

WHAT IMPACT DO EU ENVIRONMENTAL POLICIES HAVE ON URBAN TRANSPORT?

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INTRODUCTION

In the European Union, like in most of the western world, over 70% of citizens live in an urban area containing more than 10,000 inhabitants. Urbanisation and pollution emanating from vehicles are largely recognised as being the cause of environmental problems, including air pollution and climate change. In the European Union, it is estimated that urban transport accounts for 40% of all CO2 emissions emanating from road transport and up to 70% of other pollutants from transport (DG Mobility and Transport, 2011). Therefore urban transport policy needs to be tackled in order to protect human health and the environment.

Urban transport policy is shaped by multiple factors. It can be influenced by local, regional, national or supranational actors. The role of the European Union in initiating urban transport policies is unclear and its impact little understood. Yet some EU legislation and initiatives have major impacts on local transport policies and lead to important modifications and additions.

The percentage of EU legislation affecting a Member State varies greatly according to the country. In France official sources claimed in 1992 that 54% of new legislation originated from Brussels (Annual Report of the French Conseil d'Etat, 1993). In the UK, Vaughne Miller (2010) argues that between 15% and 50% of UK legislation and policies derives from Brussels.

Throughout the European Union, EU Environmental policy has a particular impact on national regulation and policies. In the UK, findings suggest that 57% of statutory instruments coming from the EU are implemented by the Department for the Environment, Food and Rural Affairs (DEFRA) (Miller, 2010).

This paper looks at an example of binding environmental legislation coming from the EU. Binding legislation adopted or implemented by the European Union can be divided in three categories: Regulations, Directives and Decisions. The first two are the main legal instruments used by the EU Commission. Regulations are legislative acts directly applicable in all EU Member States, while Directives need to be adopted into national law and their implementation is subject to a flexible time frame (Article 288 of the Treaty on the Functioning of the European Union, 2010). Decisions are usually made by the Council (or sometimes in co-decision with the EU Commission or the Parliament) and can apply to Member States or individuals (Craig et al, 1998).

The binding legislation looked at in detail in this paper is the Directive 2008/50/EC on Air Quality. Although this piece of legislation concerns Air Quality, it is likely to have had a direct and indirect impact on many policy areas, especially urban transport.

There are four main parts to this paper, which is based on on-going PhD research. The first part will set out the objective and hypotheses, review the existing literature and outline the methods employed. Second, EU environmental policies related to urban transport and air quality will be examined. Third, the EU Directive 2008/50/EC and how it incorporated in different countries will be analysed. Finally, the initial results about air quality impact on transport policies in three case study cities will be presented.

PART I: OVERALL RESEARCH

Objectives and Hypotheses

The aim of the research is to find out how binding (e.g. EU Directives or Regulations) and non binding (e.g. Community Guidelines or Funding) policies initiated by different Directorate Generals (DGs) in the EU Commission have impacted transport policies at city level, specifically in the United Kingdom (UK), France and Spain.

The overall study looks at three examples: the Directive on Air Quality, the EU Climate and Energy package (20-20 CO2 targets), and the urban funding programme CIVITAS.

This paper aims at evaluating the influence that the Directive 2008/50/EC on Air Quality has had on local transport policy, by analysing published reports and interviewing key decision makers about what changes it has led to in their cities, such as an alteration of their political agenda or concrete modification in the city's investments and infrastructure.

In this article, the main research hypotheses are:

- 1. EU environmental regulation and policy initiated by DG Environment has had a substantial impact on urban transport policies in the EU.
- 2. Directive 2008/50/EC has had an impact on urban transport policies. The Directive has contributed to promoting sustainable urban mobility and has led to concrete changes in the UK, France and Spain.
- 3. There are striking differences in the way the Directive is interpreted, adopted and implemented in the UK, France and Spain.

4. Outcomes differ between cities in the UK and France due to structural and contextual differences.

Literature Review

Six key concepts concerning EU policy making are crucial to this research and inform the theoretical framework. These concepts are both connected and overlapping. They provide us with insights to better analyse and understand the impact of EU policy making at the national and sub-national level in its Member States.

