

CATCH Summary Report

Introduction

CATCH (Clean Accessible Transport for Community Health) was a demonstration project supported by the European Commission through the LIFE-Environment Programme. CATCH aimed to support the Community's Sixth Environmental Action Programme by promoting sustainable mobility through an innovative, partnership-based approach to transport-related environment policy in Liverpool - a UK city which has been undergoing radical structural change linked to economic regeneration. CATCH also transferred knowledge and experience to Accession Countries and to Southern Europe through the participation of partners from Romania (the city of Suceava) and Italy (CTP Napoli, working with the town of Potenza). CATCH is driven by the desire of the partners to improve the quality of life for their citizens.

The project was led by the beneficiary of the EC's grant award, Merseytravel, with day-to-day project management being handled by the partner Transport & Travel Research Ltd (TTR). CATCH was a complex, integrated project with many different technical and social interactions. The project was split into 10 separate tasks covering implementation of measures in Liverpool, Suceava and Potenza, and general tasks such as technical evaluation, dissemination and project management.

Project Activities

The following table presents the tasks, including their location and a brief summary of the activities involved.

Task Number and Title	Location	Activities
1: Emissions reduction - existing vehicles	Liverpool	The installation of particulate traps on 104 buses within Arriva's fleet in Liverpool with additional exhaust gas recirculation equipment on 16 of these.
2: Emissions reduction - new vehicles	Liverpool	The initiation of a city centre shuttle route to encourage interchange and support sustainable travel in parallel with the regeneration of Liverpool city centre operated by 6 hybrid buses – the first fleet of such vehicles in the UK.
3: Air Quality Management	Liverpool	Declaration of a formal Air Quality Management Area in Liverpool city centre and an associated Air Quality Action Plan, supported by the design of walking and cycling infrastructure support measures for installation as part of Liverpool City Council's city centre movement strategy. Implementation of a community cycle training programme to support the actions aimed at encouraging uptake of sustainable transport modes in Liverpool.
4: Working with the market and citizens	Liverpool	The establishment and operation of a one stop shop for sustainable travel information in Liverpool aimed at the local community and business groups, known as ECOtravel. Production of community mobility plans for 6 city centre developments, leading to the development of a supplementary document to help town planners integrate sustainable transport infrastructure and information within future residential developments.

Task Number and Title	Location	Activities
		Running a healthy travel promotion initiative for an area on the edge of the city centre to encourage the community to change their travel behaviour to more sustainable and healthy options.
5: Pollution monitoring	Liverpool	The development, implementation and testing of advanced pollution monitoring techniques in Liverpool City Centre with a view to establishing a real time particulate mapping system for the city using existing CCTV systems.
6: Evaluation	All	Evaluation and reporting of the impacts of CATCH both in the individual impact areas and as an overall package. This involved the collection of background data, development and analysis of public opinion surveys covering travel patterns and attitudes to transport and the environment and the completion of a rapid health impact assessment for CATCH in Liverpool city centre.
7: Transferability to Candidate Countries	Suceava	Implementation of a package of measures to improve air quality in Suceava following the experiences in Liverpool, including: <ul style="list-style-type: none"> ○ The closure of a section of one of the main streets in Suceava and its transformation into a pedestrian-only low emission zone. ○ Purchase of two LPG cars by Suceava municipality that have been used in day-to-day public activities and in the promotion of clean fuels in the city ○ Extensive public promotion of sustainable travel options in Suceava ○ The refurbishment of 10 trolleybuses in Suceava leading to the removal from service of old polluting buses
8: Transferability to Southern Europe	Potenza	Investigation of measures to improve air quality in Potenza following the experiences in Liverpool, focusing on a feasibility study and recommendations for the introduction of a limited traffic zone in the town of Potenza.
9: Dissemination	All	Dissemination to ensure that CATCH has the highest possible profile within its public sector target group at local, national and international levels.
10: Project Management	All	All activities required to keep the project to time and budget and the client informed of progress.

