practices: the measures covered by the guidelines were deemed effective by the cities and there was a wide spread application. The guidelines fostered the application of measures in many cases.
- In minimum 10 model cities, the traffic-related urban PM10-contamination (diesel exhaust pipe emissions) will be reduced by half within three years (compared to base year 2010).	Newest EEA data sets analyse air quality up until 2012, the year in which the Clean Air project started. We would need to transfer local assumptions to other cities. If we take the example of the Berlin low emission zone, the analysis shows that particle exhaust emissions were reduced by -63% in 2012 compared to trend scenario (Data: City of Berlin). A similar analysis undertaken by TROPOS institute for the city of Leipzig showed a -56% trend of Elemental Carbon (Soot) in a trend analysis as a result to the LEZ. Model cities that have implemented Euro 4 low emission zones since 2013 include the German cities of Darmstadt, Offenbach, Bonn, Cologne, Langenfeld, Mönchengladbach, Münster, Neuss, Remscheid, the region Ruhrgebiet with the cities Bochum, Bottrop, Castrop-Rauxel, Dortmund, Duisburg, Essen, Gelsenkirchen, Gladbeck, Herne, Herten, Mülheim, Oberhausen and Recklinghausen, as well as

	Siegen and Wuppertal. Not available trend analysis would prove the drastic reduction of ultrafine particles similar to the experiences made in Berlin and Leipzig. Sadly, the not widespread uptake of Euro 6 vehicles to date in combination with the failure of Euro6 to achieve reductions for NOx does render a reduction of NOx so far almost impossible.
- Significant reduction (10mg3) of PM10 daily exceedances (compared to base year 2010) at around 150 urban measuring stations in network cities.	EEAs data for daily exceedances so far only includes 2012. The development between 2011 and 2012 is promising in that aspect. The overall share of the urban population exposed to PM10 concentrations above the limit value has decreased by 28,8%. In the EEA measurement stations there are 544 urban traffic stations, the reduction would therefore translate into 158 urban traffic stations less exceeding the limit value in 2012.

Expected results

Application	Actual
• Experts from a minimum of 10 local authorities will participate in each of the two workshops for the selection of best-practice models. Transferable best-practice models and concrete recommendations for measures will be elaborated based on the results of the workshops.	Throughout the project we organized two conferences and two workshops that together attracted a total of 144 participants. Additionally we've met individually with the city administrations of London, Luxembourg and Berlin. The discussion on the selected measures was fruitful and will continue beyond the project.
• A minimum of 30 participants in each of the two workshops for discussion of the guidelines. Concrete and comprehensive 'portfolio' of 10 – 15 guidelines for various measures.	In a total of two conferences and two workshops a total of 144 participants discussed a broad range of measures. Individual meetings were undertaken with cities like London, Luxembourg and Berlin.
• Up-to-date guidelines available on website. Minimum 80 readers per month and qualified feedback on guidelines.	Up-to-date guidelines available on project website as well as on www.sootfreecities.eu.
• Online guideline library achieves 120,000 hits per month.	There was a substantial error in our estimate of the website visitors for the project. We are sure we made a numerical mistake in the application probably; a reasonable ambitious estimate would have been somewhat around 1000 hits per month. Both our two websites that we presented the guidelines on had a total number of visits of 45,000. That equals 1260 visits per month on average.
• A good network of experts and representatives of various institutions (min. 100 participants, min. 80 organisations).	Broad network of city representatives, administrations, politicians, associations and NGOs that grew significantly as part of this project. Not exhaustive list of experts and representatives is attached.

In this action BUND created guidelines with best-practice information on reducing the emission footprint of urban transport and uses them to facilitate the knowledge exchange with municipalities and other stakeholders.

In the beginning of the project BUND established links with a series of municipalities and organisations and interviewed them on their interest in the cooperative assembly of best-practice guidelines. The cities initial feedback was a setback for our plans, because while cities suggested a series of reduction measures, they signalled they could not help compiling guidelines due to constraints in resources. BUND decided to change its original plan and instead researched best practise examples and compiled the guidelines itself. This caused a delay of the guidelines that BUND tried to keep within reasonable limits but that affected to overall time plan of the project considerably. The coordinating beneficiary VCD and BUND worked together intensively and cooperatively in order to find a solution.

The new approach postponed the workshops to the end of the project. Instead we started a research phase utilising questionnaires on best-practice measures. These questionnaires were sent to 25 European cities. In cooperation with the questionnaire of the DUH for action C.1, we broaden the questionnaire with some extra-questions for the European survey. These questionnaires were also part of the research for the city ranking www.sootfreecities.eu. One interesting feedback from this phase of our project was that cities were partially not interested to take part in a survey conducted by a German NGO. We got the feedback from some cities that answering the questionnaire was a large effort for them. One lesson learned from this project is the strategy to utilise small, low-key meetings with selected parts of the municipal administrations. For example, the city of Stockholm recognised filling out questionnaires (cities receive quite a lot) as well as workshops for which they have to travel, a burden for their daily work. Small workshops like the one we had with them in August 2015 in their transport administration, bringing together different administrations as well as the region, were easier to handle for them.

The process of submitting the questionnaires to the cities took considerable more time than expected. In order to contact the right person in the city and to receive a qualified feedback, we were cooperating with our network of national and local NGOs. Their input is crucial and they support the collection of information with translation and contacts. Although we started in June 2013 to contact NGOs and cities, it took until the beginning of 2014 to receive a larger number of completed questionnaires.

Until the beginning of 2014 BUND received completed questionnaires from 19 cities. Based on this research as well as additional information, acquired in consultations in our expert network and in the Clean Air project group, we drafted the guidelines. The first two guidelines were available on the project website by March 2014. Until June 2014 we finalised a total of 10 guidelines factsheets. With the update of the project website for the "Sootfree Cities" air quality ranking on the 30th of March 2015, they were also published on the website http://sootfreecities.eu/best-practice.

We promoted the guidelines within the project group as well as through the project newsletter. Additionally we sent information on the publication to the larger city networks like Eurocities and CEMR. On several meetings BUND discussed with Michael Klinkenberg from Eurocities, who agreed that NGO guidelines explaining best-practice measures was a very good addition to facilitate the uptake of new air quality measures.

After the finalisation of the guidelines, the communication with municipalities was the priority of BUNDs work. The first step was to show and discuss our findings with a larger policy oriented audience on a lunch debate on the 30th of March 2015. Two very prolific cities were Vienna and Zurich, who gave inputs to a larger audience of stakeholders, explaining their activities and what they considered to be the most-effective measures. BUND further explained the current state of measures in European cities and highlighted best-practices. Then the event discussed the necessary European policies for local air quality to improve, together with city representatives and Members of the European Parliament.

The same day BUND organised a workshop with key city representatives, discussing the guidelines and receiving feedback on the content of the guidelines. The cities of Berlin, London, Vienna and

Zurich explained their current approaches and discussed how to further improve policy frameworks and communication of measures. This fruitful discussion also featured the first presentations of London's agreed ULEZ plans.

In May 2015, BUND visited the city of Luxembourg, one of the most car-oriented cities in Europe and discussed new measures and challenges of the city. Part of the discussion also was the department for air quality measurements and national plans of the national environmental ministry.

On the 30th of August 2015, BUND visited Stockholm for a small local air quality workshop with different departments of the city of Stockholm as well as the region of Uppsala. Stockholm, one of the most sustainable cities of Europe, is a striking example of progressive policies; interestingly with a very strong focus on climate policies and structural changes in the mobility culture. Air quality is seen as a secondary target and synergies are exploited. Fossil-free Stockholm 2050 is an important target and new policies are being drafted to work towards that goal. Christer Johansson of the Stockholm-Uppsala County Air Quality Management Association gave us the verbal feedback that he thought "the best-practice guidelines were a very useful publication and contained interesting information." (see deliverable "Documentation of 4 workshops to discuss guidelines" as annex nr. 9)

The final event took place on the 13th of October in the city of Stuttgart. In 2015 the city and federal state together published a reasonably ambitious air quality action plan which now is in consultation with stakeholders. The plan includes the plans to introduce a Euro 6 LEZ in before 2021 but most importantly envisages a reduction in private motorised traffic by 20% before 2020. The conference featured the Green Major of the city of Stuttgart Fritz Kuhn, Frank Dünnebeil from the think tank IFEU as well as the cities of Berlin and Zurich.

As final element of the action, BUND updated the best-practice guidelines based on the newest developments in urban air quality measurements. The updated guidelines were translated to a total of 7 languages and were uploaded to the project website (http://www.cleanair-europe.org/en/downloads/#c1575) and to www.sootfreecities.eu. The publication was then again promoted by sending an email to the air quality network build in the network as well as Members of the TRAN and ENVI Committees of the European Parliament. (see deliverable Updated guidelines for local and regional authorities" as annex nr. 10)

5.1.3 Action B.3

Contributions of NGOs towards the revision of the EU Air Quality Directive

Indicators of progress

Application	Actual
Conference to discuss the air quality improvements that can be expected from the reviewed strategy of the Commission, this conference will be attended by minimum 60 participants	IASS, EEB and DUH organized the joint science-policy conference "Air Quality and Climate Change policies – separate or joint challenges?" in May 2013 in Brussels, attended by 75 participants.
Number of and feedback from participants in two workshops, 30 participants and 30 feedbacks each workshop	We have 14 feedback forms from attendees of the expert talk about construction equipment. The results are summarized for project monitoring in one table and evaluated by VCD within Action E.1.
Feedback from the EU Commission, EU Parliament, national ministries and government representative 3 reply letters	Our reply to the public consultation on the revision of the non road mobile machinery directive was published on the website of the European Commission https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp We got a reply letter from the German Ministry of transport (23rd of July 2013) answering our letters to inform the ministry about the ongoing development of the construction site regulation of the Deutsche Bahn. On 27 January 2014 we send a letter to the Federal States of Germany about the European Air Quality legislation. We received an answer by the Federal State of Rheinland-Pfalz on 20 March 2014. On 19 September 2014 we send letters to new elected German MEPs and had meetings with six of them to discuss the NEC and NRMM proposals. On 3rd of November 2014 DUH sent together with IG BAU a joint statement on the Commission Proposal for NRMM. We were invited to the hearing of the Ministry. DUH took part. On 1st of December we sent a voluntary opinion to the Commission accompanied with press work to show the potential of cost effective measures, which haven´t been implemented by cities and federal states to reduce the NOx emissions as soon as possible. We got reply letter from German Ministry for Transport answering our letters to inform the Minister about the ongoing development of the construction site regulation of the Deutsche Bahn. In addition we have a reply letter of the secretary of state of the Ministry for the Environment Mr. Flasbarth, answering the letter we wrote to the German Chancellor. We also received emails and calls from MEPs or their scientific assistance (for example Groote, Schwab, Giovanni La Via) for more details on our recommendations for clean air.
Number of brochures distributed and feedback from citizens 5.000 brochures, 120	Approximately 2.300 brochures are distributed by now. We distribute the brochures at any DUH event and any NGO event connected to air quality topics. 100 brochures were sent to the city of Leipzig in July

letters from citizens	2014. The distribution of flyers will be continued after the end of the project. We asked local environmental organizations and citizen's initiatives to order brochures and distribute them to interested members. On 3rd of July 2015 DUH organized a consumer information day at a central place in Berlin (Alexanderplatz) and distributed 500 flyers to citizens. The topics air quality and construction machinery are very specific and hadn´t much public attention until now. Therfore we only received one request by a citizen asking about the Clean Air Package. and another citizen spread our paper about "Soot". He wrote to the regional governments of Hamburg, North Rhine Westphalia, Rhineland Pfalz and the German association of cities (Deutscher Städtetag). All reactions of the relevant public bodies he forwarded us were positive.

Expected results

Application	Actual
The EU Commission receives, via EEB and T&E, qualified contributions from at least 10 NGOs for revising the Air Quality Directive, particularly regarding the stricter definition of limit values, pursuing the non-adherence of the limit values and input on the question of a new limit value which limits black carbon.	At 3rd of April 2013 a letter with qualified contributions have been sent to the EU Commission, DG Environment On 11th of July 2014 we sent a letter to express our concerns about some notable omissions within the interservice-document of the Commission the German Ministry of Environment. On 17th of November 2014 the EEB send a joint NGO letter to Jean-Claude Juncker, President of the European Commission and Frans Timmermans, Vice-President to express our concerns about possible withdrawals of the Clean Air Package. On 24th of November we send a request to the German Federal Chancellor Ms Merkel and the minister of the environment Ms Hendricks to support the continuous work on the Clean Air Package. The German members of the Clean Air project wrote on 1st of December a voluntary statement to the Commission to show the potential of cost effective measures, which haven´t been implemented by cities and federal states to reduce the NOx emissions as soon as possible. In April 2015 the German NGOs of Clean Air send amendments on the NEC proposal as well as on the NRMM proposal to German MEPs. The day before the ENVI Vote on NEC Directive we send a joint NGO letter linking to the Air-o-Meter that was developed by EEB to the ENVI members. At the same time we started a Twitter action to raise public awareness. Within the last two weeks before the NEC plenary vote we met eight German MEPs and wrote several Emails and letters to the German MEPs. On the day before the vote (27th of October 2015) we sent a joint NGO voting recommendation to the German MEPs.During the whole legislative process we had close contact to the relevant working staff of the German Ministry of Environment.

The invited participants from the municipalities and scientific institutes (40 participants +) take part in the background discussions, report on the developments in and obstacles to the implementation of the Air Quality Control Directive. This information is made available to T&E and EEB which can then incorporate the information in the stakeholder consultation sessions for the revision of the Air Quality Control Directive.	36 representatives from municipalities and scientific institutes took part in the background discussion. The information is made available to T&E and EEB. The second event on construction equipment held on 11. July 2014 was attended by four German regional and local authorities. The event mainly focused on the possible introduction of particulate filter obligations in public tenders. In addition we organized together with IASS two scientific workshops. One topic was soot, the other one was Ozone. Both events were attended by about 20 persons mainly from science, administration (BMUB, UBA, Berliner Senat) and NGOs. The results of the events have been made available to other NGOs (including EEB and T&E).
Two brochures will contribute to the information of at least 3,000 persons (multipliers, citizens) on the Air Quality Control Directive and its significance for citizens.	Approx. 2,300 persons have been informed so far. 100 Brochures were sent to the city of Leipzig in July 2014. On 3rd of July 2015 DUH organized a consumer information day at a central place in Berlin (Alexanderplatz) and distributed 500 flyers to citizens.
Higher acceptance for measures on air pollution control by the public.	The number of media articles shows that the interests of the public for the topic air quality and health and environmental effects have improved. We use this general interest to push specific topics like emissions of construction equipment and air quality package, as those articles mainly appear in journals and technical press.

The processes of the second revision of the Air Quality Directive, AQD (2008/50/EC) and the National Emission Ceiling Directive, NECD (2001/81/EC) have been delayed. Contrary to the application the legislation process has not started in summer/autumn 2011 but started - at least for the NECD- in December 2013. Therefore some of the activities of this action needed to be postponed as well.

The **first brochure** on limit values, laws, effects of air pollutants on health and climate has been finalized beginning of 2014. The flyer is available in German, English, Danish, Hungarian and Slovakian. The first edition comprises 2.500 brochures in English and 2.500 in German. The brochures are available for download at the Legal website (D.1), the campaign website and the websites of the partner organizations. The distribution is in progress and will be continued after the end of the project.

The Clean Air project managed to be part of a multi organization **position paper**, listing up the NGO priorities for the review of the Thematic Strategy on Air Pollution. 60 European NGOs signed the letter, which was send to the Environment Commissioner and to relevant people involved with the TSAP review in DG Environment on March 4th 2013. This position paper was send to the German Environmental Minister right before the Informal Environmental Council Meeting on 22th of April 2013, where Air Quality policy was extensive discussed according the agenda. We are part of a group of NGOs preparing 12 factsheets on air pollution in the EU. The papers are coordinated by EEB and are directed to the public. DUH took part in the development of the Factsheets about 'Air & Climate', 'Air & Non-road machines' and 'Air & domestic heating'. The brochures were published in September 2014, are available online http://www.eeb.org/index.cfm/activities/industry-health/air/ and are used for Twitter actions. (see deliverable "brochure measures for air quality" as annex nr. 13)

Due to the delayed legislation process of the NEC and NRMM Directive the DUH work on European level in 2013 has not been as intensive as planed in the application. This also has impacts on the timing and content of events. So in total the delayed legislation progress has an impact on the strategy of this action. By focusing on national level and the improvement of information and data about the

climate impact of soot, we closely work together with the Institute for Applied Sustainability Studies in Potsdam (IASS). In September 2012 we jointly organized a **scientific workshop** in Germany to raise awareness among politicians about the climatic impact of short lived climate forcers (SLCP) like soot. Due to the great success of this event we decided together with IASS to bring this event to Brussels to an international audience. Therefore we organised together with IASS and EEB the joint **science-policy conference** "Air Quality and Climate Change policies – separate or joint challenges?" on 21 May 2013 in Brussels. The Conference was very well attended by 72 representatives of the Commission, scientific institutes, municipalities, regions and NGOs. Since air pollution and climate change are often treated as separate problems although they are inexorably linked with regard to their causes, effects and mitigation options, the conference aimed to discuss the potentials, co-benefits, challenges and trade-offs of concerted action in these two sectors with representatives from policy, civil society, research organisations and practitioners. The large number of attendees and the great feedback afterwards showed us that it was a good idea to organize this event.

As a result of the science-policy conference in March 2013, IASS and DUH organized a smaller event to discuss with NGOs, scientists, municipalities and ministries in Germany the latest studies and their influence and potential on a joint legal framework for climate and air quality to use co-benefits and avoid trade-offs. We changed the topic of the workshops listed up in the application to follow the idea of combining activities of clean air and climate.

European NGOs together with several MEPs called on European Commission to release the air proposal before end of the 2013 European Year of Air. In the morning of the 10th of December 2013 a five meter big, inflatable lung was stationed in front of the entrance of the European Parliament in Strasbourg accompanied by a banner saying "Our lungs are in your hands". **The action** was jointly organized by the European Environment Bureau, the "Soot free for the climate"-campaign and the "Clean Air"-project. The occasion for this event was the official close of the "Year of air" the day before at a conference hosted by the Commissioner for the Environment. Due to the delay of the Commission´s new air package Members of the European Parliament in cooperation with NGOs started an action asking for the Commission to propose its package to the European Parliament as soon as possible and to make sure that it will be ambitious enough. The most important European newspaper "the European Voice" reported from this action.

Some days later the Commission's proposal for Clean Air Package including the revision of the NEC Directive was published.

On 14th of January 2014 DUH and IASS organized the event "Klimadialog" that was attended by representatives of the German Ministry for the Environment, the Federal Environment Agency (UBA), scientific institutes and environmental and consumer protection organizations. The results were published in a factsheet titled "Ruß in Deutschland: Hintergrundinformationen für Entscheidungsträger, Teil 1: Wirkung und gesetzliche Regelungen". A second event dealing with climate and air pollution was focusing on a local scale. IASS and DUH improved the concept of the

event. The aim was to bring together representatives from public authorities on a local and regional level as well as NGOs and scientists. Unfortunately the local authorities didn't recognize the priority to combine air quality and climate change issues. So the event needed to be postponed.

In November 2014 worries came up that the new Commission would not include the Clean Air Package in its 2015 Working Program. Before the Commissions' decision we asked President Juncker and Vice-President Timmermans in a joint NGO letter to not withdraw the Clean Air Package. On national level we asked the Federal Chancellor Angela Merkel and the Environmental Minister Barbara Hendricks to support the Clean Air Package. The NGOs continued their campaigning activities in 2015 until the final decision to not withdraw it was taken.