Europeanisation is the broadest concept, which looks at how governance and policy making in countries are affected by the European Union. It facilitates the analysis of other concepts such as **Multi-level Governance** or **Policy Transfer**. Multi-level Governance seeks to understand the balance of power between different entities and actors within the EU. Policy Transfer traces how EU policy filters from one level to another and what impact it has on different levels. **Implementation of EU policy** is closely related to studies on Policy Transfer and examines the successes and failures of EU law, as well as policy implementation at the National and Sub-national level. The **Principle of Subsidiarity** and regulatory choice (**Soft and Hard Law**) are narrower concepts. Soft, Hard and Hybrid law are different EU policy instruments which can be combined or used separately to reach a political or legal aim.

The **Principle of Subsidiarity** aims at organising and balancing power between different levels of governance in the EU. Article 5 of the Treaty establishing the European Community states that the Principle of Subsidiarity (Treaty establishing the European Community, 2002):

"whereby the Union does not take action (except in the areas which fall within its exclusive competence) unless it is more effective than action taken at national, regional or local level".

In the long history of conflict of power between the EU entities and Member States, the Principle of Subsidiarity was introduced to protect Member States from losing too much power and control over decisions and interventions (Estella De Noriega, 2002). This is particularly the case in environmental legislation as it is a field where Member States tend to be protectionist. Indeed, National Governments often invoke the Principle of Subsidiarity to prevent the Commission from regulating environmental policy, especially in Britain (Golub, 1996).

The Green paper "Towards a new culture of urban development" (Commission of the European Communities, 2007) raises the issue faced by the EU in relation to urban transport policies:

"European towns and cities are all different, but they face similar challenges and are trying to find common solutions. Throughout Europe, increased traffic in town and city centres has resulted in chronic congestion, with the many adverse consequences that this entails in terms of delays and pollution. [...] While it is true to say that these problems occur on a local level, their impact is felt on a continental scale: climate change/global warming, increased health problems, bottlenecks in the logistic chain, etc." (page 3).

The following figure illustrates the six concepts and their relationship to one another:



Study Methods

The study has four stages.

Stage One of the programme has researched all EU legislation across DGs directly or indirectly relevant to urban transport; for example, the Directive on Environmental Noise 2002/49/EC initiated by DG Environment.

The project then selected three pieces of EU legislation to examine their impact on urban transport: Directive 2008/50/EC on Ambient Air Quality (initiated by Directorate General Environment), the Climate and Energy Package (the 20-20-20 target initiated by DG CLIMA), and the funding programme CIVITAS.

Thanks to the analysis of policy documents and interviews (as mentioned in the next paragraph), the study has looked in more detail at the way the Directive on Air Quality filters down from the supranational level to the national level and subnational level. The following graph illustrates how these three pieces of legislation interact with the remainder of the legislative framework: Over 40 semi-structured and unstructured interviews were conducted at the supranational, national and sub-national level. The majority of the interviewees were civil servants and policy makers, such as policy officers in the EU Commission, representatives of EU cities in Brussels and national or local policy-makers.



This research is being carried out in three Member States: the United Kingdom, a country known as a Euro-sceptic, but a member since 1973; France, a founding member with a long history as a nation-state; and Spain, a "younger" member (1986) where the European Union appears to have been more influential. These three countries have been selected because each of them has its own complex and subtle relationship with the European Union. Cultural, political and geographical differences will be most instructive in highlighting the effectiveness of EU policies and the barriers to wider implementation.

In each country two cities have been selected, one which has been involved in transport projects and funding programmes with the EU Commission, the other which has not had any major involvement in such projects. These pairs of cities are broadly comparable in size, population and administrative structure. The location of the case study cities are shown in the map below.

Stage Two will look in more detail at the implementation at national and local levels of the 2008 Directive on Air Quality, the EU C02 targets and the funding programme CIVITAS.

Stage Three will evaluate the inputs and outputs resulting from EU policies' impact on local transport policy. **Stage Four** will formulate policy recommendations to advise the Commission on how to improve policy implementation at a local level, and enhance co-operation between the EU and subnational authorities.



PART II: EU ENVIRONMENTAL POLICIES

EU Environmental Legislation Affecting Urban Transport

The following graph shows the number of pieces of EU legislation across all Directorate Generals (DGs) which have a direct or indirect effect on urban transport. Data for the research comes from, in the first instance, the official web interface of the European Union called EUROPA in a sub section named Summary of EU legislation (EUROPA). Legislation has been categorised as "Direct" (D) or "Indirect" (ID) with a view to assessing the data in the context of its direct or indirect impact on urban transport.