Outcomes

The whole of CATCH has been dependent upon improving collaboration between public and private sector organisations aimed at reducing the environmental impacts of transport and without this we would not have been able to deliver any measures. This has been achieved by ensuring that all relevant actors were included within the project's decision making structure and by allowing enough people to participate in discussions about topics to which they would otherwise not have been able to contribute, safe in the knowledge that there was political support for this approach. In this way CATCH has enabled cross-sectoral dialogue between:

- public transport authority transport planning team
- public transport authority environmental strategy team
- the Liverpool City Council Air Quality team
- Liverpool City Council highways management

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- Liverpool City Council land use planning
- Liverpool City Council fleet management
- Liverpool City Council street safety (CCTV) team
- Liverpool University
- The area's main (commercial) bus operator

In some cases the links between the work of these organisations have been formalised in a forum that did not exist previously or through specific working procedures such as:

- The development of supplementary planning documents designed to set minimum standards for the provision of cycle parking and sustainable travel information provision in new developments at the planning stage
- The incorporation of the Air Quality Action Plan within the 5-year Local Transport Plan (a UK government requirement)

Steps have been taken to improve the local community's understanding of the impacts of personal travel decisions on air quality, quality of life and the urban environment and the necessary lessons have been learned to implement an improved programme more widely after the project officially ends with a view to making a more significant impact on travel behaviour in the participating cities. In particular this will build upon the work of the ECOtravel bureau and the experiences of the healthy travel promotion in Liverpool.

The deployment in Liverpool of 104 particulate traps and 16 exhaust gas recirculation systems (task 1) and 6 hybrid buses (task 2) and in Suceava (task 7) through the purchase of 2 LPG cars, promotion of LPG as a fuel, the fitting of 10 particulate traps and the refurbishment of 10 trolleybuses represents a significant expansion in the use of clean fuels in public transport and local authority vehicle fleets to a level that has delivered reductions in emissions of local pollutants that can be distinguished from within the overall emissions from transport within the cities.

Impacts

The local air quality benefits of the project have been demonstrated in terms of the significant emissions reductions delivered by the project measures and the even greater potential for wider implementation of these measures. In particular, CATCH has contributed annual savings in emissions in Liverpool of 3.9 tonnes of NO_x (equivalent to 1.6% of NO_x emissions in city centre) and 3.2 tonnes of particulates (equivalent to 22.2% of particulate emissions in city centre), these being the two pollutants causing greatest concern in terms of local air quality. The project measures also show the potential to deliver further emissions reductions in Liverpool, if implemented more widely. CATCH has also delivered emissions savings in the city of Suceava and developed a plan for a limited traffic zone in Potenza which would lead to substantial emissions reductions in that city.

Another direct impact of the project in Liverpool has been an increase in CO₂ emissions of 279 tonnes per year, but the project evaluation shows that a wider implementation of the project measures would actually result in a reduction in CO₂ emissions of 50939 tonnes per year assuming implementation of effective, wider behavioural communications campaigns based on the CATCH healthy travel promotion and replacement of the oldest vehicles operating in Liverpool's bus fleet with hybrid buses which can deliver the CO₂ savings that have been demonstrated under laboratory conditions.

Effectiveness

In terms of delivering reductions in local pollutants such as NO_x and particulates the retrofit technologies used in the project (particulate traps and exhaust gas recirculation) have proven to be far more effective than the other measures demonstrated in CATCH (either behavioural measures or the replacement of older buses by vehicles that meet the latest emission standards). On paper selective catalytic reduction represents an alternative to exhaust gas recirculation for NO_x reduction, although it hasn't been tested as part of CATCH.

Behavioural change measures are more likely to deliver substantial overall CO₂ reductions if successful, and although the CO₂ reductions are more modest in percentage terms than those achieved by technical measures for local pollutants, the investment costs for behavioural are generally limited to staff costs (either within local institutions or consultancy organisations).

Recommendations

The target groups for the project are local, national and European authorities, which mirror the three levels at which dissemination has occurred. Barriers and policy recommendations have been made and reported in a stand alone report, and have led to the following table which contains the main policy outputs of the project and indicates the level or levels each is relevant to.