On 22 September 2014 the DG Environment asked in a Pilot request the German government at what date the EU limit values for NO_2 will be respected in all areas, and which additional measures will be introduced to achieve compliance with the Air Quality Directive as soon as possible. The German members of the Clean Air project wrote a voluntary statement to the Commission accompanied with press work to show the potential of cost effective measures, which haven´t been implemented by cities and federal states to reduce the NOx emissions. The opinion was sent to the EU Commission on 1st December 2014. In the beginning of 2015 we did a lot to improve the Commission proposals for NEC and NRMM. We wrote letters to MEPs, sent twitter messages addressing MEPs, published press releases and organized meetings and calls with German MEPs. The ENVI vote on the amendments for the NEC Directive held on 15 of July 2015 was very successful.

For accompanying the revision process of the NEC Directive and the Trilogue we decided to enhance the public relations and write postcards to the Members of the Parliament with our requirements before the plenary vote end of October 2015. This is expected to be more effective than organizing press conferences. After a limited call for tender, the DUH got the best offer for a designer who developed some illustrations that can be used for the postcards as well as for the website. DUH sent the postcards to the German MEPs and used them for Twitter. By this action we managed to point out again our main demands.

Due to the fact, that beside all regulatory processes so far the Ozone load is rising again we organized a **joint expert talk** together with IASS to find solutions to reduce Ozone values. Ozone is not directly emitted but is a result of its precursors (methane, VOCs, NOx). The NECD is addressing most of the precursors, so this topic is relevant before the background of the NECD revision. The results of the expert talk are brought together in a "policy brief" in English and German.

DUH is pushing the topic "**filter obligation for construction machinery**" in Germany and Europe. German NGOs answered the **public consultation NRMM**. Within the answer we present NGOs view on the next steps of the NRMM Directive. The most important demand of the NGOs taking part in the public consultation is a limit value for particulate numbers as already mandatory for road vehicles. In addition we made clear that an intensive control of the implementation of the law is mandatory for its success. Beside the revision of the NRMM Directive in Brussels, the political work within the Member States focusing on the stock is also relevant. While waiting for the publication of the Commission proposal for the new stage of the NRMM Directive, DUH is concentrating on the situation in Germany, which is one of the main European countries for construction industry. Therefore we influenced successfully the **Deutsche Bahn** to include a filter obligation into their tenders. After making this public in September 2012 industry tried to water down the arrangements of the Deutsche Bahn. DUH organised an **expert talk** on May 16th 2013 and brought all relevant German stakeholders together to check the reliability of all arguments against filter obligation. The main result of this event was the fact, that most of the arguments and problems brought up against a filter obligation for construction equipment could to be solved relatively easy. In fact most of them have already been solved by Switzerland which is not part of the EU, but transposed all relevant laws to their system. On July 1st 2013 the new regulation for tenders of the Deutsche Bahn came into force with weaker requirements for construction equipment as announced. After the summer break Mr Grube (CEO Deutsche Bahn) invited NGOs to the annual summit talk. Jürgen Resch (CEO DUH) brought up the topic air pollution in general and filter obligation for construction equipment in special.

After this high level meeting the Deutsche Bahn invited DUH to work together on a second step of the regulation, which would only accept construction machinery equipped with filters.

In April 2014 a study done by the Institute for Energy and Environmental Research (IFEU) dealing with the share of construction machinery of urban air pollution was published. From NGOs point of view three main aspects – climate, occupational safety and health – haven´t been taken into account at all. Therefore the recommendations derived don't reflect the topic correctly. To give experts the opportunity to evaluate the given recommendations from different points of view, DUH organized an expert talk *„Rußfreie Baumaschinen - Vorstellung der IFEU Studie zur Minderung der Umweltbelastung aus NRMM"* on 11 June 2014. A total of 40 persons including representatives from the municipalities Leipzig, Berlin, Bremen and the Ministry for Transport Baden-Württemberg attended the event. Angela Kohls from UBA introduced the recent proposal for the reviewed environmental label "Blauer Engel" for construction equipment that include exhaust emissions to the categories. So far only noise was taken into account. In a first expert hearing in June 2014 organised by the RAL gGmbH, the awarding body for the environmental label, DUH asked for surveillance aspects and a second ecolabel for stock machinery. After a second hearing the Environmental Label Jury adopted the new label "Blauer Engel weil lärmarm und emissionsarm" in December 2014.

As a result of our work we recognized, that in the municipality of Bremen and in the federal state of Baden-Württemberg discussions on filter obligations in public tenders and on filter obligations for all construction equipment used in Low Emission Zones (LEZ) started. All regional initiatives were stopped for a while, as the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) published within the Umweltministerkonferenz (UMK) in October 2014 a document dealing with possibilities for stronger emission requirements for public tenders and LEZs. Based on this information we conducted a survey among all German federal states about how they are going to implement the requirements in detail. (See action C.1)

After the delay of the European Commission's proposal for the NRMM Directive in early 2014 DUH sent out a number of letters to the EU Commission, MEPs and German ministries to keep in mind the urgency of improving air quality in Europe during the year 2014. In September 2014 the Commission proposal for the new NRMM Directive was published. Together with the IG BAU we gave a statement on the proposal to the BMUB and to the committee for EU, Environment and Industry at the Bundesrat and underlined in a hearing of the BMUB the most important aspects of this statement. Together with BUND and T&E we organized an information dinner for MEPs and their staff to inform about the potential and way of improvement of the NRMM file to contribute to the improvement of air quality.

On 16 September 2015 DUH organized a workshop for municipalities about the possibilities to include environmental requirements to public tenders. The main aspects were to inform municipalities about the legal possibilities they have to include environmental requirements to public tenders and in special about the need to use public tenders for construction sites and for public bus transport to implement a better air quality. The Event was well attended by 40 people, including about 15 local and regional public bodies.

The second brochure "Rein oder fein?"is about ultrafine particles and their effect on health and climate. The brochure is available in English on the Website. This publication addresses interested people and aims in raising awareness about this important air pollution problem. (see deliverable" Brochure measures for air quality" as Annex nr. 12a)

(see deliverable "documentation on contributions NGOs revision of AQD" as annex nr. 12)

5.1.4 Action B.4

Exchange between public Administrations and technology on refitting with particle filter in Germany

Indicators of progress

Application	Actual
a fixed circle (15) will meet monthly for specialist talks	From September 2012 to December 2015 a fixed circle of 20 experts from manufactories, testing institutes, local authority representatives and associations met ones per month.
Revision of appendix 27	We had discussions with politicians about this topic regularly. In the meantime a revision of the UNECE-Directive REC was finalized. The REC Directive defines worldwide standards for DPF retrofit systems and was finalized end of 2015. So for Germany we do not need necessarily a new Appendix 27, but a national law defining the relevant REC classes for DPF to be installed in Off-road machinery in Germany. The REC Standards will also be used for the introduction of a new Blue Angel label for construction equipment
number and quality of transferable results/recommendations 6 mandates/ 6 recommendations for further actions by the end of the project	The recommendations and mandates were finalized by 01-08-2015 - financial support for retrofitting cars with diesel particle filters - promoting the equipment of busses with NO_2 reduction systems - change of the requirements in public announcements with the demand for using low emission construction machinery
Setting up or continuation of support programs of support programs for retrofitting filters in diesel-powered vehicles in Germany at least for one vehicle category (ships, trains, construction machinery/passenger cars/trucks)	We were very active to promote support programs for retrofitting. After many discussions with politicians and a lot of press work the coalition parties agreed to readopt support programs for 2015. 100.000 diesel vehicles can be retrofitted using this fund.

Expected results

Application	Actual
Fixed circle of participants from approx. 20 different organisations	From September 2012 to December 2015 a fixed circle of 20 experts from manufactories, testing institutes, local authority representatives and associations met once per month.

Revision of Appendix 27 (display of NOx emissions, specific details of some points)	We have discussions with politicians about this topic regularly. In the meantime a revision of the UNECE-Directive REC was finalized. The REC Directive defines worldwide standards for DPF retrofit systems and was finalized end of 2015. So for Germany we do not need necessarily a new Appendix 27, but a national law defining the relevant REC classes for DPF to be installed in Off-road machinery in Germany. The REC Standards will also be used for the introduction of a new Blue Angel label for Construction equipment.
Analysing the PM10 and NO2 limit values and the practical feasibility of technical as well as other measures, to comply with the threshold	We are analyzing the limit values and the feasibility of measures regularly. We are discussing this topic with local authorities to evaluate best practice measures. The cities are invited to the expert talks to talk about their experiences. We also discus different polluters, e.g. buses and construction machines.
Strategic considerations and how to set up state support programmes for retrofitting diesel-powered vehicles	We influenced the coalition parties to set up support programs for retrofitting diesel-powered vehicles in the coalition agreement. After many discussions with politicians and a lot of press work the coalition parties agreed to readopt support programs for 2015. In total 30 Million EURO were fixed for funding retrofitting with particle filters.
Gathering ideas and solutions for other EU countries and distribution via the project partners and other NGOs, participating in the network	We collect ideas and best practice measures for other EU countries and distribute these documentations regularly. We also support the exchange between manufactories or local authorities and associations in other EU countries.
Documentation of ideas and solutions from the exchange between administration and technology. When: 01-10-2014	This Documentation was finalized on 16-10-2014
Documentation of 24 specialist talks.	Yes. The partners NGOs receive documentations of all 30 expert talks in English every six months.

From September 2012 to November 2015 DUH organized 30 expert talks. The meetings were very well attended by representatives of manufactories (e.g. Puritech GmbH & Co. KG, EMITEC, HJS, MAHA), testing institutes (e.g. TÜV, Dekra), local authority representatives (e.g. Senatsverwaltung Berlin) and associations (e.g. NABU, BUND, VCD, ADAC). We established a fixed circle of participants from more than 20 institutions. The DUH reported about the activities and results within the *Sootfree for the Climate* campaign and the VCD presented the activities within the EU Life+ project *Clean Air*. In addition we reported about current activities on Non-Road Mobile Machinery, because theses machineries will have an increasing influence on air pollution. The decision of the Deutsche Bahn to claim only calls which demand construction machines with particle filter was cancelled, because of the great influence of the construction companies. The DUH will intensify the discussion to tighten the criteria for calls. Due to our intensive support and discussions with politicians, the governing parties declared in their coalition agreement to continue the financial advancement for retrofitting filters in diesel-powered vehicles in Germany in the new legislative period from 2013 to 2017.

After the elections both coalition parties didn't agree on the final sum and the conditions. In order to reach a continuation of the advancements the DUH had a lot of discussions with Ministries and

intensive press work, but the implementation failed due to financial problems. We enhanced our pressure on politicians and succeeded. On 28 November 2014 the Bundestag decided to readopt the financial advancements for retrofitting diesel-powered vehicles in 2015. Car owners who refit their car with a diesel particle filter will get a reimbursement of 260 Euro. We welcomed this decision via several press releases. We also intensified the discussion about wood stoves and their increasing impact on air pollution. **Appendix 27** of the German road traffic act defines measures to reduce pollution from light-duty vehicles and mobile machinery and equipment, e.g. requirements for particle filters provided for retrofitting. We have discussions with politicians concerning the revision of this appendix regularly. In the meantime a revision of the UNECE-Directive on Retrofit Emission Control (REC) was finalized. The REC Directive defines worldwide standards for DPF retrofit systems and will be finalised end of 2015. So for Germany we do not need necessarily a new Appendix 27, but a national law defining the relevant REC classes for DPF to be installed in Off-road machinery in Germany. The REC Standards will also be used for the introduction of a new Blue Angel label for Construction equipment.

The results of the specialist talks are summarized in the **documentations** which we also made available for our partners (see deliverable "documentation of 24 round tables "specialist talks" as annex no. 15). We definitely encourage our project partners to adopt this concept of regularly expert talks with Stakeholders. This is a very important possibility to share ideas and solutions, as well as evaluate air quality measures.

These regular talks will continue after the end of the Clean Air project.

5.1.5 Action B.5

Exchange between public administrations, scientific institutions and NGOs on a City Maut (city congestion charges) and other financial instruments

Indicators of Progress and expected results

Application	Actual
Three round tables with no more than ten or twelve people to discuss the congestion charge	Instead of three round tables with each 10-12 decision makers, we made 2 panel discussions, one with 38 relevant stakeholders participating and one with 125 relevant stakeholders including media representatives participating.
3 fact sheets with the results of the round tables will be distributed	Two factsheets in German and English, both were sent to relevant stakeholders in all relevant Austrian cities. One Factsheet Update after 3 years (only German). Articles in different VCÖ magazines and our electronic VCÖ newsletter.
25 reports on the congestion charge in the media (national and regional newspaper)	280 articles/notes in national papers and 1264 articles/notes in regional/local news papers. 173 of the articles in national papers on transport measures for better air quality, the rest (107) on the air quality issue in general. 712 of the articles in regional papers were on transport measures, the rest (543) on the air quality issue in general. 93 press releases on transport measures with an impact on the air quality
2 cities discussing a congestion charge	Congestion charging has been discussed in Vienna, Salzburg and Linz, but is still a long way from being implemented. Low emission zones have only been implemented for old trucks. However, several other of our suggested transport measures such as speed limits, expanding public transport as well as promoting cycling and walking are discussed and to a varying degree getting implemented in all major cities in Austria.

Since writing the application the political possibilities regarding air quality measures in Austria have somewhat changed. Quite a few initiatives to combat air pollution from traffic have been introduced (such as expanding the parking management in Vienna or introducing new traffic calmed areas in Graz or tightening the bans on old trucks in areas with air quality problems), others have at least for the time being been explicitly dismissed (such as low emission zone in Graz, congestion charging in Vienna).

Therefore we decided to broaden the original narrow focus (congestion charging only) to other measures as well and to organize two panel discussions on congestion charging and other measures to reduce air pollution from transport (like low emission zones, parking management, systematically promoting walking and cycling).This was fortunately accepted by the Commission. Instead of the originally planned three round tables with each 10-12 decision makers, the target for the two events was approx. 30-50 participants for each event including media representatives. With 38 at the first event and 125 at the second, we more than achieved our target.

In the run up to and at our panel discussion on air quality problems caused by traffic and measures to deal with them, it became evident that the smallest particles from motorized traffic are a not well-known threat to health. Therefore, we put together facts and figures as well as recommendations for the policy-makers in the fact sheet “Health damage caused by fine particulate matter”. We also enhanced our media work regarding heath problems from especially diesel engines and the measures to solve these.

During the work with the factsheets and events, we also had numerous contacts to the different institutions and people with relevance for the issue air quality and transport measures and have kept

contact with these people and institutions. We addressed the issue air quality at several meetings with political representatives especially before and after the national elections in Austria 2013. We are in contact with the cabinet of the environment minister, the division on air quality and participated in a working group on air quality delivering guidance to the minister. Whenever possible, we have also informed the Austrian MEPs on important air quality files. We have expanded our contacts on the state level (political level and administration), since many of the effective air quality measures in Austria are decided upon at a state or local level

After the events and with all the additional action including very active media work on transport related air quality problems and measures to cope with that, we can safely say that we have contributed to an important exchange between public administrations, scientific institutions and NGOs on the air pollution caused by traffic and the possible measures to reduce the problems. We have learned from the partners in projects and have engaged in legal cases as well as measurements to raise awareness as well as to achieve better measure for air quality. Furthermore, through our very active media work, we ensure a high media response on national and regional level. We have continuously adapted the project to get as much benefit for the objectives as possible.

Additional activities:

Since also NOx is a growing problem in Austria and tightly related to traffic, we decided to also make a fact sheet on NOx and transport. This was published in January 2014.

We have been exploring the legal possibilities in Austria for NGOs to get better transport-related air quality measures implemented in spite of political resistance. We managed to get another Austrian NGO focused on legal affairs interested in air quality issues and are working with this organisation (ÖKOBÜRO) together with DUH on a legal case for better air quality.

At the end of the year 2014 our partner from the Danish Ecocouncil came measuring ultrafine particles in selected locations in Vienna. The measurements were documented on film (https://www.youtube.com/watch?v=9m2314e83Ts) and were presented with the environmental doctors association at a press conference in January 2015. In June 2015, the Danish expert measured again and the results were sent to interested media as well as to the administrative unit in Vienna. Parallel to the work with measurements, we decided to update the fact sheet on ultrafine particles from 2013 with the results of the measurements and sent the updated version to approx. 8.560 stakeholders and interested private persons.

A 48 pages publication on relevance of housing, public space for transport issues (and thus for reducing harmful pollution from transport) was published in July 2015. The VCÖ-Magazine in September not only had a focus on walking as a mean to improve urban transport, but also an article on the Clean Air Conference in Berlin.

5.1.6 Action B.6

Fulfilling the existing AQD: Copenhagen as a model city for Air Quality

Indicators of progress

Application	Actual
a) 5000 copies of the clean air publication with examples of source mapping and key actions to reduce dominating air pollution sources.	The publication was layouted and printed in 4000 English copies and 1000 Danish copies in first quarter 2014.
b) 4000 copies are distributed to key politicians in EP (100) and MS's (300), 30 key NGOs, 100 municipalities etc. Taking into account the multiplier effect, the brochure will reach minimum 20000 persons involved in air quality items	During the election to the European Parliament the publication was mailed to almost 200 direct email addresses (BCC) on green NGOs in EU. Partner NGOs were asked to send the publication to their candidates for the European Parliament, national and municipal politicians, public servants in municipalities and their EPA, NGO's and people working on air pollution, key journalists and press. Furthermore, about 3000 hard-copy publications has been mailed to 15 central NGO in 9 member states, and distributed to central key stakeholders at a large clean air meeting in London on May 1st 2014, a large clean air meeting in Bratislava on February 20th 2014, and on the 18.ETH-Conference on Combustion Generated Nanoparticles in Zurich for European stakeholders. Finally, the publication was handed to key journalists in Prague and Brno during large air quality campaign in February and September 2014 resulting in TV, radio and paper articles about air quality. In addition 145 copies have been mailed to relevant delegations in the Danish Parliament and relevant members of Copenhagen city council. Furthermore, the electronic version has been out in the newsletter of the Danish Ecocouncil and the project newsletter. On The large Driving Green conference August 27th 2014 in Copenhagen and on the conference specific about ultrafine exhaust particles in Dresden on Nov. 27-28th the publication was handed out.
c) Min. 1000 downloads of the study from web page in 2014 (Goal moved from 2013 to 2014).	Number of downloads: 388 until June 2014 from Danish Ecocouncil (www.ecocouncil.dk). From the project homepage (www.cleanair-europe.org) was no download counting but 285 page impressions until June 2014 (plus readers of the newsletter). After June the counting system on ecocouncil.dk disappeared during a homepage update so we have no date for downloads after June. However, since the publication was downloaded 388 times and had 285 page impressions (equals in total about 675 downloads) within 5 months (February –June) of 2014 (without specific link marketing) the number of downloads should be above 1000 in 2014. Especially since we had many media stunts during August and September 2014 (see media report) - this have resulted in many uncounted downloads (downloading count stopped in June). Furthermore, many other NGOs and organisations might have putted the publication in their own newsletter

	or on their homepage resulting in lots of downloads. This has not been counted either. The number of downloads will thereby be well above 1000 in 2014. However, it was actually expected that more people would have downloaded the study by June 30st 2014 from ecocouncil.dk. This is probably due to the fact that the publication was mailed intensively out as a light electronic copy that can be easily forwarded and distributed by mail and in news-letters (no download needed). To increase the number of downloads we could just have mailed around the link – however, we wanted to make it as easy as possible to share the publication.
d) Min. 50 participants in each of the two workshops	WS Berlin: 42 participants WS Copenhagen: 122 participants
e) Qualified comments/results based on the questionnaires distributed during the workshop and posted on the websites	Lots of praise, interest and questions – no real comments.
f) 500 politicians on European level and in member states will read - and consider - the scientific note with focus on ultrafine particles in member states underlining the importance of ultrafine particles (PM0,1)	See actions described above under distribution of the brochure "**b)**". The scientific note is included in the brochure since the target group is similar (accepted by the monitoring team in 2013).
g) Host/arrange a LIFE project partner meeting	May 15th the Danish Ecocouncil hosted/arranged a LIFE project partner meeting held in the city hall of Copenhagen where the environmental mayor from Copenhagen city council gave a presentation.