A piece of legislation having an indirect impact makes an oblique or implicit reference to transport in its text or in its official summary, or where the legislation refers to transport but does not constitute the core of the legislation, the impact has been defined as indirect. In other words, when it is incidental to the legislation and when it is not the primary focus of the EU legislation. Regulation (EC) No 614/2007 concerning the Financial Instrument for the Environment (LIFE+) is a good example of a legislation having an indirect impact. This regulation focuses on environmental protection and only mentions transport once in the section 'urban environment' to encourage "local authorities to adopt a more integrated approach to urban management, including the transport and energy sectors".

On the other hand, a direct impact is defined as an explicit reference in the legislation's summary or the core text of the legislation to transport in an urban area. For instance, Directive 2006/32/EC on carbon dioxide emissions limitation by improving energy efficiency, initiated by DG Energy, gives an indicative list of examples of eligible energy efficiency improvement and explicitly refers to the "Transport Sector" and to "modal shifts of travel (e.g. car sharing)". In this case the legislation clearly refers to transport and gives examples of transport in an urban context.





Although DG Move accounts for most of the legislation which has a direct impact on urban transport (30 pieces of legislation), DG Environment is the DG which has initiated the most legislation which affects urban transport directly or indirectly (42). Interestingly, interviews completed to date have confirmed that legislation initiated by DG Environment has had the strongest impact on urban transport policies.

These results show the importance EU environmental policies have for transport in the EU. Air Quality policies are one of the most stringent examples of the impact EU policies can have on urban transport.

Air Quality policies and Sources of Air pollution in the European Union

The need for Air Quality policies in the European Union emerged in the 1970's. A combination of factors pushed politicians and policy makers to take action to reduce air pollution. On the one hand, more and more concern and awareness about environmental issues started to emerge in the political arena. The Stockholm Declaration at the 1972 United Nations Conference on the Human Environment and later the Rio Declaration on Environment and Development adopted by the United Nations in 1992 set the example. On the other hand more and more reports from authorities such as the World Health Organisation started to highlight the multiple risks air pollutants can have on human health. The dangerousness of air pollution for human health and the fact that air contamination crosses borders between countries legitimated an action at the EU level.

The first policies related to Air Quality in the European Community date back to

1970. These aimed at regulating emission standards for light vehicles. Then, for the first time in 1980, Council Directive 80/779/EEC established limit values for sulphur dioxide and suspended particulates, then Directive 85/203/EEC set up standards for nitrogen dioxide.

The first major EU Directive related to Air Quality was the Council Directive 96/62/EC on ambient air quality assessment and management. It aimed at setting objectives concerning Air Quality in the EU, at establishing a common framework to analyse Air Quality in each member state, at making information accessible and finally at improving levels of Air Quality throughout the EU. This Directive was referred to as the Air Quality Framework Directive (AQ FWD). Since 1996, there has been four Daughter Directives concerning various pollutants such as ozone or N02 (1999/30/EC; 2000/69/EC; 2002/3/EC; 2004/107/EC). In 1997 and in 2004 various Council and Commission Decisions (97/101/EC; 2004/461/EC; 2004/224/EC) added new elements to Air Quality measurement, assessment and planning.

In 2001, the Sixth Environment Action Programme marked a new turning point. This EU programme, called "Environment 2010: Our Future, Our Choice" set concrete objectives to protect the environment up to 2012. In this context, air pollution in cities was clearly addressed with a new Thematic Strategy on the Urban Environment (2006). The actions of guidance, training, support and best practises were encouraged by the EU Commission in order to help local authorities reach the various environmental targets, especially related to Air Quality.

All these Directives, Decisions and Programmes led to the latest EU Directive on Air Quality: Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe. This piece of legislation gathered most of the relevant EU regulation on Air Quality into one single piece of legislation.

Air Quality and Transport

Along with energy production and agriculture, transport is the main source of air pollutant emissions.

Road transport and industrial combustion (comprising emissions from power plants, refineries and from the manufacturing sector) are mainly responsible for around half to two-thirds of total emissions of Nitrogen Dioxide, Particulate Matter and Ground-level ozone. The European Environmental Bureau reports that: "Personal mobility is estimated to cause 20 % of greenhouse gases, 19 % of acidifying emissions, 32 % of tropospheric ozone precursors and 15 % of material resource use activated by national consumption."

