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PROBLEMS OF CREATING SUSTAINABLE URBAN TRANSPORT SYSTEMS IN EUROPEAN AND ASIAN CITIES

Abstract: Due to the increasing level of external costs of transport, especially noticeable in urban areas characterised by high population density and countless number of socio-economic processes, there is a great need for creating sustainable urban transport systems in cities all over the world. European and Asian cities, despite differences between them, have in common that they are facing large intensity of road transport externalities and have to develop various solutions to make transport systems sustainable. In this paper some examples of external costs of transport in European and Asian cities are presented, and some basic levels of cooperation between different administrative units and institutions connected with creating sustainable urban transport systems in Europe and Asia are outlined.

Key words: sustainable transport, urban transport, transport systems, positive external effects of transport, external costs of transport, European and Asian cities.

1. Introduction

An efficient and effective transport system is an important factor in social and economic growth and development at the local, regional, national and global scale. It creates a wide range of positive external effects[1] in social and economic life. Transport enables spatial distribution of economic activity, stimulates mobility of factors of production and division of labour while also increasing the potential output in an economy.[2] However, contemporary development of passenger and freight transport, which is predominantly based on road transportation, leads to increase in external transport costs. Phenomena like congestion, emission of greenhouse

[1] External effects can be described as "[positive or negative] effects of economic activity of producers, including transport companies, which have an impact on the other society members in an intended or unintended way", T. Szczepaniak (ed.), *Transport i spedycja w handlu zagranicznym*, PWE, Warszawa 2002, p. 82. In reality, external costs of transport are caused by every transport user, including transport companies and individual transport users, M. Paradowska, *Unijne metody internalizacji kosztów zewnętrznych transportu a sytuacja w Polsce*, Zeszyty Naukowe "Logistyka i Transport" MWSLiT, 2006, nr 1 (2), p. 44.

[2] J. Platje, *Institutional Change in the Polish Economy Since the 1970s – incentives and transaction cost*, Oficyna Wydawnicza "Nasz Dom i Ogród", Wrocław 2004, p. 44.

gases, air and water pollution, accidents or noise are the most common categories of external transport costs, negatively influencing the quality of life as well as human health and economic performance. A large intensity of transport external costs can be found in areas which are characterised by high population density and, which is connected, countless number of socio-economic processes, namely in cities and large agglomerations. These issues are complicated because of two reasons. First of all, each city is specific as it arose and has developed in different circumstances and conditions. This in turn has influenced the shape and characteristics of urban transport systems as well as their functioning. Furthermore, many cultural and mental differences between cities all over the world can be observed. In this paper some examples of external costs of transport in European and Asian cities are presented, and some basic levels of cooperation between different administrative units and institutions connected with creating sustainable urban transport systems in Europe and Asia are outlined.

2. The concept and idea of sustainable transport

The increasing level of external costs of transport forces municipalities on every continent to find and implement solutions aimed at making urban transport systems sustainable. Since the publication in 1987 of the so-called Brundtland Commission Report,[3] many definitions of sustainable transport, including sustainable urban transport, have been developed and presented, strengthening the emphasis on diverse elements of these concepts. Putting it simply, sustainable transport's main objective is to achieve a balance between social, economic and environmental priorities. Such depiction of sustainable transport is broader than the definition presented in the EST initiative[4], defining environmentally sustainable transport "as one where: transport does not endanger public health or ecosystems and meets needs for access consistent with (a) use of renewable resources below their rates of regeneration, and (b) use of non-renewable resources below the rates of development of renewable substitutes."[5] A broader approach was presented by the European Commission special Expert Group on Transport and Environment. According to this definition, environmentally sustainable transport: "[i] allows the basic access

[3] *Our Common Future*, Report of the World Commission on Environment and Development, United Nations, 11 December 1987, http://www.un.org/documents/ga/res/42/ares42-187.htm (accessed 4.05.2008).

[4] The EST! (*Environmentally Sustainable Transport*) Project was initiated in 1994 within the OECD. Two main aims of this project was to give a precise definition of sustainable transport as well as to work out some guidelines helpful in the process of achieving sustainable transport (see, e.g., *The EST Project*, OECD. http://esteast.unep.ch/default.asp?community=est-east&page_id=8701F9E5-1FF6-4242-A1E3-0A61FFB82BFF (accessed 4.05.2010).