Expected results

Application	Actual
Study of Copenhagen as a model city for successful air quality politics	The planned deadline was 31.08.2013. The study was done and presented in 2013 but was first layouted/printed in early 2014. Reason for delay explained in the midterm/final report.
Broad interest of NGOs, politicians and administrative bodies for knowledge about the model city	We are facing extremely high interest since the study has been presented to and used by politicians, the media etc.
Give an impulse for european discussion on role of ultrafine particles and special measures	We talked about ultrafine particles in TV, radio, papers, workshops etc. in Denmark, Czech Republic, UK, Germany, Italy and Slovakia. We made measurements of ultrafine particles in Vienna to make a movie about the pollution and to raise public awareness on ultrafine particles thought press work based upon the measurements.

The Danish Ecocouncil's action was divided into three key activities: the publication on Copenhagen as model city: "How to fulfil the PM/NO_2 limits in the AQD", the publication on exhaust (ultrafine) particles: "How to include exhaust particles in the AQD" and the action "How bicycles and road pricing improve air quality".

We organized two workshops in Berlin & two in Copenhagen. The workshops were combined within one day in each city: A morning workshop about *Copenhagen as model city* and an afternoon workshop about *Ultrafine exhaust particles*. This was done both in Berlin and in Germany to attract more people and due to the overlap between the participants.

In total, 122 persons participated in the workshops in Copenhagen and 42 persons participated in the workshops in Berlin. The quality of the discussions was excellent. It was wise to combine the workshops on a day i.e. a morning workshop about *Copenhagen as model city* and an afternoon workshop about *Ultrafine exhaust particles*. This was done to attract more people to the workshops since the two subjects are closely related and the target group quite similar. Furthermore, travelling was reduced as much as possible.

The publication about *Copenhagen as a model city* and the publication on *Ultrafine exhaust particles* were combined in one publication called: *Clean air Copenhagen* since the two subjects are much related (this has been approved by the monitoring team). For our publication on Copenhagen as a model city we had several meetings with key stakeholders (Danish EPA, NGOs and researchers) to gather knowledge and collected information on Danish LEZs, EU limit values, effects of stricter LEZs. The new LEZ in Copenhagen was postponed several times by the politicians (about 18 months in total). Consequently, the completion of the publication has been postponed to include the new LEZ. However, when the LEZ was postponed once again in December 2013 it was decided to complete the publication to avoid further delays. The publication has been printed in Danish/English in early February 2014. These changes/ delays have not critically influenced the activities. The publication *Clean Air Copenhagen* will have an effect for a long time after the project has ended by permanently inspiring member states to reduce air pollution through ambitious LEZs and to promote bicycles and different types of road pricing to improve the air quality in cities. Furthermore, the publication will give an important impulse on limit values for ultrafine exhaust particles in the process up to the next revision of the AQD. Marketing and promotion of the publication is important to realize these perspectives. The publication has now been widely distributed among European NGOs in both hard copy and as electronically file and thereby the marketing of the publication will go on.

Local measurements of ultrafine exhaust particles followed by a short report and a presentation of the results seem to be a very good way to create local interest and press attention. This has been used both in Copenhagen, Milan, Prague, Brno, Bratislava and in Berlin. This method was used further in marketing and promotion of the publication: *Clean air Copenhagen* in Dresden.

Furthermore, in Bratislava we presented the opportunity of cycling for a better air quality to the Bicycle Committee as a part of our third key action. We also realized measurements of ultrafine exhaust particles from traffic in Milan inside and outside Congestion Charging area.

The Danish Ecocouncil did intensive press work on ultrafine exhaust particles and how to fulfil the limits in the AQD. We also published three flyers on this topic and we produced a poster for a poster session of the symposium “Reine Luft” at the German Environmental Agency in Dessau in September 2013.

Concerning the breeching of the limit values of the AQD we wrote letters to the Danish Parliament and the DG Environment of the European Commission. The overview on media coverage attached includes only web-articles from papers, magazines and other news media. On top of these web-articles on other home-pages were published as well as 6 TV interviews for the news and 8 radio interviews for the news. We had meetings with key stakeholders at DG Environment, the Danish EPA and the Minister of Environment to talk about EU limit values, the effect of Danish LEZs and the effect of stricter LEZs. We did an intensive press work on ultrafine exhaust particles and how to fulfil the limit values in the AQD.

We had a focus on knowledge transfer and held presentations on ultrafine exhaust particles in Denmark, Berlin, Dresden, Prague, Brno, Bratislava, London, Milan and Vienna. Furthermore we did public particle number measurements in Prague and Vienna together with local NGOs.

5.1.7 Action B.7

Eastern Europe: Refitting of public transport with diesel particle filter

Indicators of progress and expected results

Application	Actual
Guidelines for Germany, Poland and the Czech Republic with recommendations for political instruments for the improvement of bus standards will be disseminated. Minimum 2.000 decision makers in the three countries will be informed.	Three Guidelines has been published. Dissemination of printed guidelines via multiple events (e.g. Warsaw 5/2015, Clean Air Conference 7/2015, DUH meeting on exhaust reduction 9/2015 or conference "Green procurement for municipalities and companies" - 9/2015). Dissemination of digital guidelines via VCD newsletter (10.000 subscribers), newsletter of cooperating NGO´s in Poland and Czech Republic and direct sending to transport companies, transport associations, industry.
Four round tables in at least three member states with a minimum of seven decision makers in each round table	10 round tables arranged in Poland, the Czech Republic and Germany: Warsaw, March 14th (8 part.) Warsaw, September 5th 2013 (12 part.) Cracow, May 8th 2014 (10 part.) Prague, March 21st 2013 (12 part.) Prague, November 20th 2013 (cancelled two days ahead due to lack of interest) Berlin, March 26th 2013 (8 Participants.); Stuttgart September 26th 2013 (11 part.) Düsseldorf April 5th 2014 (7 part.) Conference "Clean Air in Cities", September 4th 2014 (rd. 30 part.) = 3 round tables
Implementation of at least 12 activities at the local or national level	Meeting with VDV technical director Mr. Schmitz, 31/10/2013 panel discussion "Clean Air for Stuttgart", 05/05/2014 round table "Clean Air Now – with sustainable public transport for a better living quality in cities", Berlin, 10/02/2015 press conference Hannover, 20/02/2015 press conference Cologne, 17/04/2015 press conference Bamberg, 06/05/2014 documentation meeting Warsaw, 11/05/2015 background talk Alsfeld, 29/05/2015 background talk Wittenberg, 11/06/2015 press conference Meißen, 26/06/2015
Minimum of 60 articles/reports on this topic	Air pollution as a general issue is frequently mentioned in press and VCD could raise media attention. But the connection to public buses is not pointed out. VCD press releases about buses and air pollution wasn´t picked up by media. Therefore VCD focussed more on general air pollution issues than on specific bus press work. See overall press clipping.

Standards - at least at regional level - will be improved in all three member states	2014/07/01: the biggest LEZ in Germany (Ruhrgebiet, a fusion of 13 cities in North Rhine-Westphalia, >850 km²) has introduced the strictest emission standard, additional 25 other LEZ since 2013 tightened the emission standard as well; since 2013 9 new LEZ has been introduced in Germany Prague will introduce a LEZ in 2016/02/01 After a proposal in 2015 the environmental protection law of Poland should be amended to introduce LEZ; if adopted municipalities have the competence to establish such a zone
At least 100 retrofitted buses or procurement of 100 buses Euro IV or higher/retrofitted buses	BVG (Berlin public bus company) refitted 100 buses with SCRT in 2013/2014; additionally 202 buses will be refitted in 2015; In 2014 bus companies started procurement of EURO VI buses, since 2015 only EURO VI buses are available. There is no statistic available of number of EURO VI buses bought in 2014/2015. But as a conservative estimation more than 1000 buses with EURO 6 are under operation or will be bought in 2015 (source: press releases of bus manufacturers, fleet composition of several bus operators in Germany). In Poland and Czech Republic several bus companies has started attempts with new propulsion technology, e.g. fully electric buses in Prague or 40 hybrid buses in the Polish city of Częstochowa
At least additional 40.000 retrofitted vehicles (mainly cars)	Germany: In 2013 approx. 50.000 cars have been refitted with DPF; in 2015 20.051 cars have been refitted
Medium term: 20% of the current bus fleet without particle filters will be modified by 2020, and 50% by 2025	The average age of buses in Germany is 7.5 years. Between 2008 and 2013 the share of buses with EURO IV or higher (buses with DPF) increases from 46.6% to 76.6%. Until 2020 the share of buses with DPF will be almost 100 Percent.

The aim of the action was to reduce harmful emissions of public transport through the modernization of bus fleets in Germany, Poland and Czech Republic. The initial position in the three countries was different. In Germany many bus operators already started refitting their busses 10-15 years ago. Due to introduction or strengthening of low emission zones the political pressure for refitting was strong. Nevertheless many cities still have buses which are not refitted. Above that, many cities still do not meet the targets of AQD. Meanwhile the NO2 limits are a bigger problem than PM and buses have a high share on NO2 emissions. Beside the implementation of particulate filters, the modernization of German bus fleets with NOx reducing technology is an important goal within this action.

In Poland and Czech Republic the situation is different. The understanding of the role of buses as source of air pollution is less pronounced. The opportunities to improve air quality with refitting buses are rarely known as well. While in Germany the technical and financial aspects of refitting were in the focus of the project, in Poland and Czech Republic more general aspects of air pollution and the role of public transport were part of VCD´s work. In order to reach the project targets, two local NGOs have become partners: The Warsaw based NGO "Zielone Mazowsze" and "Centrum pro životní prostředí a zdraví" from Czech Republic support the activities of VCD.

Several round tables on clean buses took place in the three countries. Participants of the round tables were representatives of public bus operators, municipalities, national ministries, NGO´s, particle filter manufacturers and scientific institutions. The second event in Warsaw was a round table in cooperation with the Life+ project "PRO KLIMA: Efficient mobile air conditioning systems with natural refrigerants". The target group for both round tables was identically; therefore we decided to use synergies.

While the round tables in Poland in Czech Republic focussed more on general aspects of air pollution and the role of public transport, the events in Germany concentrated on financial aid for retrofitting and opportunities to increase political pressure to reduce emissions. Especially the burden with NOx is a big problem for cities and additional activities (regarding buses) are necessary. The second round table in Warsaw focused also on technical aspects of bus refitting.

Due to the limited number of participants (7-12), the round tables enabled an intense discussion. So far, in Poland and Czech Republic no retrofits on buses were realized. But a high interest on the experiences in Germany became obvious. During the project period the introduction of low emission zones in Poland and Czech Republic has been discussed. A success of the project is the introduction of a LEZ in Prague (starting 01/021/2016) and a draft proposal in Poland to enable the introduction of a LEZ. In order to increase the effect of LEZs VCD clearly pointed out that a general exception of public buses from regulatory of LEZ would be a weakness for this measure.

Instead of three single round tables the Clean Air project team has organised the conference "Clean Air in Cities" on September 4th 2014 in Berlin. More than 20 experts from Poland and the Czech Republic met in Berlin with German experts to discuss about air pollution, the role of public transport, technical measures to reduce emissions of buses and additional measures like LEZ. The conference included a visit of the BVG bus depot (Berlin Bus Company) to demonstrate retrofitting and maintenance of buses. Overall 31 experts took part in the event and a national press release was published. This conference was seen as an occasion to invite journalists for a best practise trip to Berlin, camera teams from Poland and the Czech Republic took part. Documentaries about air pollution were shown in national TV in these two countries.

As a result of the round tables three national guidelines on clean buses (for Germany, Poland and Czech Republic) have been published (see deliverable "3 guidelines public transportation national language" as annex nr. 22). They have been disseminated to relevant stakeholders (e.g. participants of round tables) after publication. On May 11th 2015 the Clean Air project team in cooperation with the Warsaw based NGO Zielone Mazowsze has organized an event in Warsaw (see deliverable "documentation meeting Warsaw measures" as annex nr. 24). Beside renewal and retrofitting of buses other topics on more sustainable transport has been discussed. Instead of a documentation meeting in Prague (due to lack of interest) the project team decided to spread the guidelines direct to relevant stakeholders. This way we reached persons, institutions and companies from other cities which would not attend a meeting in Prague.

Beside the round tables in Germany, additional efforts were taken by VCD to reach the project targets. The VDV (Verband Deutscher Verkehrsunternehmen) is the umbrella organization for public transport companies. VDV regularly provides information on technical and environmental aspects to its member companies. The recommendations of the VDV are taken very seriously by the members and in order to convince bus operators to retrofit buses it's very important to cooperate with VDV. Background talks with VDV´s "Managing Director of the Business Unit Engineering" (deliverable "2 background talks in Germany", no proofing documents available) and a regular exchange with VDV will support VCD´s approach for cleaner buses. Representatives of VDV also participated in the round tables.

Regularly VCD participated in the specialist talks organised by DUH in the frame of action B.4 and got in exchange with the participating stakeholders on bus retrofitting. Additionally, VCD regularly meets filter manufacturers for individual discussions.

To raise public awareness VCD published a press release in June 2013 to request from VDV to reconsider its position on refitting buses. Although media response was not as good as expected, the impact on decision makers was excellent. Especially VDV reconsidered its position on refitting buses and assured a more intense cooperation in the future.

In summer 2013, the city of Munich decided to exclude refitting buses with SCR from the regional clean air plan. VCD sent a letter to the Major and members of city council requesting to reconsider the decision. In February 2014 the major of Munich, Mr. Christian Ude replied and confirmed the decision of summer 2013 and pointed out, that for more than 15 years the city of Munich only procures buses with diesel particulate filters. Refitting buses with SCRT to reduce NOx emissions wasn´t and will not

be in the future an option for Munich. They rather will reduce NOx emissions due to procurement of EURO VI buses.

In 2015 several meetings with bus companies, municipalities and transport authorities took place. The target of the meetings was to discuss possibilities of increasing attractiveness of public transport. Increasing demand of clean public transport is an important measure to improve urban air quality. At four out of six meetings local press also attended (see deliverable "4 local press conferences in Germany" as annex nr. 26). We got fewer reactions on bus emissions; this indicates how less urgent this topic is compared to other public transport issues (e.g. financing and quality of PT). Separate information of the public/survey on bus emissions would not have been effective due to low interest. Therefore the project team decided to expand the topic to general aspects of attractiveness of public transport and how more people can be achieved to use public transport. In cooperation with VCD local chapters an online survey was started. A general outcome is that more and real time information is needed (on stops, in vehicles and online) and the integration of different modes of transport (e.g. cycling, bike sharing and car sharing) would raise demand as well. (see deliverable "Information of the public, survey AQ public transport" as annex nr.25)

A success of the projects work is the prolongation of financial aid for refitting of passenger cars and light duty vehicle with particle filters in Germany. This prolongation was included in the coalition agreement of the new German government after the national elections in 2013. In 2015 20.051 cars had been retrofitted. In 2013/14 the public transport company in Berlin (BVG) has refitted 100 buses with SCRT systems (combined particle filter and system to reduce NOx emissions). In 2015 BVG decided to refit another 200 buses.

Last but not least due to the work of the project in the German state of Baden-Württemberg the introduction of a blue label for vehicles, which consider the emission of NOx is currently being discussed. The blue label would extend the current LEZ scheme and shall reduce emission of NOx. VCD advocates for inclusion of buses into the new scheme.

5.1.8 Action B.8

Clean Air in Ports

Expected results

Application	Actual
A transnational network on green ports will be built over the three-year project period.	Networking has been successfully developed since the start of the project: within the workshops as well as on several external events (e.g. GreenPort Congress, GreenCruise Congress, IAPH-World Ports Conference, "Greening Ports"-Conference, CNSS-Conference, "Clean Air in Ports"-Conference Hong Kong, several smaller regional expert meetings). The extensive contact list first in the working paper and now in the printed and online manual "Clean Air in Ports" also enhances networking. Last but not least the online presentations from the workshops at our workshop websites serve as a basis for networking, too.
Ships use low-sulphur fuel also during the time they do not fall under the regulations for the time they are berthed in the port (see Directive 2012/33/EC)	The new EU regulation for the North-and Baltic sea requires this from all ships since January 2015. Due to this legal framework our demands have been implemented. If ship owners do not want to switch to low sulphur fuel, they can alternatively install a "scrubber" to extract the sulphur from the exhaust gases. In July 2014 the "Trident Alliance" was formed, a group of several ship owners, with the goal to ensure strict enforcement of the sulphur regulation in the Sulphur Emission Control Areas (SECA).
Introduction of environmentally differentiated port duties in as many ports as possible in the network countries	Hamburg introduced environmental port fees for some measures for cleaner air in 2014. Gothenburg introduced environmental port fees for ships using LNG in 2015 and also grants discounts for ships doing well in the ESI or CSI. Lisbon offers a reduced fee for good environmental practice since 2013. Rotterdam grants a discount for extra low NOx emissions since 2015. Antwerp grants a reduction of up to 30% for ships that emit fewer particles as of June 1st 2015.

Indicators of progress

Application	Actual
Dissemination of the brochure to minimum 50 decision makers involved in the management of harbours	The manual "Clean Air in Ports" has been printed and delivered to far more than 10 major ports/10 major ship owners, local authorities and 5 major port cities. Events like the IAPH World Ports Congress (Hamburg, June 2015), the NABU Hamburg Workshop "Greening Ports" (June 2015) with 100 participants and the presentation of the "Clean Air in Ports" manual, the Green Ports Congress (October 2015), the workshop "Clean Air in Ports", (EUAP) Hong Kong (October 2015) have been used for distribution to relevant stakeholders. The online version has been sent out to almost 1000 persons.