Passenger transport is one of the key emission sources for PM2.5, NMVOCs, NOX and CO. The following graph illustrates the percentage of these emissions which emanates from the road transport sector in the EU:



Source: EEA (European Environment Agency), NOx is Mono-Nitrogen Oxides (NO and NO2), CO is Carbone Dioxide, NMVOC is non-methane volatile organic compounds and PM 2.5 is a type of Particulate Matter.

Regular exposure to high concentration of these pollutants aggravates and causes respiratory problems, worsens heart diseases and can cause premature death.

PART III: THE EU DIRECTIVE 2008/50/EC ON AMBIENT AIR QUALITY AND CLEANER AIR FOR EUROPE

Directive 2008/50/EC

As explained in the graph below, EU Directive 2008/50/EC had to be transposed into National Law in each Member State. Then, each national government is responsible for implementing national regulation corresponding to the Directive. The objectives set up by Directive 2008/50/EC must be achieved by national governments within a given time, although a time extension can be requested if necessary.

The following graph illustrates how the Directive on Air Quality filters down from the supranational to the local level.



Example of Concrete measures taken by local Authorities: Air Quality Plans, LEZ, Investment in public transport

Since Air pollutants are mainly concentrated in cities, local authorities become responsible for assessing their Air Quality, measuring levels of pollutants in the air, developing Air Quality Plans, and taking the necessary measures to achieve the targets and to comply with the limits.

Since transport is one of the main sources of Air Pollutants, local authorities have to focus their efforts on decreasing polluting motorised traffic in urban areas. Therefore, throughout the EU, concrete measures have been taken following the implementation of Directive 2008/50/EC. For instance, in 2008 London introduced the Low Emission Zone policy, in order to discourage polluting vehicles from driving in the Capital. The system required certain heavily polluting vehicle to pay a charge whenever they want to drive in London.

Every year local authorities have to measure the different levels of various pollutants in their urban area, relative to the limit levels, and present the results to their National Government, which in turn is responsible for reporting them to the Commission. Therefore, every year each Member State sends a general report to the Commission. In it, all measurements throughout the year are included.

Differences in the Way the Air Quality Directive has been incorporated into the National Administrative Structures of France, UK and Spain

A comparative analysis of the piece of legislation incorporating the Directive 2008/50/EC on Air Quality into national law in the UK, France and Spain, shows interesting results. Substantial differences in the implementation date,

the legal structure and the content are visible between the UK, France and Spain.

The Directive 2008/50/EC was adopted on the 21st May 2008 and Member States were given two years to incorporate it into national binding law.

It was only six months later that France published Decret n° 2008-1152 (7th of November 2008). On the other hand, in the UK, the new Air Quality Standards Regulations only came into force two years later, on the 11th of June 2010, just before the deadline.

The Directive was implemented even later into Spanish national. Indeed it was only as recently as the 28th of January 2011 that the Royal Decree 102/2011 was officially published and implemented. Spain missed the initial deadline set up by the Directive, and had to request permission for an extension.

Beyond just the date of incorporation, striking differences exist between countries in the legal structure of each national law on Air Quality.

In the UK, the Directive 2008/50/EC was incorporated into a single independent document, solely dedicated to addressing Air Quality in the UK: the Air Quality Standards Regulations 2010 (as showed in the graph below).

Although the Department for Environment, Food and Rural Affairs (DEFRA) coordinates Air Quality policies in the UK as a whole, each devolved administration was in charge of transposing the EU Directive into law. As a result Minor differences exist between Air Quality Standards regulation in England and in the devolved administration. The name of the regulation remains the same in different administrations in the UK; for example, in Wales it is called Air Quality Standards (Wales) regulation 2010.



In Spain, it is also implemented as single and independent document aimed at summarising various existing pieces of legislation, mainly Directive 2008/50/EC (as illustrated in the graph below). The Spanish Royal Decree 102/2011 is more substantial than the UK document and is a Royal Decree rather than a law. This means that the Decree was adopted by the executive

power (government) rather than coming from the parliamentary legislative power - in contrast to the previous law 34/2007 on Air Quality.

Though it is possible that the Decree will become a formal law, the date of implementation and the nature of the law suggest that the latest Air Quality Law in Spain was delayed and might be modified.



Legal structure AIR QUALITY in Spain

In France, the Code de L'Environnement is a different form of legislation. It is a very long document including all relevant law concerning environmental matters. The Section II on Air and Atmosphere (Livre II Articles L220-1 to L220-2) summarises and establishes all regulations concerning Air Quality (details shown in the graph below).