[5] *EST! Environmentally Sustainable Transport. Future, Strategies and Best Practices*, Synthesis Report of the OECD project on Environmentally Sustainable Transport EST presented on occasion of the International *EST!* Conference 4th to 6th October 2000 in Vienna, Austria, p. 35.

and development needs of individuals, companies and societies to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations; [ii] is affordable, operates fairly and efficiently, offers choice of transport mode, and supports a competitive economy, as well as balanced regional development; [iii] limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes while minimising the impact on the use of land and the generation of noise"[6]. Although there exist various kinds of definitions, in general sustainable transport's main assumption is to maintain socio-economic development without deterioration of the environment. This means first of all changes in present-day trends of the functioning of transport systems, in particular in urban areas which are often called driving forces of socio-economic development. Private cars are the most important source of external transport costs, especially in cities because of the intensity of transport needs and countless number of journeys. The unsustainable nature of contemporary urban transport systems expressed by external costs is one of the factors hampering the pace of socio-economic development. This can be observed both in European and Asian towns and cities.

3. Unsustainable development of transport in European and Asian urban areas

About 80% of European citizens live in urban areas,[7] while creating 85% of the EU's GDP. On the one hand transport enables a dynamic pace of development and urbanisation. On the other hand it is responsible for many negative effects visible in different dimensions. According to the EEA (European Environment Agency) this sector accounts for around a third of all final energy consumption in Europe and over a fifth of greenhouse gas emissions.[8] Each day over 7500 km of European motorways are blocked due to congestion, while the average car speed in the European biggest cities is around 20 kph.[9] Congestion on roads and in airports contributes to the increase in energy use of 6% as well as an increase in air pollution.[10] Nowadays, circa 20-30%

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[6] *Defining an Environmentally Sustainable Transport System*, Commission Expert Group on Transport and Environment, European Commission, 2000, p. 5. This definition is based on the definition of sustainable transport developed in 1997 by the Toronto-based Centre for Sustainable Transportation (author's annotation).

[7] Over 60% of the population lives in urban areas with over 10 000 inhabitants, *Green paper: Towards a New Culture for Urban Mobility*, Brussels 2007, COM (2007) 551 final, p. 3.

[8] *Transport and the Environment*, EEA, http://www.eea.europa.eu/themes/transport/about-transport (accessed 4.05.2010).

[9] P. Olson, K. Nolan, *Europe's Most Congested Cities*, http://www.forbes.com/2008/04/21/europe-commute-congestion-forbeslife-cx_po_0421congestion.html (accessed 4.05.2010).

[10] *Europe at a Crossroads. The Need for Sustainable Transport*, European Commission, DG for Press and Communication, Brussels 2003, p. 4.

of people living in European cities is exposed to pollutant concentrations exceeding selected limits or target values.[11] Joint research of WHO (World Health Organisation) and the EU shows that each year 400,000 of people die prematurely and 100,000 have to be hospitalised because of air pollution.[12] These numbers are much bigger than statistics referring to road accidents – in 2007 almost 42,500 people died on the European roads, around a third of them in European cities.[13]

Problems connected with directing the development of urban transport systems into a more sustainable direction, consistent with the assumptions of sustainable transportation as a kind of ideal, exist also in numerous Asian cities. Many of them, particularly Asian metropolises, are facing a high level of external transport costs, like congestion, air pollution, especially PM emission, noise or CO_2 emission. For example, according to forecasts, during the next 15 years the CO_2 emission in tons *per capita* for land transport will increase from 0-0.2 to 0.5-1 in such countries like Vietnam or India, from 0.2-0.5 to 0.5-1 in Indonesia and Philippines and from 0.2-0.5 to 1-2 in countries like China or Thailand. Different forecasts were presented in reference to PM emissions *per capita* – this indicator should decline in all mentioned countries, which is, *inter alia*, connected with the development of technology.[14] As in Europe, also in Asia the transport sector is the fastest growing source of CO_2 emissions. Global transport-related emissions are rising by 2.5% per year, and in South Asia even by 4.4%.[15]