Minimum 60 persons will participate in the six conferences for experts/ managers on harbours	All our events were very well attended, and in addition we had several opportunities throughout the project to present our ideas at other events or to discuss them one-on-one with experts or managers from harbours. Hamburg, 2013: 100 persons Antwerp, 2013: 50 persons London, 2014: 30 persons Copenhagen, 2014: 50 persons Barcelona, 2014: 50 persons Gdansk, 2015: 50 persons
Minimum 60 decision makers/ multipliers will participate in the transnational network on green ports	The contact list in our manual consists out of 39 contacts, but the lists of contacts we have and still use is about 100 persons and institutions – and growing still.
Minimum 25 decision makers/ multipliers will give a feedback on the brochure and will start to implement recommended measures. The implementation will lead to reduction of PM, black carbon, sulphur dioxide, NOx emissions (the daily average value of the respective type of emissions as measured by a monitoring station in the vicinity of or in the centre of a port, figures in micrograms per cubic metre of air)	About 25 persons gave feedback to our working paper before it was turned into a manual. Some of them even started undertaking measures (below). However, it was almost impossible to get data for port emissions and their change over the project time. Since the exact attribution and correct interpretation of such data is difficult we cannot deliver such data. OPS in Hamburg: Political and financial decision has been made. Realization of OPS at Cruise Terminal Altona in 2016. Strategic decision taken for LNG terminal in Antwerp and Hamburg in 2013, aimedat 2015. Current development of LNG bunkering station at Brunsbüttel Port. Due to discounts for particulate filters several trains have been retrofitted in 2014 at the port of Hamburg. Movements of retrofitted locomotives had an increase from 5% to 28% in 2014. Hamburg plans to refit all 22 diesel driven harbour ferries (8 million passengers/year) with DPF and Kat in the next years. One refitted ferry is tested at the moment. Later on LNG could be the solution if the infrastructure is available. LNG Hybrid barge can supply cruise liners at terminal Hafencity in Hamburg since June 2015. Rotterdam ordered 22 automatically guided vehicles (AGV) for the ECT Delta Terminal. Cruise ships : "Europa 2" equipped with an SCR, "Mein Schiff 3" equipped with SCR and Scrubber, "AIDAcara" retrofitted with DPF, SCR and Scrubber, "Mein Schiff 4": SCR and Scrubber, "AIDA Mia"/"AIDA Prima": SCR, Scrubber, Particulate Filter, OPS

In February 2013 NABU officially started its action “Clean Air in Ports” with a website, a flyer, its first workshop and networking. NABU also compiled a working paper on measures for cleaning up the air in ports. Throughout the project period, six workshops with stakeholders from the maritime industry, authorities, politics and NGOs dealing with the issue of air quality in European port cities were held in the last one in Gdansk (03/15). In Gdansk, NABUs workshop was linked to the Baltic “Transport Week” (17th-19th of March), where NABU attracted 50 participants from ports and transport sector for the “Clean Air in Ports” workshop (see deliverable “Conference on Green ports

Poland" as annex nr. 34). In addition NABU contributed to the "Transport Week" by participating in a panel discussion about challenges of the port sector and presented its project there, too.

The working paper progressively gathered the information and results from the workshops and from the activities throughout the project (meetings and events with relevant stakeholders). It has been commented by more than 25 stakeholders from the maritime industry, authorities and other relevant experts. In May 2015 the working paper was turned into a manual (see deliverable "Publication on practical measures for green ports" and deliverable "Documentation transnational network on green ports" as annex nr. 35/36). It describes the problem of air pollution and its harmful impacts on nature, climate and human health, gives an overview about existing international and EU-regulation, best practice examples and technical solutions in terms of air quality improvements for several emission sources in ports. It as well addresses actors and possible actions and collects all contacts as an integrated documentation of a "transnational network on green ports" and to facilitate networking for the stakeholders in the future. The manual is available online and printed and has been delivered to many port authorities and experts from the maritime industry in Europe, the US and China (in Chinese) either by email or as a print version and was also distributed at two major conferences in 2015 (e. g. World Ports Congress 2015, GreenPort Congress 2015).

After discussions with relevant experts it turned out that it would be fairly unrealistic and hardly to prove the reduction in air pollutants in concrete numbers, as it would be neither possible to collect or get access to relevant data nor to run own measurements or assign scientific support. But many measures for an improvement of air quality in ports or in the shipping industry are already- or will be-implemented in the nearer future (see "indicators of progress"). But besides a positive impact on the expert discussion and public and media awareness an NGO has a limited influence on the decision makers in terms of when, how fast and with what financial and political efforts developments are pushed, or if developments turn out to be feasible as easy as expected. Opportunities to connect our workshops to established events such as the "GreenPort Congress" or "Transport Week" inevitably led to small changes in the sequence of the workshops originally planned in the proposal, but had no influence on quantity or quality of the workshops or targets of the project.

Even if we did not totally reach all indicators of progress, the project has been extremely successful. Several measures and other promising technical solutions are or will be implemented, like an exhaust filter for the first retrofitted cruise line ship. In addition, alternative fuels with less emission like LNG reach market maturity for a wider range of ship owners. Some major cruise companies (AIDA and COSTA) have ordered LNG cruise ships and LNG is getting more attention for ferry operators and short-sea-shipping. Throughout the project NABU has proven to be a serious and well prepared stakeholder with an influence on a vivid debate about air quality in European ports. NABU has been invited to several additional events and meetings throughout Europe (and the US and China) to present its project "Clean Air in Ports" (e. g. Port Authority of Lisbon, GreenPort Congress, GreenCruise Congress). One highlight was the contribution with speech and participation in a panel discussion at IAPH-World Ports Conference in June 2015 where a session on air quality was named after our action "Clean Air in Ports". Another success was the opportunity to present and deliver the just printed manual "Clean Air in Ports" during the conference "Greening Ports" at NABU Hamburg and the attendance of the senator (minister) for environment and energy at the federal state of Hamburg. Also, in October 2015 NABU was invited by the EU-funded "European Union Academic Programme" to attend the "Hamburg-Hong Kong Dialogue: Clean Air in Ports" – and to give a speech about the outcome of the project, participate in a panel discussion about air quality and visit the ports of Hong Kong and Shenzhen to discuss air pollution in ports with further Chinese stakeholders. We received very positive feedback on the manual Clean Air in Ports. After the three years of the project we are now an established and serious player and expert in the field of environmental aspects, especially air pollution, of ports.

NABU will even after the end of the project "Clean Air in Ports" be actively involved in the debate about air quality in ports and continue disseminating the manual, contribute to relevant conferences and talk bilaterally to port stakeholders, maybe even hold a workshop in China (2016). For the 4th of December 2015 NABU has been asked to present the EU LIFE+ project "Clean Air in Ports" at the

European Sea Ports Organization (ESPO) who is celebrating the 10th anniversary of the "Environmental Shipping Index" in Paris.

5.1.9 Action B.9

Clean and sootfree inland navigation: Refitting of ships with diesel particle filter

Indicators of progress

Application	Actual
Best practise models for retrofitted ships in total of 20 cities and at least three EU countries will be awarded.	This indicator we could not accomplish. In total we have awarded 9 ships within the time of the project, active in two countries, Germany and Switzerland. Reasons are the very slow retrofit rate of ships and the difficulty of getting information on those ships.
Compilation of best national programs for the retrofitting of filters or other strategies for clean ships	The Publication was published in March 2015 (see deliverable "publication clean and sootfree inland navigation" as annex nr. 37)
Minimum 500 decision makers/multipliers in Europe will be informed about the best national programmes and practice models	The publications were disseminated to a list of more than 500 decision makers and multipliers.
Minimum 50 decision makers/ multipliers will participate in the two expert workshops	We organised two workshops/debates with a total of 48 participants. (see deliverable "documentation workshops inland navigation" as annex nr. 39)
Feedback from 30 decision makers	During our project we received written and oral feedback from 34 stakeholders.
Feedback from 30 European parliamentarians	Within this action we had mostly oral feedback in discussions with 30 MEPs, some of which we also had email exchange with.
10-15 cities with initiated actions (land-based power supply, harbours in low-emission zone, emission controls)	The 10 cities of Düsseldorf, Cologne, Konstanz, Berlin, Rotterdam, Basel, Mannheim, Wurzburg, Amsterdam and Antwerp, all have undertaken measures to clean air pollution from IWT. Mainly they have invested in land-based power supply.
20 retrofitted ships	So far we count 13 ships that have been retrofitted in Germany since 2010. We searched for additional information but the uptake of retrofit solutions in the IW sector is very slow.
At least 2 national regulations or funding for cleaner shipping	The first regulation is the update of the existing German national retrofitting programme for IWT in August 2015, which included extended funding of 250,000€. Furthermore, Austria also introduced a national retrofit subsidy that was partially modelled after the German programme. Additionally, there is the regional initiative "NOxVrij" of the Region of Zuid-Holland and the city of Rotterdam.

Expected results

Application	Actual
positive examples will be identified and receive an award	In total we have awarded 9 ships within the time of the project, active in two countries, Germany and Switzerland.
national programmes and incentives for clean shipping will be adopted in at least one national parliament	The German national retrofitting programme for IWT was improved and enlarged in August 2015, including extended funding of 250,000€. Furthermore, Austria also introduced a national retrofit subsidy that was partially modelled after the German programme.
Decision makers will be informed and sensitised on the national and the European level	We had a great deal of influence with our communication on IWT air quality issues with our press work. Also we tried to inform about existing best-practice solutions in preparation of the vote of the European parliament on the NRMM regulation. In preparation of this vote, BUND also participated in two stakeholder hearings in the German Bundestag. Two workshops that we organised were instrumental in informing national and EU officials.
spread of good solutions among cities with high share of ship emissions	Press activities and contacts with municipalities and regional governments in North-Rhine Westphalia, Bremen as well as in Berlin. Also contacts with MEPS and German Members of the Bundestag as well as filter and engine manufacturers.
5 cities will include harbour in their low emission zones	No city included ships in their harbours. The city of Berlin analysed the possibility and dismissed it, as it feared that it would be criticised for disproportionate action.
10 cities with additional measures of land-based power supply	A minimum number of 10 cities Duesseldorf, Cologne, Konstanz, Berlin, Rotterdam, Basel, Mannheim, Wuerzburg, Amsterdam and Antwerp have installed land-based power supply.
20 additionally retrofitted ships	In total we have awarded 9 ships within the time of the project, active in two countries, Germany and Switzerland. Reasons are the very slow retrofit rate of ships and the difficulty to get information on those ships.
better knowledge of inland navigation solution: expert pool	We have an extended expert pool on IWT issues comprising around 50 stakeholders.
better control of low sulphur requirements in harbours	We analysed the current market situation and there are no control issues in harbours.

In this action BUND worked intensively with different stakeholders in IWT, both in Germany and on EU level. Among those are the German Association for Internal Shipping (BDB e.V.), the EU CEN agency, our partner NGO Transport & Environment (T&E) and the German Federal Ministry of Transport. BUND followed the EU legislative processes around the NAIADES II communication and the NRMM revision. Furthermore, BUND worked on national initiatives and regional solutions on IWT emissions. Our work also included awarding retrofitted ships with a sticker that showed the impressive nature of the technical solution.

The most significant outcomes of the action were:

- Very solid outcome of the EP ENVI vote on IWT emission limit values (Sept. 2015)

- Extended and improved German national engine and retrofit subsidy (July 2015)
- During the project we were able to push for land-lined power supplies and several cities invested into this technology.
- Overwhelming media coverage for this small niche topic.

One of the first activities in the project pushed an improvement and continuation of the national subsidy programme for sustainable IWT investments, a call that was successfully added to the German Coalition Treaty in late 2013. We continued as active stakeholder in the discussions on the national subsidy programme. In early 2015 we organised the first workshop on different best-practice solutions, including the subsidy programme, which brought together 13 actors from the German IWT debate and led to a very open and useful discussion. Our invitation for this workshop triggered a short-term roundtable one week before our workshop, where the national transport ministry asked for an exchange of views. Our participation, the discussions in the Clean Air workshop one week later as well as our position to the process which we send to the ministry subsequently, all led to the outcome that the programme was extended and improved with a new subsidy regulation in late July 2015

We were able to give awards to nine ships that were equipped or retrofitted with particulate filters within this action. This small number is caused by a very slow uptake of filter technology in this sector. We see this as a result of the insufficient regulation in this sector, no LEZ includes the inland waterways or harbours, so ship owner see no advantage in retrofitting their ships. Overall, we have knowledge of only 13 ships that are retrofitted with filters since we are working on this topic. One ship has only retrofitted one engine out of two. There are additionally ships retrofitted with other emission reduction technology, but we do not accept reductions that are way below the performance of closed-particulate filters. We organised three labelling events, one in Berlin and two in Konstanz. (see deliverable “Documentation of 10 ships environmental award” and deliverable “documentation of all ships environmental award as annex nr. 38/41)

We published two publications; an English documentation on national programmes on sustainable shipping and a German version customised for the national debate. The research took considerably more time than expected but both of them were published in March 2014. (see deliverable “publication clean and sootfree inland navigation” as annex nr. 37)

On the EU level, especially the revision of the NRMM regulation represents a crucial opportunity for the IWT sector. The process gained traction with the discussions in the European parliament in early 2015. We cooperated intensively with the Brussels partner NGO Transport & Environment in order to input good best-practice examples and relevant technical information into the discussion.

The postponement of the political discussions on the NRMM regulation in the European Parliament as well as the national discussion on the retrofit programmes meant that we needed to retime the workshops to the first half of 2015, when both topics simultaneously gained political prominence. In May 2015 we cooperated with T&E and DUH to organise a dinner debate on technical solution to clean non-road emission sources, in particular IWT. The debate featured almost 40 stakeholders including two DGs of the European Commission and several MEPs. (see deliverable “Brussels presentation regulatory strategies” as annex nr. 40)

The overall feedback we received was very constructive. Amongst those stakeholders is the city of Berlin, who reported of their difficulties motivating ship owners to retrofit their ships. The ship-owners in Berlin replied to us, that it was a tremendous administrative effort to apply for the grants, adding up to the high investment costs that stood against no advantages from the retrofit. Without emission limits or financial advantages, the extra burden for ship owners does not reap sufficient benefits. The same holds true for the national programme that covers retrofits. Several ship-owners, first and foremost their association BDB are in good contact with us. Furthermore, we developed good working contacts with the federal state administrations of North-Rhine Westphalia, Bremen and Hessen.

5.1.10 Action B.10

Model project Ecological driving training in driving schools in Slovakia

Indicators of progress

Application	Actual
Electronic version of Technical report (up to 30 pages) on ECO-driving (possible savings, different measures...) in SK and EN summary (4 pages) available on the web; 50 hard copies of the TR and 20 hard copies of EN summary;	electronic version: http://www.cepta.sk/index.php/sk/clean-air-ciste-ovzdusie-projekty-736/515-ekosoferovanie-ako-usetrit-a-zaroven-sa-spravat-ohladuplne-k-zivotnemu-prostrediu; Technical report = 28 pages; EN summary = 11 pages; Printing copies - 10 in Slovak, 10 in EN;
Methodology / guide for ECO-driving for personal cars (busses, trucks? - finances) in SK (up to 30 pages) and EN summary (4 pages) available on the web; 50 hard copies of SK version and 20 hard copies of EN summary;	Methodology / guide for ECO-driving done (SK/EN = 9 pages): http://www.cepta.sk/index.php/en/clean-air-ciste-ovzdusie-projects-736/528-ekosoferovanie;
Criteria for "ECO-driving car" + Annual "top three list" list for most fuel saving cars;	Criteria based on VCD evaluation methodology and data; adapted to Slovak car market; evaluated best cars whole; family cars and climate best cars available in Slovak market in 2013, 2014 and 2015. Disseminated via CEPTA web-page, Ecodriving conference 2015 and also via press release via Slovak Syndicate of Journalists.
Three certification schemas for ECO-driving (Driving schools, companies, individuals); until 15-07-2014	We did develop certification criteria for drivers (starting, individual, professional); for driving instructors & trainers; for fleet managers. Then also certification criteria at company level – for driving schools, training companies and fleet companies.
At least 10 proposals for label got in competition, 3 prices for best designs. Three final modifications for person, for company and for driving school.	Out of 30 proposals, one winner design has been internationally selected and diversified in 6 (not 3) basic variants http://www.cepta.sk/index.php/en/clean-air-ciste-ovzdusie-projects-736/527-sutaz-na-navrh-loga-pre-ekosoferovanie-vyhodnotenie;
ECO-driving labels for individual persons, for companies as well as for driving schools;	Finally there are developed **9 ECO-driving labels** for: personal car, van, bus, lorry, motorcycle, ship + fleet company, driving school + general "I like ecodriving" label.
Webpage online in Slovak / English languages	all information about the project you find at: http://www.cepta.sk/index.php/en/clean-air-ciste-ovzdusie-projects-736
Three ECO-driving labels for individual persons, for companies as well as for driving schools;	Finally there are developed **9 ECO-driving labels** for: personal car, van, bus, lorry, motorcycle, ship + fleet company, driving school + general "I like ecodriving" label
Courses for ECO-driving - for individual drivers (for at least with 50 drivers with feed back to curricula), + course for driving school trainers (at	We trained on ecodriving 47 drivers; we organized three intensive 3-days-long courses for 30 driving school trainers from all Slovakia + 5 representatives from ministries.

least 5 driving teachers); - until end of project; 01-09-2015	
List of certified companies (20 or more), driving schools (10 or more), (individuals 40 or more) - until end of project; 01-09-2015	Certification system was most complicated point of our activities, needed a lot of additional work & time, we created supporting web-page. Finally **we did have certified 24 driving instructors & trainers and 5 other drivers** (from ministries etc.). Additionally two driving schools and one company applied for company certification until now. Company going for certification have to create own program for developing the eco-driving, have to train drivers, name competent person, in fleet companies have also green criteria for procurement of new vehicle. We motivated two ministries for implementation of ecodriving in official Slovak legislation.
At least 50 driving schools; 100 companies; 1000 individuals will be informed (via mail conferences)- until end of project; 01-09-2015	We created an own mail-list of 336 driving schools, which we used to spread our information. Until now we distributed over **21 000 leaflets**; at information days we spoke to tens of citizens. Ecodriving have been presented and discussed at several international events (Slovakia, Germany, Hungary…) - at final conference in Slovakia in 10th Sept. 2015 took presence over 50 representatives from different companies. Our impact with our air/ecodriving related outcomes in important national media (TVs, Radio, Newspapers) reached levels much **over 20 000 000 viewers, listeners, readers** during last year of work, based on results from official media-research.
At least 20 articles, reports / PR will be published.	We collected 83 reports which were published or broadcasted
International workshop for at least 15 participants from at least 5 EU countries focused on ECO-driving; (28-02-2015)	Ecodriving workshop have been organized 13-15.04.2015 in Bratislava. It was a meeting of experts from 5 EU countries. However, in certification we did not came to final consensus, as ECOWILL representatives keep own approach of master trainers (e.g. certificate receive just for participation etc.). Slovak certification system focuses on keeping and developing the quality of ecodriving.
Methodology is transferable to other EU countries;	Methodology / guide for ECO-driving done (SK/EN = 9 pages): http://www.cepta.sk/index.php/en/clean-air-ciste-ovzdusie-projects-736/528-ekosoferovanie;
Visits on Websites and download of information material – 2000 in 3 years	Between 1.1.2013 – 16.09.2015 we had 330 910 web-page visits and 67 927 individual visitors.

Expected results

Application	Actual
Number of beneficiaries of ECO-driving guide (at least 50)	about 10 paper copies distributed; 200 leaflets;
Number of informed people (at least 1000)	We trained 47 drivers from which was 30 driving instructors. In media listened about CEPTA air-protection, ecodriving activities over ***20million*** watchers, listeners, readers. Leaflets have been distributed to more than ***16 500*** citizens.