Whenever this document is to be amended, a separate Decree is adopted and then integrated into the Code de L'Environnement. Decree 2008/50/EC integrates Directive 2008/50/EC on Air Quality.

The Decree in itself is very short compared to the Spanish or the UK equivalent.



Legal structure AIR QUALITY in France

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Problems of Non-Compliance with Directive 2008/50/EC

Directive 2008/50/EC has experienced several cases of non-compliance. This situation is not new in the EU. In fact, the Commission reports that from 2003 to 2010 there has been an average of 492 cases of infringements of environmental law per year across all Member States. Infringement cases handled by DG Environment represent 20% of all infringement actions. Transport and Energy are also areas where infringements are common.

This table illustrates the number of infringement cases in environmental law in six Member States:



Source: DG Environment, European Commission, http://ec.europa.eu/environment/legal/law/statistics.htm

Spain is the second worst culprit of all 27 member states with 40 infringement cases in 2009 after Italy and is closely followed by France and the UK. The UK also has a high number of environmental infringements compared to the average. Indeed, in 2008 the average in the EU was 17,8, and in 2009, 16,70 and the UK had 31 cases of infringement in 2008 and and 28 in 2009.

The following graph illustrates the origins of all environmental infringement cases in the EU in 2009:



These results clearly indicate that Air Quality law poses problems since 16% of all environmental law is concerned with Air Quality.

Research in the UK, France and Spain, at the national and more especially at the sub-national level, indicates that the successful implementation of the Directive 2008/50/EC has proved to be very challenging.

Indeed this Directive is controversial since most of the cities, and therefore most of the Member States, cannot comply with the levels required. The European Environmental Bureau (EEB) reports that 13 European Countries out of 27 are not complying with the limit values. The UK, France and Spain are amongst these 13 countries.

Research conducted for this study indicates that local authorities in the UK, France and Spain experience similar challenges and problems. Cities claim that they do not have the financial and technical capacity to implement the legislation and lack expertise. They also complain about the lack of help and communication coming from the Commission regarding the implementation of this Directive. The Commission recognises this problem and tries to offer support, such as organising workshops to help understand N02 (Nitrogen Dioxide) levels, or by providing guidance documents on implementation.

PART IV: COMPARATIVE STUDY ON HOW AIR QUALITY LAW IMPACTS TRANSPORT POLICIES IN CITIES

Contextual and structural differences

The research in the case study cities has highlighted various differences related to Air Quality policy. Differences are particularly striking between Cardiff and Toulouse.

First, the cities show structural differences in the way they deal with Air Quality. For instance, in Cardiff, Wales, a section of the municipality is exclusively dedicated to Air Quality and noise policies, whereas in Toulouse Air Quality management is integrated into the Ecology and Sustainable Development section.

Although Toulouse relies on an Observatory for Air Quality (ORAMIP) to measure and observe Air Quality in the city, which Cardiff does not, the Observatory is not involved in policy making. Those managing the Air Quality management observatory in Toulouse therefore have little influence on the city's policies.

On the other hand in Cardiff, five to six employees are experts in Air Quality issues, have their own unit and spend their time managing these issues. This team has a high degree of responsibility in the municipality and are able to influence policy in the city. Furthermore, a higher degree of cooperation exists between the office in charge of transport policies and the one in charge of Air Quality in Cardiff, whereas this is less obvious in Toulouse.

In Toulouse it is also noteworthy that responsibility for these issues extends to several entities. As regards Air Quality and Transport the two main actors are:

- i. The Grand Toulouse, which controls different municipalities in a large administrative territory, including Toulouse municipality (it is similar to a Unitary Authority in the UK).
- ii. And Toulouse municipality

Their responsibilities often overlap with the obvious consequence that it is sometimes unclear who is ultimately responsible for managing, implementing and creating policies on Air Quality.

As a result, Air Quality policies are more advanced and have a stronger impact in Cardiff than in Toulouse.

Second, geographical and climate context has a strong impact on Air Quality in cities. In Cardiff, marine winds often disperse pollution. On the other hand in Toulouse, an inland city which can experience high temperatures and therefore a concentration of harmful pollutants, limits in the city are often exceeded and require emergency procedures to protect citizens.