However, the increasing levels of external transport costs in European and Asian urban areas have different backgrounds resulting from differences between cities on both continents. First of all, one of the distinctive features of Asian countries is the rapid process of urbanisation (see Figure 1) which is expected to continue during the next forty years. In the 1960s, among the ten cities with the largest population all over the world there were three Asian cities and three cities from member states of the European Community. In 2000 there was no metropolis in this ranking from the EU, but six from Asia.[16] While in Europe in the biggest metropolises the population density varies from about 3300 (Paris, France), 5100 (London, The United Kingdoms) to 5400 persons per square kilometre (Madrid, Spain and Athens,

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[11] *Air Pollution in Europe 1990–2004*, EEA Report No 2/2007, p. 7.

[12] Time to clear the air, *Environment for Europeans*, Magazine of the DG for the Environment, http://ec.europa.eu/environment/news/efe/20/article_2434_en.htm (accessed 4.05.2010).

[13] *Energy & Transport in Figures 2009*, European Commission, DG TREN, Luxemburg 2009, p. 173.

[14] S. Punte, B. Fabian, *Sustainable Urban Mobility in Asia (SUMA). Program and EST Linkages*, Clean Air Initiative for Asian Cities Center, CAI-Asia Center, Seoul 2009, http://www.uncrd.or.jp/env/4th-regional-est-forum/Presentations/25_PS3_CAI-Asia.pdf (accessed 5.05.2010).

[15] B. Fabian, *Financing Urban Transportation in Asia: Importance of Carbon Financing in Achieving SUT and AQM*, 3rd UNCRD Regional EST Forum in Asia, Singapore 2008, http://www.uncrd.or.jp/env/3rd-regional-est-forum/doc/37_Climate%20Change-CAI-Asia.pdf (accessed 6.05.2010).

[16] M. Smętkowski, B. Jałowiecki, G. Gorzelak, *Diagnoza problemów rozwoju obszarów metropolitalnych i rekomendacja delimitacji obszarów metropolitalnych w Polsce*, Centrum Europejskich Studiów Regionalnych i Lokalnych (EUROREG), Uniwersytet Warszawski, Warszawa 2008, p. 4.

Greece), in Asia the density is much higher. The number of inhabitants per square kilometre is around 25,000 (Mumbai, India and Hong Kong, China) or even 40,100 (Dhaka, Bangladesh)[17].