CATCH Recommendation	Local	National	European
The development of supplementary planning documents designed to set minimum standards for the provision of cycle parking and sustainable travel information provision in new developments at the planning stage	Y		
Clarify the policy guidance linking transport and land-use planning (PPG13 in the UK) to be more explicit and empowering for local authorities on issues such as minimum standards for sustainable transport provision in new developments		Y	
Adopt a partnership-based approach to transport-related environmental policy, so ensuring that all relevant actors are included within a project's decision making structure and allowing people to participate in discussions about topics to which they would otherwise not have been able to contribute, safe in the knowledge that there was political support for this approach.	Y		
Encourage politicians to lead the process by providing support for a vision which the project can work towards	Y	Y	Y
Deliver programmes that combine complementary measures in order to deliver the maximum benefit within a single project structure. (The technical and behavioural elements of CATCH illustrate this perfectly.)	Y	Y	Y
Review government funding rules to allow the necessary flexibility to provide the optimum package of measures for a particular situation rather than restricting certain streams to certain types of measure.		Y	
In order to remove problems associated with short term changes in the level of funding and technical focus of transport provision it has becoming much more common to produce		Y	

long term funding plans for transport. Formalising the link between Air Quality Action Plans and Local Transport Plans in the UK is seen as a very positive step to providing the same level of certainty for a related policy area.			
There is a need to develop a formal industry standard for the presentation of comparative emissions results for different types of vehicle demonstrating different clean fuel or drivetrain technologies rather than relying on de facto standards which are not universally recognised as representative.		Y	Y
The European State Aid rules themselves need to be reviewed urgently and modified so that they do not prevent the implementation of future technologies which will significantly improve the quality of life in European cities or have a positive impact on reducing climate change.			Y
Investigate alternative frameworks for public transport integration such as re-regulation or the provision of quality bus contracts that would enable passenger transport authorities to specify a minimum environmental standard for particular areas / routes and so ensure that environmental considerations are integrated into the standard service provision.	Y	Y	

Dissemination

The dissemination of CATCH has been extremely successful. The formal targets set for dissemination of CATCH were:

- Production of one journal article or conference paper during each year of the project, excluding the final CATCH conference.
- Building a database of 1000 contacts by time of the final conference (July 2005)

We have met and indeed surpassed all the dissemination targets set at the start of the project, produced high quality dissemination materials which have been commended by the LIFE programme monitoring team during the course of the project and ran an end of project conference which was praised by some delegates as the best that they had ever attended. In total CATCH partners and subcontractors gave 5 conference presentations, produced two conference papers presented CATCH at 2 conference poster sessions and produced several other national and international news releases of different forms. By the end of the project the database contained just over 1200 sets of contact details.

In terms of transferability and dissemination Suceava has been an integral part of the project in its role as a follower, and has done an excellent job of testing the measures it considered most appropriate to its local circumstances but also in disseminating this message further in its regional sphere of influence.

The project results, as contained in the final project reports, will remain available for download on the CATCH project website www.cleanaccessibletransport.com until August 2008.

Legacy

The CATCH project will have a significant legacy. In particular:

- The technology implemented within the project has a significant life expectancy. Particulate traps (Liverpool and Suceava) and EGR systems (Liverpool) are expected to last a minimum of five years. New vehicles (buses in Liverpool and LPG cars in Suceava) are expected to last a minimum of fifteen and ten years respectively.
- The CATCH city centre shuttle service is being operated on a five-year contract and it is hoped that at the end of that period it will have demonstrated that it can operate on commercial basis. (If not it will be up to Merseytravel to decide if it wishes to retain the service as a one of its supported services, which seems likely at this stage.)
- The investment in retrofit technologies has already led Merseytravel to commission a further review of future bus pollution reduction options as part of their future public transport strategy development.
- Liverpool's AQAP which is well respected within the UK and which will be backed up by a package of resources to see it implemented effectively.
- City centre infrastructure in Liverpool (cycling and walking support infrastructure) and Suceava (permanent, pedestrianised low emission zone)
- Support for further adult cycle training programmes in Liverpool building on the pilot initiated in CATCH.
- The development of the ECOtravel bureau through partnership working has led to the bureau co-ordinator's position being made permanent and having an expanded remit for work across the whole of Merseyside. The Suceava information point in the city hall will also remain open after the formal end of the project.
- The Supplementary Planning Document and developers protocol will be adopted and when combined with new working practices and co-operation between transport and land use planners will mean that there will be greater control of future city centre residential developments in Liverpool.
- Plans are being formed for individualised marketing campaigns building on the work of and lessons from the healthy travel promotion project in Liverpool
- Efforts are being made to discuss the innovative particulate monitoring technology to understand the steps that will be necessary for it to become approved as a tool for monitoring air quality to statutory air quality standards