Number of informed companies (at least 100)	We trained and informed 107 companies.
Number of informed driving schools (at least 100)	We created a special mail-list on driving schools and several times contacted over **300** driving schools in Slovakia. Additionally we started very good cooperation to Slovak National Chamber of Driving schools and as well as to Ministry of transportation and Ministry of Interior..
Number of articles, PR, reports (at least 20)	We collected 83 reports which were published or broadcasted
Number of web-page visit (at least 2000)	Between 1.1.2013 – 16.09.2015 we had 330 910 web-page visits and 67 927 individual visitors.
Number of trained individuals (at least 50)	**47**
Number of trained teachers (at least 5)	**32** teachers from driving schools have been trained in ecodriving, **30** of them took part on intensive 3-days courses**, 24** of them successfully passed all exams and finally received certification as official instructors for ecodriving.
Number of certified companies (at least 20);	2 in process, at the conference with certification - 19 companies
Number of certified individuals (at least 40)	At certification courses participated 37 drivers, but certification is demanding process and only **30** drivers completed successfully all exams.
Number of certified driving schools (at least 10)	2 in process; **21** driving schools is with certified instructors
Number of interested individuals (at least 100)	327 interested individuals
Number of interested companies (at least 60)	seminars, conferences – over 50
Number of interested driving schools (at least 30)	we trained instructors 21 different driving schools, **63 were interested**, but capacities for training & certification have been limited
Number of international seminar for ECO-driving (at least 15)	On working seminar in 13-15.04.2015 with registered **10** participants from 5 EU countries. On international SK/CZ conference on ecodriving on 10.09.2015 participated over **50** participants from Slovakia and Czech Republic.
Existing labels of ECO-driving for car, companies and driving schools	we do have developed **9** different labels/logo-types: general ecodriving LOGO (SK/EN version) + I like ecodriving LOGO + we do have different versions of ecodriving logo for: *personal car, van, bus, lorry, motorcycle, ship + fleet company and driving school.*

CEPTA developed a methodology for ECODRIVING which we based on experiences of previous similar European projects (like ECOWILL) but we present it broader, as an approach for sustainable mobility the methodology also includes at first place biking and public transportation, than how to select the eco-car and finally guide how to eco-drive your vehicle.

After having developed the methodology we started developing the certification scheme for individual drivers, trainers as well as for driving companies and fleet companies. To label the driving schools,

bus companies, shipping companies and individual driver we developed a LOGO for ECODRIVING in an international competition. We also developed didactic materials for driving instructors/trainers who will train & teach ecodriving in the future.

The project team organized several ecodriving trainings. We involved Miss Slovakia 2014 for training and the promotion of ecodriving, inclusive biking in the capital city of Slovakia - Bratislava. Participation of Miss Slovakia led to more media interest and public awareness for the topics of sustainable mobility. In August 2013 we had the opportunity to present the ecodriving principles in Slovak national public Radio, during one week (four days) in program focused & broadcasting for drivers at noon time.

From May to September 2015, we organized three intensive 3-days long certification courses of ecodriving where we trained all together 37 drivers from whom 32 were teachers from driving schools. Certification successfully finished 30 drivers from who were 24 driving teachers, they passed difficult exams – multiple by theoretical test (15 questions); 2-3 practical drives (with 10 criteria evaluated) and couching exam which is an innovative lecturing approach practice. Two majors of Slovak & Polish cities and important representatives of Slovak ministries of transportation and interior were also trained in our training sessions. We started constructive a cooperation in ecodriving "legislating" with two Slovak ministries – Ministry for Transportation & Ministry for Interior and we trained five important officers. As well we cooperated with Slovak Chamber of Driving Schools who is going to incorporate ecodriving into its internal standards as well as Slovak department for Road Safety.

During all ecodriving trainings in years 2014 and 2015 we trained under Clean Air project over 47 drivers, incl. 32 driving instructors/teachers. (see deliverable "documentation of training for driving trainers" as annex nr. 44)

For the demonstration drives organized in July 2014 we had test drives with a personal car, a van, a truck and a bus. Our drivers reported up to 20% reduction of fuel consumption. Unfortunately we did not get data from the research institute which had done the emission monitoring during the drives due to a system breakdown at the research institute from Czech Republic. But we were able to work together with our Clean Air project´s partner from the Danish Ecocouncil and we did in summer 2015 week-long measurements of particulates number in 7 different places in Slovakia including measurement of cars with DPF and without DPF filter. We measured air quality in cities, in highest Slovak mountains, in trains, buses, cars as well as in shopping centres. These measurements got a lot of press attention in all Slovak press and media.

During the project implementation we did three times the best **ECO-car list** based on competitions of new cars which are offered in Slovak market, we evaluated CO_2 production – fuel consumption, noise, impact on human health and impact on nature. The methodology was based on VCDs Auto-Umweltliste.

The Ecodriving certification scheme was probably the biggest challenge for us. It took us much more time and capacity as we expected and planned. To keep and develop the quality, it became a bit more complicated because just a certification for driving schools was not sufficient. Finally we do have certification schemes for individuals (starting, non-professional, professional drivers and fleet managers); for instructors and trainers and for driving schools as well as fleet companies. It is translated it into the English as well. (see deliverable "certification scheme for driving schools" as annex nr. 45)

On 12-13th February 2013, CEPTA organized the **international conference "Clean Air in European Cities"** in Bratislava to raise awareness for air quality issues in Slovakia. The conference was organised by CEPTA in cooperation with the Ministry of the Environment of the Slovak Republic and the Union of Towns and Cities of Slovakia and was attended by 72 participants from six EU countries. The conference focussed on answers to following questions: What is the air quality situation in Slovakia and in neighbouring countries? What are the solutions and where are they successfully implemented? Why are particulate matters and soot dangerous for people, their health and the environment? How do we deal with and how will we deal with particulate matters and soot in Slovakia and other EU countries? Speakers from 6 EU countries contributed with their presentations to the

discussion of these aspects. In February 2014 we organized a second two-day international conference "***Clean Air for Cities***" with presence of the European Commission, the Slovak, Czech and Hungarian government representatives in Bratislava focused on effective measures for improving the air quality in cities and possible usage of EU funds for improving the air quality.

In September 2015 we organized international seminar "***Ecodriving for cleaner air not only in Slovakia***" focused just on Ecodriving with participation over 50 representatives from companies, institutions, driving schools, from Slovakia and Czech Republic. At the conference were presented different looks and experiences with ecodriving in driving schools and companies as well as in relation to air quality. Presentations started with three ministries, Slovak emissions control institute and finishing with four best-practice companies from Czech Republic. (see deliverable " documentation international two day seminar" as annex nr. 46) (see deliverable "documentation of training ecological driving" as annex nr. 47)

All important events you find at CEPTA, Clean Air – project web page: http://www.cepta.sk/index.php/en/clean-air-ciste-ovzdusie-projects-736.

Every year we actively took part on street actions for example during the European Mobility Week from 16 to 22 September as well as during Car-free Day on 22nd September in cooperation with municipality and other local NGOs working also with children on sustainable mobility education. Here we presented the principles of ecodriving to the public in talks and through nice activities.

CEPTA was advocating for a national legislative space in air-protection acts which leads to the adoption of the National Strategy for PM10 Reduction by Slovakian government in February 2013. The amendment to air protection act, introducing low emission zones, was adopted in September 2015.

All years 2013, 2014 and 2015 we did intensive work on air/climate friendly EU funds 2014 - 2020 in Slovakia, being active in working groups preparing the programs – meetings, comments. Our success is that there is a "low-emission" mission in three related operational programs 2014-2020: ENVIRO (OP KŽP), RDP - AGRO (PRV); REGIO (IROP).

5.1.11 Action B.11

Clean Air in Hungary: Refitting of public buses and financial regulatory instruments

Indicators of Progress

Application	Actual
High level discussions Minimum 60	We organized more than 160 meetings concerning our project's topics of which ~ 70 meetings with high level officers and decision makers. We gave presentations at 25 conferences.
Letters to decision-makers Minimum 100	We sent nearly 1100 letters to local and national-level decision makers, high-level officers and candidates for the local, national or European elections.
Press appearances Minimum 200, expected to reach 10% of the Hungarian citizens (1 million people)	We achieved 270 media appearances during the reporting period, related to the topics of our project. Most of them were online news websites, but we have appeared in newspapers and on national radio and television channels as well. Kossuth Radio, where we appeared 4 times, has 1.38 million listeners (14% of the total population) on an average day.
Newsletter 200 new readers	We published our e-newsletter every month. 1794 readers received our monthly e-newsletter in March 2013, and 1947 in September 2013.
Facebook likes and shares: from 0 to 1300 and an average of 200 likes per post.	We wrote more than 200 Facebook posts related to the project's topics. Our Facebook page had 2460 “likes” in December 2013 and 4130 in September 2015.
Website 120 updates	Our webpage http://www.tiszta.levego.hu/ was updated with more than 120 new related to air quality and transport.
E-mail and telephone hotline (the number of persons and organizations using this service) Minimum 300 users	Our “call centre” and e-mail hotline received about 900 calls and e-mails relating to air pollution. It gave detailed information or advice in each case.
Mobil poster exhibition	The mobile poster exhibition on the problems caused by PM10 and soot and the possible solutions has been presented at 30 locations, including district municipalities of Budapest. Altogether approx. 10 000 citizens saw the exhibitions. In many cases, the local press reported about the exhibition, including information about PM10 pollution.
Survey: opinion poll of 1000 citizens about public transport	The survey of 1012 citizens was completed and the results were communicated to the press and to the Mayor of Budapest. The results showed that there is a great public support for more bus lanes and renewal of the bus fleet.
Qualitative survey of 19,000 citizens (petition to the government on a postcard to renew the bus fleet)	More than 8000 petition postcards have been collected and handed over to the Prime Minister's Office.

Expected results

Application	Actual
Concrete decisions by the Hungarian Government and the Budapest Municipality to replace/retrofit buses Minimum 200 new buses will be replaced/retrofitted	267 new EEV and 406 new EURO VI buses were put in operation in Budapest and its surroundings. The Budapest Transport Company (BKV) announced a new tender for at least 150 (and maximum 300) new EURO VI articulated buses in August 2015. BKV announced a tender for the overhaul of the engine of 126 used Volvo 7700A buses in September 2015. BKV announced plans to put into operation 25 fully electric buses in 2016. BKV started experiments with retrofitting the existing bus fleet with particle filter. This was the direct result of CAAG's advocacy work. BKV substantially improved the maintenance of buses. This was mainly the result of CAAG's campaign conducted mainly on Google and Facebook.
Concrete decision (with precise deadlines) by the Hungarian Government and Parliament to introduce a distance-based toll for trucks	The Hungarian Government has implemented a distance- and (partly) pollution-based road toll for trucks on motorways and main roads (6513 km) from 1st July 2013. Concrete plans foreseen by the government and the Budapest Municipality to reduce pollution from urban freight.
Reduction of CO2 and PM10 emissions from freight transport in Hungary	No data available for CO2 and PM10 emissions.
Concrete decision of the Budapest Municipality to raise and extend parking fees	Several streets were added to the pay-parking zones in Districts III, XIII, VI, XIV
Reduction of CO2 and PM10 emissions from transport in the Budapest Agglomeration	The following data were communicated by BKK for the NOx and PM emissions: NOx year t/year average emission per km 2012 4642 [t] 44 g/km 2013 4010 [t] 38 g/km 2014 3725 [t] 32 g/km PM year t/year average emission per km 2012 242 [t] 2,3 g/km 2013 191 [t] 1,8 g/km 2014 167 [t] 1,4 g/km Remark: The data is based on the emission standards of the different Euro categories, an average distance travelled of 70000 km/vehicle/year for the entire fleet, and uniform consumption and engine power values. No data is available on CO2 emissions.

Concrete decision of the Budapest Municipality to introduce congestion charging in Budapest	The Municipality announced that congestion charging will be implemented until the end of 2016. CAAG is actively involved in the process.
Concrete decision of the Budapest Municipality about providing priority for public transport buses in traffic	2.9 km of bus lanes were created in Budapest in 2013, 1.9 km in 2014, and 1.3 km in 2015

The first objective of our work was to raise political, public and media awareness for upgrading the public bus fleets in Hungary by purchasing or leasing new buses, including zero emission and hybrid buses; by retrofitting buses with particle filters, and by improving the emission tests and maintenance of buses. The other objectives were the introduction of priority for buses in city traffic and the implementation of the following financial instruments for sustainable transport: a distance-based fee for trucks on all roads; an extension and raising of parking fees in Budapest and a congestion charge in Budapest. CAAG also aimed to regularly consult decision-makers regarding the implementation of the new national programme for PM10 emission reduction and prepare proposals for local, national and EU decision-makers for soot/PM reduction and on related EU legislation.

Upgrading the public bus fleet in Hungary – especially in Budapest and its surroundings – was the main topic on which CAAG focused during the Clean Air project. We carried out an intense advocating work for clean buses in Hungary during the whole project period, targeting decision-makers at local and national level, officers at Budapest public transport company (BKV), at the Center for Budapest Transport (BKK), and at ministries. CAAG met also regularly various stakeholders active in the field (for example: electric bus constructors, companies producing retrofitting devices). CAAG asked citizens to sign a petition on a post card urging the government to renew the bus fleet with soot-free vehicles, including electric buses. Altogether more than 8000 postcards have been signed and handed over to the representatives of the Office of the Prime Minister in August 2013. We also made a call on Facebook and on our website to citizens asking them to report, if they smell exhaust fumes inside a bus. More than 50 such complaints were received and forwarded to the Budapest public transport company (BKV), which repaired the buses. CAAG made measurements of the particle number in emissions of buses running with EURO 0, I, II, EEV and VI engines and compiled a report with the results for BKK, together with proposals on how to ameliorate the situation. CAAG supported the organisation for testing four types of electric buses (BYD, Solaris, Rampini-Siemens, Evopro) in Hungary (mainly in Budapest and its surroundings), and communicated the results to the media.

CAAG also initiated pilot runs for retrofitted old buses with particle filters in Budapest, Békéscsaba and Pécs, and convinced the State Secretariat for Environment and two private companies to finance further pilot projects at BKV (Budapest Public Transport Company) for obtaining real-time feed-back to drivers on the fuel consumption of buses and to measure the effect of various parameters of the engine on the PM emission of the buses.

The renewal of the bus fleet in Budapest began in 2013. According to the official data received from BKK until December 2015, 705 old buses with a standard worse than EURO up to EURO III were or will be withdrawn from the circulation in the city of Budapest and its surroundings. In the same time 673 buses with EEV standard or EURO VI standard were or will be procured. In August 2015, BKV announced a new tender for at least 150 (and a maximum of 300) new articulated buses. In September 2015, BKV announced a tender for the overhaul of the engine of 126 used Volvo 7700A buses. BKV also announced plans to put into operation 25 fully electric buses in 2016.

CAAG commended a survey on the opinion of Hungarian citizens about bus transport and air pollution. According to the survey 60% of the population in Budapest support the idea of creating more bus lanes and 61% of the population support the idea of giving priority to trams and buses at traffic lights. The outcome of the survey was used to argument in favour of keeping the bus lanes that the mayor of Budapest wanted to withdraw in autumn 2013. The bus lanes remained!

CAAG was the first to launch the idea of the introduction of a distance-based fee for trucks on all roads in Hungary. Within the Clean Air project CAAG intensified its advocating activity for the introduction of the fee. The distance- and (partly) pollution-based road toll for trucks was implemented on 6513 km from 1st July 2013. This is much longer than originally planned (about 3000 km) by the government and the toll is also substantially higher than planned earlier – as it was demanded by CAAG. The Budapest Municipality started to elaborate a plan for making freight transport in the city more environment-friendly, and the government accepted a decision to elaborate a concept for reducing the harmful environmental effects of urban freight transport. Both have been long standing demands of CAAG. CAAG has been advocating that such plans and concepts include also the tolling of trucks in cities in accordance with their environmental characteristics.

CAAG advocated to the Budapest Municipality and the Center for Budapest Transport to raise parking fees and extend the area of paid parking. The Municipality implemented some extension of paid parking. CAAG also prepared a proposal for reducing places for both on-street and off-street parking. CAAG advocated for the introduction of a congestion charge in Budapest by organizing workshops and meetings with decision makers and officers of the Municipality of Budapest and Mayors of Budapest's districts, by sending them letters and compiling a study on congestion charging. At the latest news, the Municipality of Budapest will introduce the congestion charging until the end of 2016. The details of the scheme are not yet known. CAAG has been regularly discussing the issue with high level decision-makers, including János Lázár, Minister for the Cabinet of the Prime Minister, János Fónagy, Deputy Minister responsible for Transport, and Balázs Szeneczey, Deputy Mayor of Budapest.

To raise awareness on the PM10 pollution in Hungary CAAG initiated high level meetings to accelerate the implementation of the PM10 reduction programme of the Hungarian government. It commented the yearly progress reports of the programme and gave detailed advices on how the improve its implementation. We brought the topic to the media's attention especially during the European Year of Air. Several emissions were broadcast on air quality issues during the project with the participation of CAAG in Hungarian national television and radio channels. CAAG published a booklet on how to make cities soot-free by reducing emissions of transport, and sent it by the post to nearly 1000 City and District Council Members in Budapest and other Hungarian cities.

CAAG emphasized the Clean Air project's topics during the election campaigns which took place in 2014 in Hungary. Before the national elections of April 2014, on CAAG's initiative, 64 Hungarian green NGO's invited MP candidates to commit themselves to make progress during the next 4 years in twelve environmental fields, among them „Clean Air" and „Environment-friendly transport". 15 candidates have signed the commitment document proposed by the NGO's, of which 5 candidates were elected.

Before the local elections of October 2014, CAAG compiled a booklet „Recommendations for Budapest – What do we expect from the municipalities of Budapest between 2014 and 2019". The booklet, in which recommendations were included for cleaner mobility and a clean transport system in Budapest was sent to the candidates for Mayor and candidates for the posts of council member.

CAAG created a poster exhibition on PM10 pollution and ways to reduce it and organized the exhibition in 30 locations (city halls, cultural centres, libraries...) all around the country. We diffused news on air quality issues on its Facebook page, blog and website and wrote articles in our monthly newsletter during the whole project period. The number of persons following us on Facebook grew from 2460 to 4161.

During the car free week-ends of Budapest CAAG's tents were visited by several hundreds of citizens each year, where they looked at our posters, and played with our games on transport and clean air.

To interact with citizens we operated an environmental consultancy office which gives advice to citizens in case of environmental problems. During the project CAAG answered about 900 complaints regarding air pollution (problems concerning transport pollution, illegal burning, pollution of small industrial sites, etc.).

Outside the transport issue CAAG campaigned for the reduction of PM10 pollution from household heating and illegal burning, and wrote a report about the problem to the Ministry responsible for Air quality issues (Ministry of Agriculture). At CAAG's initiative, in 2015 the Ministry decided to make a national wide communication campaign to raise citizen's awareness on the topic.

(See deliverable "Report on transferable experiences from Budapest" as annex nr. 53.)