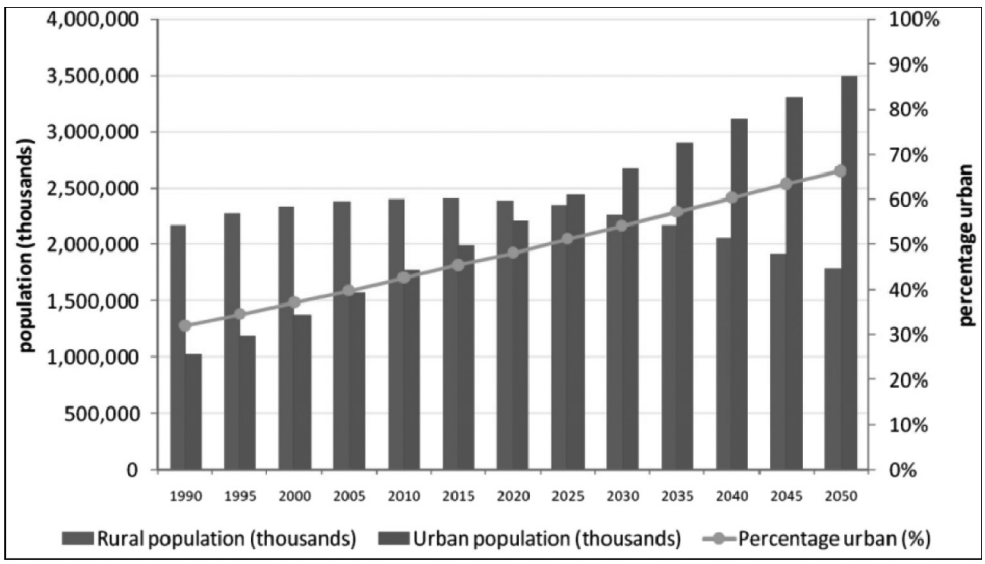

Figure 1. Rapid urbanisation in Asia

Source: S. Punte, *Air Quality and Climate Change in Asia*, Clean Air Initiative for Asian Cities Center, CAI-Asia Center, Bangkok 2008, http://www.baq2008.org/system/files/p1_Punte+presentation.pdf (accessed 7.05.2010).

Generalising, these data show a basic difference between developed (European) and developing – or another called: raising (Asian) – economies. While in Europe the car share of inland passenger transport accounts for circa 83.5% and raised slightly during the last 10 years by about 0.5%,[18] in Asia socio-economic development accompanied by the increase in incomes among some social groups is reflected by rapid growth of transport demand which in turn has resulted in increasing level of individual motorisation. In the European Union the number of private cars decreased slightly from 469 per 1000 inhabitants in 2004 to 464 in 2009.[19] In Japan it increased

[17] *Demographia World Urban Areas & Population Projections*, 6th Annual Edition March 2010, http://www.demographia.com/db-worldua.pdf (accessed 6.05.2010).

[18] *Car Share of Inland Passenger Transport*, Eurostat data, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsien090&plugin=1, (accessed 7.05.2010).

[19] The slight decrease in motorisation was an effect of enlargement in 2004 and 2007. In new member states road transport and individual motorisation were not so developed as in old ones, but this is changing – number of vehicles is also growing, but not so rapidly as in many Asian cities (author's annotation).

from 530 to 539 during the same period, in Russia – from 161 to 188 and in China – from 13 to 29 an (increase of over 100%).[20] However, the modal split in Asian cities is still in favour of public transport and non-motorised transport (in some urban areas they account for 70% of passenger transport) (see Figure 2). Dynamic motorisation growth is also responsible for the increasing level of use of non-renewable resources in the context of growing energy demand and worries about future supply in the world. Figure 3 presents energy consumption and vehicle growth in Asia in 1990--2035.

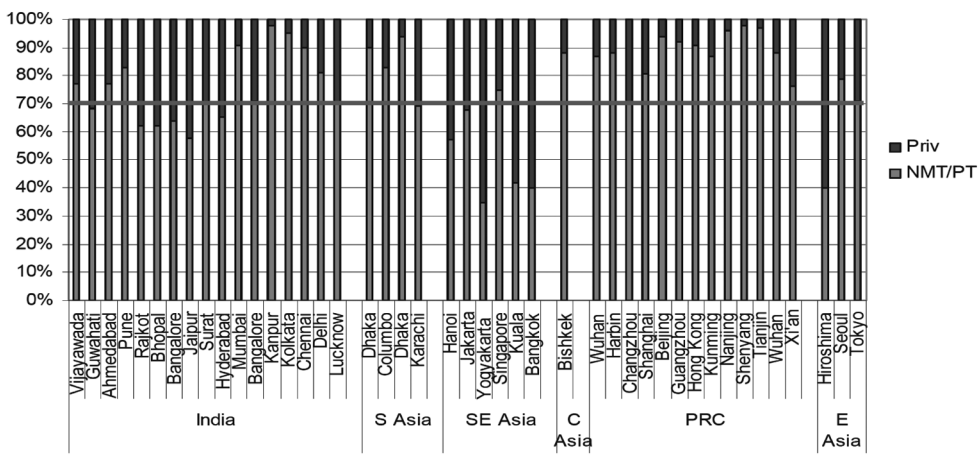

Figure 2. Modal split in Asian cities

Source: T. Chatterton, *Managing Transport Impacts in Asian Mega-Cities*, Air Quality Management Resource Centre, Tunis 2008, http://new.unep.org/pcfv/PDF/Tunis-IUAPPA-ManagingTransportAsianMegaCities.pdf (accessed 7.05.2010).