Air Quality Impact on Urban Transport Policies

Interviews and data collection have enabled a deeper understanding of the impacts of Directive 2008/50/EC. The majority of the stakeholders interviewed confirmed that the Directive on Air Quality is among the top three EU policies which have had the most impact on urban transport policy.

Since the major source of highly harmful pollutants comes from motorised traffic, the solution to urban Air Quality mainly lies in urban transport policies. The Directive itself recognises this by proposing:

"measures to limit transport emissions through traffic planning and management (including congestion pricing, differentiated parking fees or other economic incentives; establishing low emission zones);"

and that: "*measures to encourage a shift of transport towards less polluting modes*;" must be provided (Directive 2008/50/EC, page 38).

The Directive clearly encourages sub-national authorities to include measures concerning urban transport into Air Quality Plans.

Research in the case study cities shows that it is difficult to establish a causal link between Air Quality Law and specific measures which have been taken to improve urban transport. Urban transport is most often improved in response to a variety of factors.

However, interviews with stakeholders reveal the strong influence Air Quality Law has had. In the case of Cardiff for instance, it is clear that the Air Quality situation was one of the main drivers to transform St Mary Street in the city centre into a pedestrian area.

St Mary Street was one of the problematic areas in the city and was identified as an Air Quality Management Area. It regularly exceeded limit values for NO2 and exposure to the population was very high since it was one of the busiest commercial streets in the city with a high concentration of pedestrian traffic.

Policy makers and politicians took the unpopular but ultimately effective measure of closing the road to traffic and transforming it into an exclusively pedestrian area. The Public Transport system had to be rethought and reorganised in order to offer alternatives to private vehicles.

In addition to the St Mary Street example, the Cardiff Local Transport Plan (LTP) has recognised the need to tackle Air Quality issues. Furthermore, in Cardiff, the LTP and the Air Quality Plans are linked, especially in problematic areas mentioned above, the Air Quality Management Areas.

Interviewees in Toulouse also recognised that Air Quality problems have had an impact on transport policies in the city, although interviewees could not provide concrete examples such as in Cardiff.

In the recent years environmental issues in Toulouse have started to have an impact on policies, mainly due to the fact that the population is more aware and concerned about these issues. As a result decisions to implement sustainable mobility policies in the city emanates from a mixture of factors, including concerns about Air Quality, as well as sustainable development and climate change.

However, interviewees in Toulouse acknowledge that environmental issues have a limited impact on transport policies in the city. Priority has had to be given to dealing with demography issues as the city rapidly expands and the population increases. All the stakeholders representing local authorities acknowledged that, although it is very challenging to cope with the Air Quality Directive, the Directive on Air Quality was necessary. According to them, without the EU Air Quality Directive no concrete steps would have been taken to improve Air Quality in cities. In fact prior to the EU law, no countries had a legal requirement of any kind to measure or improve Air Quality.

Further, most of the interviewees acknowledge that since every country and every city is different, the Principle of Subsidiarity needs to be respected. However, they also acknowledge that many problems faced by cities are common throughout the EU and that harmonised policies are necessary. Therefore, they recognise that the EU has an important role to play.

CONCLUSIONS:

Initial results of the research show that EU environmental regulation and policy initiated by DG Environment has had a substantial impact on urban transport policies in the EU.

Most of the interviewees agreed that EU Directive 2008/50/EC on Air Quality is, across all DGs, one of the regulations which has had most impact on urban transport.

The Directive has made a significant contribution to sustainable urban mobility and the establishment of a pedestrian area in an inner city road exemplifies the kinds of concrete changes it has promoted. However, there are still many cases of non-compliance throughout the EU. The UK, France and Spain are amongst the countries failing to meet targets set by the Directive.

There are fundamental differences in the adoption of the Directive into national law in the UK, France and Spain and the way in which Air Quality Law is implemented in different countries and different cities. Variables such as the administrative structure or the climate explain differences at the local level.

The burden on local authorities is very high, they often lack resources and there is insufficient national cooperation to reach targets. Local authorities also require more direct assistance from the Commission itself.

Interviewees agree that without EU binding law no substantial progress would have been made in the improvement of urban air quality.

Further research needs to be done to compare and analyse the content of Air Quality Laws in the UK, France and Spain. Further work should also be carried out to identify how these different transpositions of the Directive in different countries has affected urban transport policy outputs and outcomes in different cities.

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