5.1.12 Action B.12

Action Alliance: European Biking Cities

Indicators of progress

Application	Actual
Minimum 24 participants in the European Biking Cities Action Alliance (involvement of all stakeholders)	The cities Mannheim, Vitoria-Gasteiz, Bolzano; Strasbourg, Brighton& Hove and Potsdam as well as the VCD participated in all five project meetings. Twelve persons were involved in the internal meetings.
Six active and ambitious cities/ municipalities will participate in the network of European Biking cities	Six ambitious cities are actively participating.
Minimum of 50 cities is interested in receiving information about the network	Around 10 cities were initially interested in joining EBC but were not able to provide staff capacity. All of them were informed about the EBC best practice brochure that was published in June 2015. City networks such as ECFs Cities for cyclists (19 members), Eurocities (183 members) or Civitas also received it.
Six cities will adopt and implement additional measures for cyclists. Evaluation of the quality of the measures will indicate the environmental impact	All six EBC network members are continuously taking steps to improve conditions for cycling. EBC encouraged and inspired project partners to take additional measures and supported them with contacts and knowledge to better implement measures.
Minimum of 60 participants in the networks meetings	The network meetings were split in closed meetings of representatives of the six cities (15 people involved), meetings with external experts and public events (media conference in Potsdam, panel discussion in Vitoria-Gasteiz, presentation at a major bike conference in Strasbourg, evening reception in Brighton&Hove, presentation at the Velo-city conference in Nantes. The average number of participants was more than 60.
100 media reports about the events and publications in the network	We registered 40 media reports about the events and publications in the network
Three measures at a national and European level to promote cycling will be decided	EBC project manager Wasilis von Rauch accompanied the release of the second German cycling strategy (Nationaler Radverkehrsplan 2020), he gave an expert statement in the traffic committee of the Bundestag with a focus on e-bikes and cargo bikes (written version in the attachment, TV interview: http://www.tagesschau.de/ausland/radverkehrsplan100.html). VCD actively supported the successful claim to change national law in favour of equal treatment of bicycles as business vehicles. Formerly only motorized vehicles received tax advantages (so called "Dienstwagenprivileg"), now everyone can get tax advantages when using a bicycle as vehicle for professional purposes. A pilot project in Strasbourg on reducing fines for cyclists will probably lead to an adoption into French national law: http://www.cleanair-europe.org/de/projekte/vcd/ebc/cohabitation-between-

	cyclists-and-pedestrians/

Expected results

Application	Actual
The European Biking Cities Action Alliance will further intensify its efforts to improve traffic conditions for cyclists, and thus increase and the proportion of bicycle-based traffic. This results in improved air quality. Decisions on support measures for cycling and pedestrianism are made in various EU member countries and by the EU. This will further increase the proportion of bicycle traffic and encourage more municipalities to start promoting cycling.	All six ECC network members are continuously taking steps to improve conditions for cycling. EBC encouraged and inspired project partners to take additional measures and supported them with contacts and knowledge to better implement measures. A study trip for European journalists to Vitoria-Gasteiz was organized in June 2015 to showcase the doubeling of cycling mode share in only three years.
Best practices for climate-friendly transport will be applied and further developed. An increase in the proportion of non-motorised traffic directly results in better air quality, improving the health of cyclists and the population as a whole. Some of the measures to promote this traffic sector are aimed at an ecological transformation of the existing transport infrastructure. Traffic noise is also reduced.	The final brochure "European Biking Cities – Good practices on cycling promotion from six pioneering European cities" was published and presented at the international Velo-city conference in June 2015. It was spread widely across Europe. After participating in a European Biking Cities roundtable in Berlin the Institute of Advanced Sustainability Studies in Potsdam started a scientific research project to better understand the potential of promoting cycling and improving urban air quality: http://blog.iass-potsdam.de/2015/06/more-cycle-traffic-to-improve-air-quality-in-berlin-and-potsdam-a-model-study/
- 15 concrete measures to promote cycling will be implemented within the project period	Oslo decided to get carfree until 2019, extension of cycling infrastructure and support of e-bikes Paris "Plan Vélo", 150 Mio Euro for cycling infrastructure London will build 29 km bicycle highways Bolzano awareness campaign cyclists and pedestrians Brighton-Hove March 2015 opening of big indoor bike parking at train station Potsdam Guideline for real estate industry regarding bike parking facilities Strasbourg cargo bikes in the municipality's vehicle fleet Mannheim dialogue with parcel delivery company to plan model project Vitoria-Gasteiz January 2014 new law on access regulations for delivery bikes See more examples in the brochure attached as annex nr. 56
- 250 media reports on the Action Alliance will be published	We registered 40 media reports about the events and publications in the network
- 3 promotion measures at a national and European level will be decided	EBC project manager Wasilis von Rauch accompanied the release of the second German cycling strategy (Nationaler Radverkehrsplan 2020), he gave an expert statement in the traffic committee of the Bundestag with a focus on e-bikes and cargo bikes VCD actively supported the successful claim to change

	national law in favour of equal treatment of bicycles as business vehicles. Formerly only motorized vehicles received tax advantages (so called "Dienstwagenprivileg"), now everyone can get tax advantages when using a bicycle as vehicle for professional purposes. A pilot project in Strasbourg on reducing fines for cyclists will probably lead to an adoption into French national law
- The proportion of bicycle traffic in six cities will be increased by 3%	We are sure that in some cities (e.g. Vitoria-Gasteiz) the bicycle traffic has increasd by 3% but we cannot proof it with concrete numbers

In the network "European Biking Cities" six cities were actively participating: Bolzano (Italy), Brighton-Hove (United Kingdom), Vitoria-Gasteiz (Spain), Strasbourg (France), Mannheim and Potsdam (both Germany). All these cities already had ambitious cycling policies; half of them are the leading cycling cities in their countries. Each one has its particularities and strengths and brought important experiences into the network.

After the initial meeting in Potsdam (25/26 October, 2013) the network met for three thematic discussions in Vitoria-Gasteiz (May 22/23, 2014), Strasbourg (14/15 October, 2014) and Brighton & Hove (March 2015) and a concluding meeting at the sidelines of the international Velo-city conference in Nantes (June 2-5, 2015) (see deliverable "documentation final conference and conclusion" as annex nr. 57). The network had chosen three major topics for its exchange on successful cycling promotion: while cohabitation of cyclists and pedestrians and bike parking are key topics for any city to initiate or maintain growth of cycling the topic of cargo bikes in commercial transport is a rather new but promising issue to further increase the potential of cycling. Beyond internal thematic discussions the five meetings included inspections of the local cycling infrastructure, a press conference in Potsdam, a press conference and a panel discussion in Vitoria-Gasteiz (40 participants), a panel contribution at the international expert conference "Le vélo à la conquête des villes européennes" in Strasbourg (400 participants), an evening reception with the mayor of Brighton & Hove (60 participants, resulted in a regular gathering of local cycling experts) and a presentation of the concluding best practice brochure in a panel of the international Velo-city conference in Nantes (100 participants). Additional meetings with part of the network were held on the way to/from Brighton & Hove with the chair of the European Parliament´s transport committee, Michael Cramer in Brussels and with a Transport for London official and the London cycling campaign in London.

Results of these meetings and discussions were published in the brochure "European Biking Cities – Good practices on cycling promotion from six pioneering European cities" (see deliverable "documentation of implemented measures biking alliance" as annex nr. 56). It was presented at the international Velo-city conference and aims at inspiring other cities. It was spread widely across Europe through project partners, social media channels and email lists. The good practice examples were documented also online with additional background on the project´s webpage. In addition a study trip for six European journalists to Vitoria-Gasteiz in June 2015 was organized to showcase the major success of doubling the share of cycling from 6.8% to 12.3% in only three years.

The VCD undertook additional activities in Germany to promote cycling. In 2013 we gave an expert statement at a hearing of the German parliament´s transport committee on the release of the new German cycling strategy (Nationaler Radverkehrsplan 2020). VCD also successfully lobbied for equal treatment of bicycles as business vehicles. Formerly only motorized vehicles received tax advantages (so called "Dienstwagenprivileg"), since 2012 also bikes are included. An expert's roundtable on cycling and urban air quality in Berlin was hold on February 25th, 2014. It resulted in a research project of the Institute of Advanced Sustainability Studies in Potsdam. With regard to the topic cargo bikes in commercial transport the VCD at the world´s leading commercial vehicle fair "IAA Nutzfahrzeuge" in Hannover in September 2014 presented E-cargo bikes for the very first time in the

history of the fair. On 10th December 2014 VCD organised a network event in Berlin on cargo bikes in commercial transport with 80 participants.
The European Biking Cities action alliance was particularly successful in forming a network of very ambitious cities with very committed cycling officers who put a lot of time and energy into the network. This resulted in important learning effects and mutual inspiration of the project partners and a very well received brochure with good practice examples to inspire other cities. While quantifying the project´s effects in terms of specific measures would be somehow misleading partners themselves claim that several current and (potential) future measures of promoting cycling were at least partly inspired or supported by the work done within the action alliance.

Media reporting on the action alliance did not reach levels that were expected in the beginning but it increased sharply towards the end of the project especially with the English publication of Vitoria-Gasteiz´s 2014 mobility survey and the invitation to a study trip for European journalists to Vitoria-Gasteiz.

5.1.13 Action B.13

Elaboration of scientific background and attending policy development

Indicators of progress

Application	Actual
More than 50 organisations will be informed by regular briefings looking at the political context and the potential for further reductions.	Air quality subsection on T&E website (RDE and NRMM): 4 positions on NRMM 2 positions on RDE 2 presentations (ppt) on NRMM to Clean Air stakeholders 3 factsheets (funded by another project) on RDE, NRMM and diesel vehicles Regular information at each NGO stakeholder meeting More than 50 organizations have been informed
One NGO workshop on NRMM will be attended by minimum 15 NGOs	Part of EEB Clean Air Working Group, presented NRMM proposal and subsequent legislative developments twice yearly
One conference on the Air quality Package will be attended by 50 participants each	Conference on the Air Quality Package: Health Impacts of Air Pollution organised on 22 January 2015 as parliamentary breakfast meeting in European Parliament (together with HEAL and EEB)
Minimum 100 stakeholders will be informed and sensitized about the importance of the transport sector to further reduce air pollution in Europe and should consequently take action to deliver these emission reductions	4 positions on NRMM 2 positions on RDE; 1 factsheet on diesel cars Air Quality section on website (RDE, NRMM) 2 presentations (ppt) on NRMM to Clean Air stakeholders Event on new NRMM proposal organised in European Parliament as parliamentary dinner on 27 May 2015 (together with Bund and DUH) Participation in approximately 20 conferences and workshops. More than 100 stakeholders have been informed
Documentation of the conference on review of Air Quality Directive will be disseminated within minimum 100 decision makers/multipliers	The documentation of the conference of 22 January 2015 sent to over 100 decision-makers/stakeholders via email newsletters
Findings and proposals for further improving the air quality regulations in Europe: e.g. introduction of a mechanism to correct the gap between test-cycles and real driving emissions, introduction of effective standards for the non-road sector, promotion	4 positions on NRMM 2 positions on RDE 2 joint letters with other NGOs with proposals for the Air Quality Package + over 100 joint factsheets on NECD

Monitoring and qualitative analysis of the changes in the EU and/or national legislation regarding the consideration of the proposals elaborated and promoted within the present project	Air Quality Package includes transport issues (RDE and NRMM); analysis and suggested improvements to those elaborated with other NGOs and presented to decision-makers

Expected results

Application	Actual
More than 50 organisations will be informed by regular briefings looking at the political context and the potential for further reductions.	Air quality subsection on T&E website (RDE and NRMM): 4 positions on NRMM 2 positions on RDE 2 presentations (ppt) on NRMM to Clean Air stakeholders 3 factsheets (funded by another project) on RDE, NRMM and diesel vehicles Regular information at each NGO stakeholder meeting More than 50 organizations have been informed
- Two reports assessing current levels of emissions and exploring the possibilities for reduction will be sent to 30 stakeholders each	1. Report on air pollution from on and off road sources such as vehicles and construction machines together with policy recommendations published in September 2015 and launched with a cocktail reception in the European Parliament (around 60 attendees). 2. Report on shipping NOx, expected in October 2015
- Three NGO workshops will be attended by 15 NGOs	Part of EEB Clean Air Working Group, presented NRMM proposal and subsequent legislative developments twice yearly
- Two conferences on the most relevant policy developments will be attended by 60 participants each	1. Conference on the Air Quality Package *Health Impacts of Air Pollution* organised on 22 January 2015 as parliamentary breakfast meeting in European Parliament (together with HEAL and EEB) 2. Event on new NRMM proposal organised in European Parliament as parliamentary dinner on 27 May 2015 (together with Bund and DUH) 3. Policy lunch event on shipping emissions *The Sulphur Directive – cutting air pollution from ships* was organised on 11 December 2014 in the European Parliament.
- Minimum 100 stakeholders will be informed and sensitized about the importance of the transport sector to further reduce air pollution in Europe and should consequently take action to deliver these emission reductions	4 positions on NRMM 2 positions on RDE; 1 factsheet on diesel cars Air Quality section on website (RDE, NRMM) 2 presentations (ppt) on NRMM to Clean Air stakeholders Event on new NRMM proposal organised in European Parliament as parliamentary dinner on 27 May 2015 (together with Bund and DUH) Participation in approximately 20 conferences and workshops. More than 100 stakeholders have been informed

Findings and proposals for further improving the air quality regulations in Europe: e.g. introduction of a mechanism to correct the gap between test-cycles and real driving emissions introduction of effective standards for the non-road sector, promotion of retrofitting actions and programmes throughout Europe, measures to reduce emissions for the shipping sector, etc.	4 positions on NRMM 2 positions on RDE 2 joint letters with other NGOs with proposals for the Air Quality Package + over 100 joint factsheets on NECD
Documentation of Conference on review of Air Quality Directive.	The documentation of the conference of 22 January 2015 sent to over 100 decision-makers/stakeholders via email newsletters
Documentation of Conference on shipping emissions.	The documentation of the conference of 11 December 2014 sent to over 100 decision-makers/stakeholders via email newsletters

T&E has been active in different fields of air quality at European level: the revision of the non-road mobile machinery directive, the real driving emissions regulation shipping and general air quality issues.

The aim of T&E's work is to achieve a NRMM proposal with strict emission limits for different categories (construction machinery, rail, waterborne transport), aligned to the emission limits of heavy duty vehicles, currently much stricter and latest BAT. T&E intensively contributed to the Commission's preparatory work on the NRMM legislative proposal by attending official meetings and speaking at various events, meeting Commission officials and contributing to the public consultation. Since the release of the EU commission proposal in September 2014, T&E developed 3 position papers and numerous legislative recommendations to highlight the strengths and weaknesses of the NRMM legislative proposal. T&E has also kept informed other European and national NGOs, including the members of the Clean Air project, about the review of the NRMM legislation to encourage them to actively campaign. T&E has also had much press coverage on NRMM. T&E worked with the European Parliament and Council in order to influence these decision-makers and achieve a European legislation on NRMM that significantly reduces non-CO2 pollutant emissions from this source. In particular T&E engaged and offered its expertise in the amendment preparation and compromise negotiation stages in the Environment Committee of the European Parliament. T&E organised a parliamentary dinner debate on the NRMM proposal on 27 May 2015 which was attended by around 40 stakeholders. T&E will continue to update Clean Air project members and encourage their participation, as the proposal nears the trilogue stage at the end of 2015.

Real World Driving Emissions (RDE)

T&E participates in meetings of the Commission stakeholder group and its related sub-groups on Real Driving Emissions (LDV-RDE working groups). The aim is to develop a procedure that verifies emission limits measured during test in the laboratory are respected in real life conditions. Currently emissions during real driving are about seven times higher than legal emission limits. In order to define the best technical solutions to ensure that vehicle emissions in real life meet emission standards T&E has also had regular contacts with the Commission, industry groups (AECC), the International Council on Clean Transportation (ICCT) and some member states. Inputs have been integrated into the legislative text agreed on 19 May 2015 to make sure that the RDE test is both realistic and ambitious; for example, T&E has pushed hard to include the emissions during cold starts and particulate filter regeneration events. The advocacy work of T&E also ensured that vehicle sensors are not allowed to be used, to make sure that the vehicle does not know it is being tested. An intern has been hired for 2

months to work on the evaluation tools that the RDE test will use to validate and normalize the data. A report with the findings is available to any interested party, but has not been made publically available (for internal use). The second stage of RDE work will agree further aspects, such as introduction dates and stringency of the emission limits; the third stage is expected to include PN limit into the RDE procedure. T&E regularly informs other members of the Clean Air project on this very technical issue so that they can take action on this subject at national level.

General air quality

Together with its partners from the European Environmental Bureau (EEB), Client Earth, Health and Environment Alliance (HEAL) and AirClim, T&E has intensively contributed to the current discussions on the Air Quality Package (NECD in particular). It has done so by: developing common lobby strategy and position papers, meeting MEPs and participating in public conferences and discussions on air quality, organising events (e.g. on health impacts of air quality, with HEAL and EEB, on 22 January 2014), media work, etc. An important milestone was reached on 15 July 2015 when the Environment Committee voted on NECD and supported raising ambition, including new pollutants (mercury) and making the 2025 limits binding in line with the NGO position T&E is part of.

A report on air pollution was commissioned in 2014 to analyse the flaws of the testing procedure for on and off road vehicles and machines and how to solve it. The report was published in September 2015 and launched with a cocktail reception in the European Parliament on 14 September 2015.

T&E has also created a section on Air quality on its website. It includes general information on Air quality and information on NRMM (Diesel machines) and RDE. T&E has informed all its members and partners of the Clean Air project about this new section on its website, reaching more than 50 stakeholder organisations working at national and European level. The number of hits on T&E website is important. The total number of visits in 2013 was 111.379, of which 62.24% were of new visitors.

T&E has produced its air quality report "Don't Breather Here" that looks at road-related sources of air pollution such as Euro 6 passenger cars and non-road mobile machinery (NRMM). The report was launched on 14 September 2015 in the European Parliament and got much media attention. (see deliverable " report on entry into force Euro VI+AQ" as annex nr. 61)

We have joined the clean air webinars organized by EEB on a regular basis to provide updates and analysis on all NGOs across Europe working on air pollution. In those webinars we provided information on those areas where T&E is most active, such as Euro 6 and NRMM. (see deliverable "documentation three NGO workshops" as annex nr. 62)

EU shipping activities

T&E provided France Nature Environnement (FNE) with a grant of € 2.950 (all taxes included) intended to support activities in France aiming at measuring the type of pollutants emitted by maritime transport of goods and passengers, especially cruise ships, and raising public awareness about their impact on the public health and the environment. The overarching objective of this grant is to influence the French public debate on the level of air pollution from cruise ships and its impact on the public health and the environment as well as the decisions of public authorities, port operators and cruise industries. FNE's project took place in Marseille in July 2015 and attracted a lot of press attention and publicity (see deliverable "report on emissions from maritime sector" as annex nr. 59).

Besides the above described activities, T&E has commissioned a still ongoing study on NOx emissions in European waters. The study – final report expected by the end of November 2016 – will look into potential technical and policy measures/options to control NOx emissions from the shipping sector in EU. The analysis will take a special look at the Baltic and North Sea, including the English Channel, as those are the current EU Sulphur Emission Control Areas. On this regard, the report will assess the technical and political opportunities and constrains of including the same sort of control area for NOx ('NECAs').

Apart from the implementation of Emission Control Areas, the contractors will look into NOx emissions projection up until 2040 based on different scenarios: Business as usual and in the case of the successful implementation of a NECA.