The way in which transport systems can be made more sustainable is influenced by differences in economic growth and development, the pace of personal income growth, stratification, pace of urbanisation,[21] population density, motorisation growth, etc. Although the general objective remains the same – to ensure an effective, safe and environmentally-sound transport system, in the operational sphere there are a lot of differences resulting from the level of socio-economic development. For example, in West Europe restrictions for cars are accompanied most often by well developed,

[20] *Energy & Transport in figures*. Statistical pocketbooks *2006* and *2009*, DG TREN, European Commission 2006 and 2009, http://ec.europa.eu/transport/publications/statistics/doc/2009_energy_transport_figures.pdf (accessed 7.05.2010).

[21] In general, major phenomenon in Europe is suburbanisation, where people with high incomes are moving from cities to suburbs and non-urbanised areas. In Asia there is a process of rapid immigration of workers, who are moving to urban areas in order to earn more money (author's annotation).

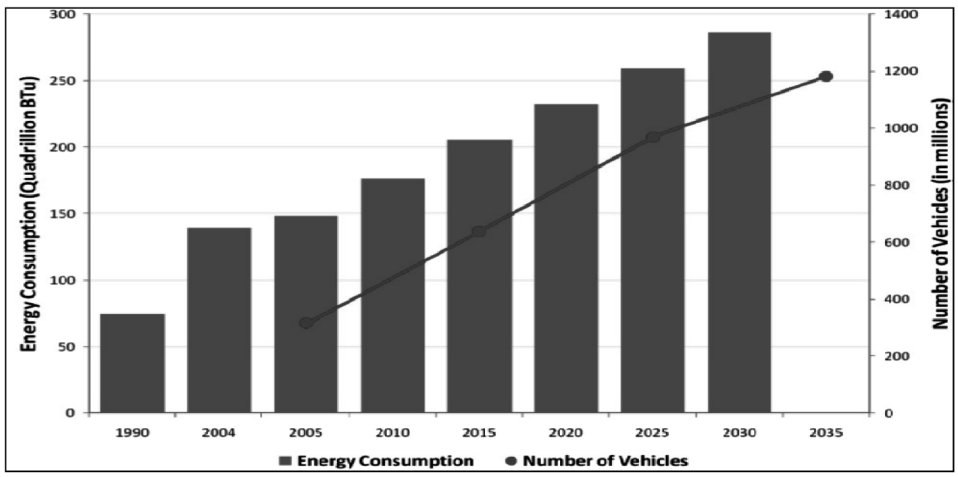

Figure 3. Total energy consumption and motorisation growth in Asia

Source: T. Chatterton, *op. cit*.

attractive public transport. In Asia there is also a great need for reducing volume of individual motorisation in the biggest mega-cities like Hong Kong, Mumbai or Singapore, even despite the favourable modal split, which is connected with incredibly high population density and limited space for transport. However, public transport does not meet the needs resulting from dynamically growing passenger transport demand. People travelling by foot or non-motorised vehicles, which are ecological and desirable from the point of view of sustainability, are often discriminated against private cars and become victims of road accidents. In China, the majority of urban households is non-motorised and their transport needs to receive little attention of municipalities. Forecasts regarding the urbanisation in the next few years underline the need of well-organised public transport, but local authorities have most often insufficient funds.[22] Together with other problems like lack of obedience of rules for road traffic, chaos and poor management of urban transport systems, this creates very "unsustainable" picture of urban transport in Asia.[23]

[22] This is why there is a BRT (*Bus Rapid Transit*) proposed as the best solution for public transport for Asian mega-cities, though solutions based on rail transportation or metro would be "more sustainable". However, their main disadvantage is the high costs of building, operation and maintenance.

[23] See e.g.: *China: Building Institutions for Sustainable Urban Transport*, EASTR Working Paper No. 4, The World Bank, Transport Sector Unit, Infrastructure Department, 2006, pp. 2-6.