5.1.14 Action C.1

Regular surveys to local and regional authorities regarding the implementation of measures to improve air quality

Indicators of progress

Application	Actual
Minimum 200 municipalities in 7 EU member states will be informed and motivated to participate in the survey	Survey on LEZ in Germany: 1st survey Germany: 55 cities 2nd survey Germany: 15 cities 3rd survey Germany: 69 cities 4th survey Germany: 76 cities Survey on construction machinery: 1st survey Germany: 146 cities 2nd survey Germany: 16 Länder 3rd survey Germany: 16 Länder
Minimum 100 municipalities will participate in the survey and provide qualified answers	Seven municipalities from three Member States took part in the first Clean Air European survey in 2013. After simplifying and shortening the questionnaire in 2014 we received 17 answers from municipalities in four Member States. The questionnaires concerning construction machinery in Germany was answered by 126 cities in 2012. In 2014 and 2015 all 16 German Bundesländer took part.
Survey results compared to the previous year will proof an increase of cities in the "green category"	2013: 6 cities in green category 2014: 17 cities in green category 2015: 38 cities in green category
Proof of stricter controls in the individual environmental zones more than four cities in the "green category"	YES, the number of cities in the green category increased, because of the good press work and the discussions with local authorities.
6 municipalities will implement stricter requirements in tendering for public contracts	Berlin, Bremen, Frankfurt, Kassel, Mainz, Köln, Aachen demand the use of low emission construction machinery (standard IIIB or particle filter) in public announcements. The federal state of Baden-Württemberg developed a state ordinance for the use of low emission construction machineries in high polluted areas. Deutsche Bahn (private company in full possession of the Federal Government) demands the use of low emission construction machinery in public announcements, national guidelines for the obligatory use of low emission construction machinery in public announcements or Low Emission Zones and high polluted areas.
Minimum 100 articles in the media	First survey on LEZ Germany: 56 Online Articles, 1 TV; Second survey on LEZ Germany: 2 Online Articles Third survey on LEZ Germany: 20 Online Articles Forth survey on LEZ Germany: 32 Online Articles Third survey on Construction vehicles: 2 Online Articles

Expected results

Application	Actual
40 municipalities take part in the survey	Survey on LEZ in Germany: 1st survey Germany: 55 cities 2nd survey Germany: 15 cities 3rd survey Germany: 69 cities 4th survey Germany: 76 cities Survey on construction machinery: 1st survey Germany: 146 cities 2nd survey Germany: 16 Länder 3rd survey Germany: 16 Länder
60 municipalities in 6 other countries take part in the surveys over the whole project period	In 2013 we sent the questionnaire to 22 cities in six European countries. Seven cities answered to the survey; four municipalities in UK (London, Bristol, Leeds and York), one city in France (Lyon) and two cities in Denmark (Copenhagen and Aarhus). Unfortunately, we don't have any reaction from the rest of the cities. In 2014 we asked 43 cities in seven Member States to fill in the questionnaire. We received answers from 17 municipalities in four Member States.
100 media react to the press release in total	First survey on LEZ Germany: 56 Online Articles, 1 TV; Second survey on LEZ Germany: 2 Online Articles Third survey on LEZ Germany: 20 Online Articles Forth survey on LEZ Germany: 32 Online Articles Third survey on Construction vehicles: 2 Online Articles
Greater acceptance in public opinion for measures to improve air quality through better and clearer information	The greater acceptance in public opinion for the LEZ can be seen in a higher number of cars with particle filter and a decrease of violations against the LEZ-regulations. In addition the great demand for retrofitting with particle filters.
Improvement of LEZ controls by the authorities and thus improvement of air quality in individual cities	We realized an improvement of LEZ controls by the authorities, as a result of our surveys and the following press work. This lead to an improvement of air quality in cities.
Increased use of construction vehicles and machines with particle filters due to stricter requirements for public contracts	We had several expert talks with local authority representatives in Bremen, Stuttgart, Leipzig, Worms, München and Berlin. In addition we organised workshops und wrote statements. RESULTS: Berlin, Bremen, Frankfurt, Kassel, Mainz, Köln, Aachen demand the use of low emission construction machinery (standard IIIB or particle filter) in public announcements. The federal state of Baden-Württemberg developped a state ordinance for the use of low emission construction machineries in high polluted areas. Deutsche Bahn (private company in full possession of the Federal Government) demanded the use of low emission construction machinery in public announcements, national guidelines for the obligatory use of low emission construction machinery in public announcements or Low Emission Zones and high polluted areas.

On 29 April 2013, DUH published the results of the **first survey**. All 55 German cities which have implemented a Low Emission Zone (LEZ) before 2013 were asked how they monitor violations against the LEZ rules. The survey addressed the authorities in the cities, responsible for the implementation of air control measures. We also wanted to know how much violations were allowable fined and if there are different responsibilities and procedures of controlling driving and parking cars. Two-thirds of the cities did not conduct effective controls. Some cities argued that there are different definitions of the current road traffic act and they don't feel responsible for controlling the sticker. Since April 2013, the road traffic act is amended and local authorities are allowed to control parking cars also. To find out if cities changed their monitoring within the new road traffic act, we repeated the survey for those cities which declared to not control the sticker. The **second survey** was sent out on 22 August 2013. We asked which authorities are responsible for controlling the parking cars since the new road traffic act came into force. In addition we wanted to know how much violations were determined in the first decade and the second decade. The survey proofed that under the new road traffic act the controls in the Low Emission Zones increased. Only in two cities – Halle and Magdeburg- contrary to the law - the local authorities don't feel responsible for controlling the sticker on the cars. (see deliverable "third report survey Germany" as annex no. 68)

The **European Clean Air survey** compares different national activities and measures to improve air quality and to meet European limit values. The basic idea is to realize an inquiry among local and regional authorities about which measures they use to improve air quality and how they control the implementation of these measures. DUH developed the questionnaire and asked local NGOs for translation and contact details in the municipalities. In cooperation with the questionnaire of the BUND for action B.2, we broaden the questionnaire. The local NGOs supported us to remind the authorities in case of delayed answers and they helped to translate the answers into English. We were aware that some of the authorities will need a lot of time to react; therefore we already started to send out the questionnaires in June 2013 – one month earlier than planned. We sent our questionnaires to 22 cities in six European countries - twelve Cities in the United Kingdom, three cities in Poland and France and in four cities in Denmark. Four municipalities in UK (London, Bristol, Leeds and York), one city in France (Lyon) and two cities in Denmark (Copenhagen and Aarhus) answered to the survey. Unfortunately, we don't have any reaction from the rest of the cities. One of the problems might be that they are not interested to take part in a survey conducted by a German NGO. In addition the BUND questionnaire is very extensive, because of the aim to get detailed information about air quality measures in other member states. Maybe answering the questionnaire was a large effort for the cities. We assume that the municipalities missed the duty to reply to answers which belong to environmental matters. The received information of the seven returning questionnaires is very fragmentary. Therefore we have to bother to get more information by asking the local NGOs or the local authorities.

The lesson learned for DUH was to simplify and shorten the questionnaire for the **second survey**. After the questionnaire was send out in June 2014 we received at least 17 sparsely answered questionnaires (13 questionnaires from the Czech Republic, 2 from Denmark, 1 from United Kingdom and 1 from France). Unfortunately the results still do not justify the effort and could not be used in press and PR work. So the DUH decided to intensify the surveys in Germany, where several good results were already achieved, instead to be active in Eastern Europe in vain. End of 2012 DUH already asked the majors of all German Cities with more than 60,000 inhabitants about local activities towards **sootfree construction sites and construction works**. The covering letter was used to promote the use of public tenders as an easy way to anchor a filter obligation for construction machinery. But most of the cities haven´t even thought about environmental aspects in public tenders at that time. Some progressive cities used at least the procurement to ensure, that their own new machinery is only bought with filter technology. The results of this survey lead to an intensified work of the DUH to push the topic at a regional/ local and national level.

In February 2014 DUH sent out a **survey** on specific emission regulations for construction equipment to all 16 Länder. We received 15 answers. Bayern didn´t give us any information since the legal process initiated by DUH against the Freistaat Bayern is still running and filter obligations are one key aspect of this claim. Eight Länder answered, that no additional measures are necessary since they are

meeting the PM_{10} limit values of the AQD. They are not taking into account the high local emissions with impact on workers and residents. This is especially difficult, since construction equipment has a high average age, weak emission standards and is running for a long time in the same place. In Berlin, Bremen, Thüringen, Rheinland-Pfalz, Baden-Württemberg, Nordrhein-Westfalen soot emissions from construction equipment are already on the political agenda either on a regional or local level. (see new deliverable "Survey in German Länder on implementation of national guidelines on construction machinery" as annex nr. 69)

Nearly all Länder refer to a Bund-Länder-working group (LAI) dealing with air quality in general and with soot emissions from construction machinery in special since we brought up this topic. Within this group national guidelines were written under the lead by the German Ministry for Environment. All environmental Ministers of the Länder agreed on them in October 2014. In order to check for observable changes after the national guidelines have been adopted.DUH decided to have a third survey among all German Länder on their activities to reduce emissions from construction equipment in the beginning of 2015. In addition surveys – if answered properly – force authorities to deal with a specific topic. This gave DUH the opportunity to show the potential and use of these national guidelines, which are only recommendations. The results of this survey have been published in a press release.

5. 2. Dissemination Actions

5.2.1 Action D.1

"legal-infos-for-air-quality-measures" website for association representatives, officials and consumers

Indicators of progress

Application	Actual
Minimum 100 organisations will use the website as a source of information	More than 100 organisations in the legal network receive regularly information about the website.
Minimum 50 regional and local authorities will use the website	We send the link with the questionnaire to 73 municipalities in Germany. As a result we count about four times more visitors in January 2015 compared to the year before. This shows the interest of the local authorities on legal actions.
Approx. 1000 citizens will find out information from the website	The statistics show approximately 8.000 unique visitors and an average number of monthly hits of 14.368 from launching the website until the end of November 2015.
Continuous updating of the website	We update the website continuously with legal information in different Member States and court decisions.
Minimum 8 websites of NGOs refer to the page "legal-infos-for-air-quality-measures". Summaries of the information provided are available in minimum 7 EU countries (Germany, Hungary, Denmark, Slovakia, Austria, France, The Netherlands)	So far 8 websites inform about the legal website: In addition six Newsletters reported about the topic and link to the Website.
Number of hits: Minimum 1.000 hits/ month	We counted on average 14.368 hits per month by the end of November 2015. We had a very large number of hits after the launch of the website with 79,411 hits in January 2013. The number of hits decreased in the following months. We promoted the website in the NGO network via Mail and also via DUH Email Signature. This promotion leads to an increase of hits.
Minimum 150 completed online questionnaire and evaluations and individual feedback from 20 organisations	287 completed online questionnaires by now.
60 reports published on the website	57 reports about lawsuits and decisions in nine European countries are published on the website. In addition there are seven entries in the blog which results from requests by citizens. We update the website continuously and collect information about legal cases within the broad network.

Expected results

Application	Actual
Minimum 100 organizations (contacted via the networks of the EEB clean air working group, law working group and the "sootfree for the climate" campaign) will use the website as a source of information	More than 134 organisations were informed about the website via the EEB Clean Air Working Group and the DUH Legal Network and asked to use it.
Minimum 50 regional and local authorities will use the website	We send the link with the questionnaire to 73 municipalities in Germany. As a result we count about four times more visitors in January 2015 compared to the year before. This shows the interest of the local authorities on legal actions.
Approx. 1000 citizens will find out information from the website	The statistics show approximately 8.000 unique visitors and an average number of monthly hits of 14.302 from launching the website until August 2015. So we achieve these requirement.
Links to the website and summaries of the content in various languages on at least 8 websites of NGOs	8 websites inform about the legal website.In addition six Newsletters reported about the topic and link to the Website.
Legal information for air quality measures on at least 7 EU countries	9 Countries: Germany, Austria, Denmark, France, Hungary, Slovakia, Poland, Portugal and the UK
Intensive exchange of information with minimum 20 NGOs (environmental and citizens protection). Minimum 10 regional and local authorities per year will request further information and minimum 10 European citizens per year will request support to take legal actions.	We have an intensive exchange of information with 23 NGOs and legal experts. We received 15 requests from citizens, three requests from administrations or politicians, ten requests from NGOs and citizen’s initiatives and one request from a journalist to take legal actions. The mayor of the city Offenbach asked us for help, because the city suggested effective air quality measures, that the ministry of environment didn't accept. Also local politicians, especially from the opposition ask us for help, if the governing parties didn't react.

The website **legal.cleanair-europe.org** was launched end of January 2013 and is available in German, English, Danish, Hungarian and Slovakian, as it was described in the proposal. The Website comprises legal information on national and EU-level, so that the user find legal information for air quality measures in Germany, Austria Denmark, France, Hungary, Poland, Portugal, Slovakia and the United Kingdom. The Website informs about time extension notifications, infraction proceedings and current limit values. In addition, the website serves as a collection of previous legal cases and judgments where interested organizations and lawyers can get an easy overview. The Website is a good source of information for interested association representatives (environmental associations, consumer protection organisations, citizens’ initiatives), regional authorities and municipalities from all the European member states, as well as interested citizens. Until the end of August 2015 we provided 57 reports on legal background, lawsuits and decisions in nine European countries.

In the **library** of the website we provide a lot of information material on air quality legislation. Affected citizens or interested organizations can download the guidelines resulting from the legal workshops, a form letter to demand reduction of air pollution and different brochures on air quality limit values and measures.

The **Blog** offers affected citizens and citizens’ initiatives the possibility to send us questions. The answers and advices are published in the blog as well. Via blog we provide the possibility for users to get in touch with us directly and improve the individual information situation as well as a direct involvement via a comment function. We received a lot of requests via Mail, but also phone calls.

Affected citizens, local environmental organizations and citizen's initiatives as well as local administrations and politicians contacted us and asked questions about the possibilities of using legal actions to improve the implementation of air quality measures. A lot of people demanded us to take legal actions as DUH, but unfortunately we are not able to finance all proceedings that might be successful. We had to evaluate the cases regarding the chance of success, the possible effect on future lawsuits before national courts in Germany, but also in other Member States and the predicted costs and timeframe.

We installed an **online questionnaire** to evaluate the information and the user knowledge about air pollution. Due to technical problems during the first two months, we couldn't count the completed questionnaires. Now everything is working properly and so we are able to analyse them. 255 completed questionnaires were registered by the end of the year 2013. Nevertheless we decided to shorten the survey and improve the design to increase the number of completed questionnaires and develop the website. By the end of August 2015 we counted 287 completed online questionnaires. The most effective ways of tackling air-related problems were assumed in "Applying stricter controls on emissions from new cars and trucks" and "Restricting traffic in polluted cities" and "Introducing stricter air quality legislation". Almost 65 % of participants feel well informed about air quality problems in their country. Very interesting is that more than a third of participants think the air quality deteriorated over the last 10 years and feel the air they breathe is mostly bad.

We **promoted** the website via the networks of the EEB clean air working group, the EEB law working group and the *Soot free for the climate* campaign. By now, approximately 134 organizations are informed about the website and motivated to use it. The Website statistics shows, that we get more than the assumed number of 1.000 hits/ month. The most hits (79,411) were registered in January 2013, as we launched the website. In the following month the number of hits decreased with a peak in August (13,084). The problem is that the visits duration was quite low with rarely more than 5 minutes. That means most visitors just look on one page, but don't read all reports. We decided to strengthen the promotion for the website and asked partner organisations to refer to the page. Eight other websites link to legal Website by now. The Clean Air partner organizations created a link and a summary of the content on their own website by 01-05-2014. In addition we promote the website via the DUH Email Signature that promote alternately different projects. This E-Mail Banner was active in the period from 11 November to 18 November 2013. Because of the noticeable increasing number of hits we reactivate the banner every three months. The **statistics** also proofs the registration of more than 8.000 unique visitors until the end of August 2015. The indicator of progress to provide information to 1.000 citizens is already fulfilled.

We have an **intensive exchange** of information with 23 NGOs and legal experts in different European countries. In this network we discuss possibilities to take legal action. Because of the Website we received 15 requests from citizens, three requests from administrations or politicians, ten requests from NGOs and citizen's initiatives and one request from a journalist to take legal actions. We checked these requests intensively and discuss with the responsible authorities which measures should be implemented to meet limit values. The mayor of the city Offenbach asked us for help, because the city suggested effective air quality measures, that the ministry of environment didn't accept. Also local politicians, especially from the opposition ask us for help, if the governing parties didn't react.

Mr James Thornton, Senior lawyer at ClientEarth is working for DUH as an external expert, managing all legal cases in the UK on air quality issues and overviewing the work of Mr Alan Andrews and Mr Ugo Taddei. Because of the large number of cases we increased the number of working days for him.

5.2.2 Action D.2

Project website with information boards

Indicators of progress

Application	Actual
Minimum 2.000 hits/month	We can only account “page impressions” and “visits”. The average of monthly page impressions went up from 1.700 in 2013 to over 3.000 in 2015. The Clean Air Website had 57.000 page impressions and over 20.000 visits in total 2.313 download of publications on our website plus more untracked downloads on partner websites and other - 2.893 views of the video “Clean Air in cities”
5.000 feedbacks (1.500 Environmental associations, 2.500 citizens, 500 Administrations, 500 Media)	130 feedbacks together with the newsletter subscription plus 150 users taking part in the survey "Which of the following means do you consider effective for clean air?” We cannot say where the feedback is coming from. We have 342 followers on twitter

Expected results

Application	Actual
Regularly updated website in German, English, Danish, Slovakian and Hungarian	The Clean Air website is updated regularly in English and German. Detailed information in Danish, Slovakian and Hungarian are updated on the partner websites.
Qualified feedback from users of the Project Website per Month	We got very little qualified feedback from users of our website, in total there were 98 registered feedbacks
Quantified audience of dissemination effort	The Clean Air Website had 57.000 page impressions and over 20.000 visits in total plus dissemination on partner websites and external sites. The newsletter has 382 subscribers, the twitter channel 342 followers.
Short survey to identify the type and interest of the users of the website. Possibility to register in order to receive further information.	There is a feedback function, a short survey on effective measures on air quality and a registration process for newsletter subscription on the website. - we provide a quarterly newsletter in English and German with 382 subscribers (176 German version, 382 English version)
About 90.000 uses of the website during the project duration (environmental and consumer protection associations, citizens, local and regional administrations and media representatives). Over the project duration the project website will have at least 2.500 visitors per month.	The Clean Air Website had 57.000 page impressions and over 20.000 visits in total. The average of monthly page impressions went up from 1.700 in 2013 to over 3.000 in 2015.

Updated Information Board with a sound overview over the development of the project as well as the different activities.	The information on the website is regularly updated. In addition to news, press releases and publications there is a special project section where the outcomes and development for each project is presented. There is a share-button for news and all project events are publicly announced on the website and in the newsletter. Furthermore, we created an internal information board to share information, templates and timetables with the partners in a restricted user group.

The website http://www.cleanair-europe.org/ provides all background information and news about the current state of all projects. There is a news section, a press section and extensive information on all projects. All publications are available for download. VCD is continuously updating the website. As one tool to better communicate with journalists we set up the information portal www.saubereluft.org which is embedded in the project website and provides additional easy-to-read background information for all relevant target groups. This portal went online together with the website in March 2013.

The Clean Air Website had 57.000 page impressions and over 20.000 visits in total. The average of monthly page impressions went up from 1.700 in 2013 to over 3.000 in 2015. The website is regularly monitored and a Typo3 update was done in 2015 to make sure the website will be technically up to date and provided with the necessary security patches for the next five years.

Additionally we are using social media channels for communication. In April 2013 we set up a Clean Air **Twitter** channel which has become a successful dissemination tool towards multipliers and political decision makers. Among the 342 followers are e.g. EU Environment Commissioner Karmenu Vella, Air quality rapporteur and MEP Julie Girling, and the Umweltbundesamt. We are tweeting mainly in English on several aspects of air quality from European Countries, but also covering the most important debates in Germany (in German). In addition to providing regular information on air quality issues we used it to address all relevant persons by messaging them directly during important phases of decision making.

Since June 2013 we also have a Clean Air **Youtube** Channel with 3.220 views in total (https://www.youtube.com/channel/UCUfTg_bHYh37Gh3Gbx6QwWA). It contains our main project video on air pollution in cities and the Clean Air project activities (2.893 views) as well as several video documentations of the Round Tables. The videos were shared by the partners and also disseminated by some online newspapers. The videos proofed to be very attractive and brought many new users on the website.

In addition to the project website we regularly provide information on the project activities and air quality issues in our quarterly newsletter. There is an international version (English) and a German version. We have 383 subscribers in total, 206 for the English version and 176 for the German version. This also contributes to the increase of traffic on the website.

To get a qualified feedback about the website we installed different surveys. In order to increase the number of participants, we disseminated the survey together with the newsletter. By the end of the project more than a half of the users of the website which took part in the survey are private persons or from environmental or costumer-protection organisations. So the biggest parts of the website users or newsletter subscribers are citizens or organisations fighting for the environment or consumer rights. 80 percent of the users who took part in the survey got relevant information on the subject air quality on our website.

The feedback regarding the website was very positive. The users who took part gave us an advice in which topics they are interested. For example “I'd like to start an open discussion on "urban areas air quality improvement plan". In Italy we are working on. Thank you very much for your attention, best regards, GS”

VCD installed a file storage and synchronization service at Google Drive to share the corporate manual, publications, time schedules and other documents and allow all project partners to collaborate and to exchange relevant internal documents. The service is used very well by the partners. VCD continuously updates the time schedules and provides new design templates for presentations or publications.

The physical notice board was produced in November 2012 after the corporate design for the project was finished. VCD handed the files for the physical notice board to all the partners for their use. All partners produced roll-ups as notice boards which they used for all events during the project to inform about the project, the LIFE funding and the other project partners.

5.2.3 Action D.3

Press and Public Relations

Indicators of progress

Application	Actual
At least 5 representatives from media per local press conference	12 press conferences with mostly more than 5 media representatives
at least 500 queries from media representatives	Approximately 575 queries by journalists, only regarding the queries counted there were much more which were not registered
at least 300 articles/reports per year	3.474 during the whole project implementation time, 2012: 115 2013:1361 2014: 658 2015: 1259
at least 3000 media contacts in the database	Approximately 3.300 contacts

Expected results

Application	Actual
At least two national press conferences per year in Germany, each with at least 15 media representatives	9 press conferences, each with approximately 10 media representatives spread over the whole project duration
At least four press releases per year in Germany	62 press releases over the whole project implementation time
At least four regional press conferences in the associated project partners' countries per year, each with 10 media representatives	We had 6 press conferences in the associated project partners' countries over the whole project implementation time: 2 in Austria, 1 in Hungary, 3 in Slovakia with 10 -15 media representatives each; Denmark doesn't give press conferences they have direct contact to media representatives
At least four local press conferences with the associated project partners per year outside Germany	2 in Austria, 1 in Hungary, 3 in Slovakia with 10 -15 media representatives each
At least two press releases from all associated project partners per year	In total the project released 179 press releases over the three years of project implementation: 9 in Hungary, 12 in Slovakia, 3 Belgium, 62 in Germany, 93 in Austria; Denmark doesn't use press releases they have direct contact to media representatives
At least 200 printed articles or broadcast reports in Germany	823 online and print articles and reports have been published in Germany.

At least 10 articles in major foreign media outlets per year	Approximately 95 major media outlets (e. g. Zeit, n-tv, Spiegel, taz, Morgenpost, Stern, Heute, Süddeutsche, Yahoo! News, Die Welt, Reuters, Financial Times, Politiken, El Mundo, Corriere della Sera, EurActiv, European Voice) at least 10 of these in foreign media outlets
Development of contacts with 25 new media representatives per year	We are updating the database for every press release. Currently the databases of all partners include approximately 3300 contacts.
Contacts administered in a database which records the respective media representatives' area of interest	Yes
Award of three research prizes	No – following the amendment to the Grant Agreement
Two information-gathering trips, each with 10 media representatives	- 09/2014 to Germany/Berlin on retrofitting and Low Emission Zones with 5 media participants. - 06/2015 to Spain/Vitoria-Gasteiz on cycling with 9 participants.
At least four "round table" talks per year, each with 10 media representatives	We had 11 round tables in total (4 in 2014 and 2015 each and 3 in 2013). A twelfth round table planned for may 2015 unfortunately had to be cancelled at short notice.

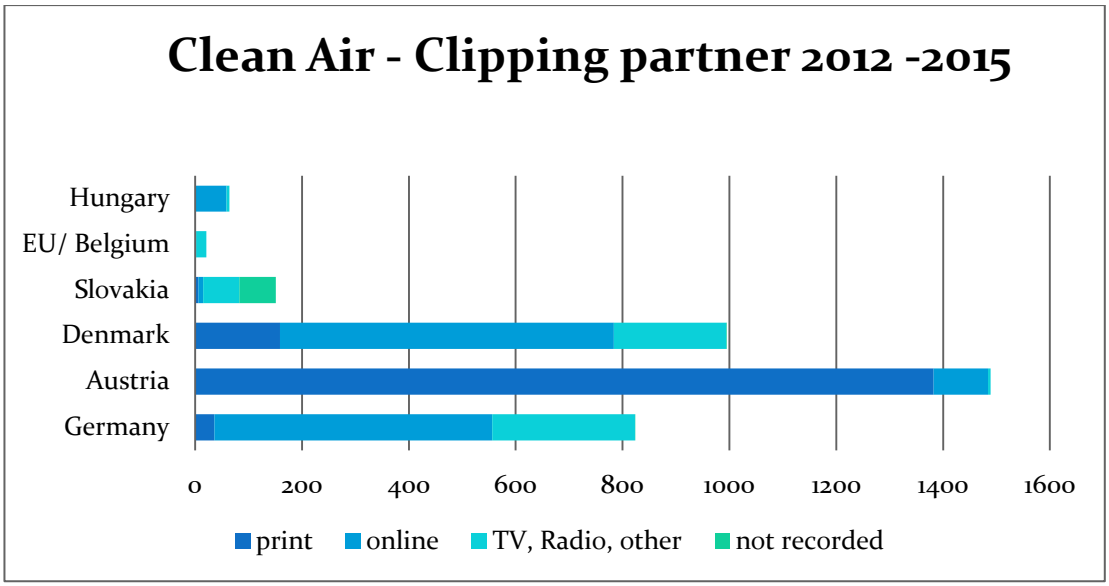
VCD developed the strategy for the media and public relation work in cooperation with a professional PR consultant. The strategy was then discussed with the project partners and suggestions from the partners were included. As part of the communication strategy, the logo and corporate design were developed together with the Associated Beneficiaries. VCD provided templates for publications, presentation and letters as well as guidelines for the corporate design. All beneficiaries were asked to use the templates and VCD updated them when it was appropriate.

The main project flyer explains the project with all project partners and the different actions. It was used for all events, round tables and project presentations throughout the whole project duration. All partners have the project flyer and they have also access to the template to create their flyer in their own language based on the corporate design.

The press work within the Clean Air Project is done by all the partners and according to the media strategy elaborated. Additionally and because of the different languages and the regional differences, every partner realizes own press work in the country for the action he is responsible for. In total the project released 179 press releases over the three years of project implementation: 9 in Hungary, 12 in Slovakia, 3 Belgium, 62 in Germany, 93 in Austria; Denmark doesn't use press releases they have direct contact to media representatives

During the three years of project implementation 15 press conferences were held in five of the six participating countries, the Danish Ecocouncil from Denmark doesn't organise press conferences to inform the press. T&E also prefer press releases or direct contacts to inform the press. (see deliverable "documentation of press conferences of whole project" as annex nr. 82)

The media work of the project has been very successful with 3474 articles over the three years of project implementation (approx. 1650 online, approx. 1600 printed). The journalists were most interested in examples of best practice. Our Austrian partner vcö and the Danish Ecocouncil which promotes Copenhagen as a model city had an impressive media coverage.



Within the Clean Air Project we organised 11 Round Tables in total, a twelfth Round Table "Actions for volunteers" was planned for the VCD Academy in May 2015 but had to be cancelled at short notice. (see deliverable " documentation round tables (final report) " as annex nr. 81 and find video documentation of three round tables here: https://www.youtube.com/watch?v=wIzQdQ01sNg, https://www.youtube.com/watch?v=-DZHxZuCJ1A, https://www.youtube.com/watch?v=ZjUROj8cJHY)

- 2013-01 Round Table: NGO strategic discussion on air quality, Brussels
- 2013-02 Round Table: E-Bikes, sustainable mobility and air pollution control, Berlin
- 2013-11 Round Table: Alternative Future Urban Mobility, Berlin
- 2014-02 Round Table: Urban cycling promotion, Berlin
- 2014-05 Round Table: Low Emission Zones, Berlin
- 2014-11 Round Table: Actions for Volunteers, Nurnberg
- 2014-12 Round Table: Cargo Bikes, Berlin
- 2015-02 Round Table: Urban Public Transport, Berlin
- 2015-03 Round Table: Sootfree Cities, Brussels
- 2015-07 Round Table: Air quality - Best Practice in Cities, Berlin
- 2015-07 Round Table: The future of urban air quality - a political challenge, Berlin

In the frame of the action Clean Buses the conference "Clean Air in Cities" was organised on September 4th 2014 in Berlin. More than 20 people from Poland and the Czech Republic met in Berlin with German experts to discuss about air pollution, the role of public transport, technical measures to reduce emissions of buses and additional measures like LEZ. This conference was seen as an occasion to invite journalists for a best practise trip to Berlin, from Poland as well as from the Czech Republic a camera crew took part. Two documentaries about air pollution were shown in national TV in the two countries. In June 2015 a second journalist trip was organised. Seven journalists from all over Europe visited Vitoria-Gasteiz the Spanish partner of the European Biking Cities network which has completely transformed itself from a car-dominated, polluted city to one of the most pedestrian and bicycle-friendly in Europe in the last ten years. (http://www.cleanair-europe.org/en/news/news-detail/clean-air-journalist-trip-to-vitoria-gasteiz-the-new-spanish-cycling-champion/vom/4/9/2015/)

As agreed in the amendment to the Grant Agreement we decided to not have a research award but to elaborate our website and to diversify our communication channels. The budget was used to create more skilled content for journalists and multipliers on the website. A short film now informs about the problem of air pollution and the project activities. Feedback regarding the film was very positive.

Furthermore video documentation was done on three round tables and made available on the Clean Air project website.

The final Clean Air conference "Clean Air for European Cities" which took place in Berlin on July 6th 2015 had over a hundred registrations. In the morning we started with a national press conference organised by the German Clean Air partners in cooperation with MEP Michael Cramer, Chairman of the Committee on Transport and Tourism. The conference was held in the afternoon at Landesvertretung Niedersachsen and accompanied with a poster exhibition on the project activities by all nine partners, a giant lung in the garden and an information table by the EU LIFE unit. After three keynotes there were two panel discussions and in the evening there were ample opportunities to deepen issues of the conference and to discuss specific issues with experts in more detail accompanied by a buffet and drinks.

5.2.4 Action D.4

Layman's Report

The Laymans report summarize the objectives, measures, and results of the project in an easy-to-read manner. The report is available on website in English and German and will be spread via newsletter of all project partners. (see deliverable "Layman's report" as annex nr. 83)

5.2.5 Action D.5

After LIFE Communication Plan

The After Life Communication Plan was developed in the last project team meeting and approved by all partners by 15th August 2015 as planned. The After LIFE Communication Plan will ensure a sound communication of project results and lessons learned after the end of the LIFE period. It was developed in the frame of the last project team meeting 7th of July 2015 in Berlin and approved by 15th of August 2015 as planned. The plan as foreseen includes two types of actions: Basic communication action (without additional finances or costs borne by partner) and extended communication actions (if additional finances can be acquired) (see deliverable "After LIFE communication plan" as annex nr. 84)

5.2.6 Action D.6

Networking with other LIFE Projects

We are concentrating our networking on NGOs and consumer protection organisations in Europe as well as national and European organisations with relevance for politicians on local, regional and national level. VCD and the Associated Beneficiaries were in regular exchange with approx. 25 organisations.

One important objective is the exchange with the coordinators of other LIFE projects with similar tasks. Our participation in the Green Week 2013 in Brussels (June 4th to 7th 2013) was a good opportunity to exchange with different projects like the OPERA project (LIFE09 ENV/IT/000092), the PhotoPAG project (LIFE08/ ENV/F/000487) or the SunEagle project (LIFE09 ENV/IT/000115). In November 2013 we hosted together with Astrale GEIE the Life Platform Meeting on Alternative Future Urban Mobility. There we met other LIFE projects active in the transport sector. The participants including Hervé Martion and Guido de Wilt from the European Commission discussed about future trends in urban mobility and exchanged about their project results and experiences. All participants receive the Clean Air newsletter.

5. 3. Evaluation of Project Implementation

To coordinate nine organisations from six countries is always a challenge and requires time and resources. All partners know each other since long time and were working together in other projects such as the Sootfree for the Climate Campaign. This was very helpful for the Clean Air Project.

Furthermore it turns very helpful to have an external and therefore neutral expert who helped to structure the project management and contributes to identify the challenges from the project management point of view as well as finding solutions in accordance with the requirements of the LIFE Programme.

All Actions were facing challenges and most of them have been foreseen in the project proposal. The success of the actions depends to a high share on the political willingness and the attention given by the European citizens to the topic. All partners are NGOs without the possibility of direct influence. To influence politicians and citizens requires creativity, professionalism, persistence and resources. As NGOs we work with creativity, professionalisms and persistence, but since the economic crises in Europe, to get funding and assure the financial contribution for the project is even more difficult than in normal times – especially for the NGOs in Slovakia and Hungary.

Despite of these conditions described above we were able to manage all critical situations and to solve problems such as the serious delay in the performance of the B2 action carried out by BUND. To date there is no evidence of serious risks regarding the objectives of the project. The atmosphere in the project steering group was positive and constructive and all partners gave a positive feedback regarding the project coordination by VCD.

The Advisory Board has done an evaluation of the project implementation based on the principles of a SWOT analysis in its Evaluation Report which cannot be done better by the project team, find here the analysis of the Advisory Board:

Strengths

- The diversity of partner organisations, countries and project activities involved covered a range of important aspects of air quality as well as different target groups
- The participating NGOs were highly motivated to initiate, support and facilitate positive change in transportation policy
- Legal actions for the enforcement of European law were initiated. One important result were court judgements that NGOs have a right to sue, if EU limit values are breached
- The international network created, widened the horizon for the participating NGOs on how project work may be successfully implemented
- NGOs connected different political levels: European, national, regional and local
- International cooperation increased, especially the cooperation between NGOs in Western and Eastern European countries
- The participating NGOs successfully participated cooperatively in the European political process, e.g. by providing input for EP amendments to important details of the NEC-proposal and NRMM-proposal
- Most of the implemented actions are transferable to and replicable in all EU countries
- The project had influence on national and local priorities and actions to reduce air pollution, notably retrofitting of buses, facilitating bicycling, and raising awareness on the role of inland waterway ships, not to mention several other beneficial activities
- Industry (especially SME's) was motivated to join in project activities (i.e. Germany, Bratislava, Brussels, Budapest)
- Two joint projects for follow-up activities have been suggested: DUH started with the Danish Ecocouncil a LIFE+ project Clean Heat for reducing the emissions of stoves, BUND participates in a Horizon2020 project on measuring air pollutants.

- Public awareness on air quality and air pollution has increased via national publications and internationally through PR organised by the project

Weaknesses

- The degree of interaction between the NGOs was limited, especially due to the wide range of topics, often with only one or two NGOs involved in a particular topic
- The diversity of the topics limited the intensity and scope of international interaction
- The environmental impact of projects like this and their related actions are generally difficult to assess, and while the metrics discussed throughout the project were a step forward, they nevertheless only provided limited help
- The socio-economic impact of such projects is even more difficult to evaluate
- For the typical long-term work of NGOs the project period was much too short
- The right to sue for NGOs requires human and financial resources as well as persistence and will therefore not be a mainstream instrument
- Local authorities could not be motivated to contribute data to elaborate a baseline report on air quality measures implemented on local level
- It was generally difficult to quantify the actual air quality benefits.

Threats

- Increase of air quality problems in cities because of impacts of climate change (evidence demonstrates that morbidity and mortality is affected due to elevated concentrations of ozone and fine particles)
- Loss of momentum based on lower degree of public awareness due to other dominant news, events and preferences
- Low public interest in mitigation of urban air quality problems despite the high mortality rate for inhabitants.
- Low public interest in reducing biodiversity losses despite detrimental effects due to atmospheric emissions
- There may be only very limited follow up actions to further develop the started activities for air quality, given that no specific measures were put in place to support such follow-up
- Lack of continuous external funding of the EU-activities of environment NGOs could make it difficult to maintain the requisite degree of networking between European NGOs, which seems necessary for them to continue playing the barely needed watch dog role in national and EU-wide plicymaking and enforcement of environment policies

5. 4. Analysis of long-term benefits

Awareness Raising and capacity building

The activities of the project resulted in raising awareness of the citizens, especially on the health problems related to the emission of air pollutants. More and more citizens e.g. know about the health problems connected to the breathing of nitrogen oxides and ultrafine particles. In addition the knowledge about possible solutions and best-practice-cases rose. A higher share of the public understands and supports the key role of public transport and of non-motorised transport.

The capacity building measures of the project make contributions to supply administrations with adapted practical knowledge. In addition there are now experienced NGOs who act as supporters of progress for air quality. The risen ability of NGOs to use law as an instrument for air quality will result

in more and more successful court cases that will force national states and cities to implement effective measures.

The project used the momentum of the VW scandal for sensitizing companies, administrations and consumers regarding the need of proper implementation of legislation, esp. Real Driving Emissions The fact that Euro 6 diesel cars are missing the limits under real driving conditions might enhance the pressure on cities to foster the promotion of non-motorized transport.

Regulatory measures as well as structural and economic measures, the introduction of ecologic (notably emission) standards in public procurement and bidding processes by regional and local authorities is more widespread and regularly implemented.

Due to our tenacious work the integration of lessons learnt on air quality could be introduced in project selection criteria e.g. for projects co-funded by the EU Structural Funds or funding of national ministries. Air quality in initiatives related to transport, energy and agriculture, at all levels (from EU funding and legislation to local measures and initiatives) is now mainstreamed.

Network of Experts

The network of experts is permanently built up. All project-partners made their contribution to this effort. The experts can give fast response on questions e.g. from administrations. The build-up network will exist after the end of the project and can help to discuss and develop innovative measures, bring them to implementation and to have fast exchange about best-practice. Best-practice will find faster and broader implementation trough enhancement and distribution by the network.

Concrete fields of activities

The discussion started in the ports and shipping sector regarding air quality issues will continue. The important decision makers are sensitised and we already see first ships with DPF and/or SCRT in the sector. These prototypes prove practically that the technique works and the costs are capable. This shows the possibility to equip ships with this technology. With promotion programs by the member states and/or by regulation DPF or SCRT can be made a standard in this shipping sector. This is an important prerequisite for regulation in this sector for example by setting new standards. Regarding ports we see first ports setting up or planning on shore power supply stations which is an important step for reducing air pollution in the ports area.

The activities for the retrofit of bus-fleets in different cities with DPF and or SCRT will result in more and more cities following this model. The Clean Air project lays ground by transfer of knowledge between the cities and by publishing guidelines for retrofit of buses and the accelerated modernisation of the fleet. The Hungarian best-practice, the accelerated modernisation of the bus fleet in Budapest, will find interest and copies in Central and Eastern Europe.

The visible changes made by the biking cities in the network of the Clean Air project helped to raise the public awareness on the important role of cycling (including e-bikes and (e-)cargo-bikes) for sustainable transport in cities. The collection of best practice measures will testify how powerful selected measures can be and will find copies in many European cities, because this makes important contributions to a bunch of problems in cities: e.g. reduction of air pollution, noise reduction, climate protection, avoiding congestion.

The Network of Biking cities will continue its cooperation and help to transfer the knowledge and effective measures to other European cities.

If the advocacy for a new Standard for Non-Road Mobile Machinery accordingly to Euro VI for heavy duty vehicles is successful, all new construction machines will be equipped with a diesel particle filter (DPF).