4. Directions and levels of cooperation towards sustainable urban transport systems in Europe and Asia

Based on the discussion above, some important observations can be made. Firstly, the European Union seems to be more experienced in creating and implementing tools of sustainable transportation in urban areas as it is represented mostly by developed countries with established and moderately increasing (at least in comparison to Asia) share of road transport in total freight and passenger transportation. Secondly, creating sustainable urban transport in Asian cities seems to be much harder, much more expensive and requires much more activities, which is, *inter alia*, connected with underdevelopment of urban transport systems in most Asian metropolises. Together with other factors, like different population density, mental and cultural differences between both continents, etc., it may be argued that Europe and Asia need to find and implement different solutions for sustainable transport systems. Although there is merit in this statement, problems referring to creating sustainable urban transport systems seem to be much more complicated, which can be observed when looking at particular levels of activities aimed at sustainable urban transportation. Both in Asia and in Europe problems of sustainable urban mobility are subject to discussion and actions at a local, regional, international and global levels.

According to the subsidiarity principle of the EU, activities connected with implementing sustainable urban transport should be taken at local level which is the closest to the problem and the citizens, because at this level access to information and knowledge about specific conditions of the area is the largest. Also in Asian cities, issues connected with sustainable urban transport systems are objectives of local policy, especially in the face of increasing problems resulting from growing number of vehicles or growing demand for passenger transport. As municipalities are often not able to manage these tasks, cooperation is undertaken at the national and especially international level. A good example seems to be the European Union with developed and continuously improving regulations, funding and initiatives aimed at helping and stimulating local and regional authorities to find and implement sustainable solutions for urban transport. Within Asian integration groups like the ASEAN (Association of Southeast Asian Nations) or the APEC (Asia-Pacific Economic Cooperation) problems of sustainable urban transportation do not receive high priority. As a consequence, European solutions and best practice may be interesting for Asian cities. However, the process of benchmarking between Asian and European cities or learning about existing solutions is focused more on issues like indicators for sustainable urban transportation or implementation of technological innovations than on direct adaptation of European solutions. The main reasons for this are processes described above, such as rapid urbanisation or high population density in Asian cities and differences between urban transport systems on both continents. This does not mean that European best practice is not suitable for Asian cities at all. Moreover, dynamically growing level of road transport in Asian

mega-cities makes it necessary to develop new tools and solutions very quickly. This is why there are some instruments invented in Asia and now widely implemented in Europe, like road pricing (for the first time adapted in Singapore). Thus, international cooperation between the two continents can lead to creation of new and effective solutions for both – European and Asian cities. Although Asian integration groups do not work so intensively on sustainable urban transport like the EU, there are many initiatives, programmes and projects undertaken at the international and global level together with the OECD, the World Bank, ecological organisations and organisations in the field of sustainable urban transportation. Within this approach also cooperation with Europe is broadened.[24] Cities from both continents can gain and learn from each other.

5. Conclusions

This paper provided an outline of some problems and challenges connected with creating sustainable urban transport systems in Asian and European cities. The increasing level of transport externalities resulting from growing share of road transport in urban transportation is becoming a global problem and requires many kinds of tools and solutions aimed at achieving sustainable urban mobility. Thanks to the cooperation undertaken and developed in this field, even despite the distinctions between the both continents, European and Asian urban areas can learn from each other and help each other, gaining partnership and rational results. But also in this case, besides cooperation, there are some examples of rivalry, especially visible in the sphere of technological development of new, clean, quiet and energy-efficient city-cars. The biggest motorisation companies in the world are competing with each other in order to dominate raising motorisation markets in dynamically growing Asian economies. It seems that even the favourable modal split cannot protect Asian mega-cities from problems connected with overdevelopment of individual motorisation.

References

Air Pollution in Europe 1990–2004, EEA Report No 2/2007.

Car share of Inland Passenger Transport, Eurostat data, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsien090&plugin=1.

[24] Partnership between the ASEAN and Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH can be an example. GTZ supports the ASEAN's Regional Environmentally Sustainable Cities Programme (RESCP), *inter alia*, in the creation of sustainable solutions for urban transport, see, e.g., *Environmentally Sustainable Cities in ASEAN*, http://www.aseansec.org/network_activities.htm (accessed 9.05.2010). Another example can be the Clean Air Initiative for Asian Cities which developed Partnership for Sustainable Urban Transport in Asia (PSUTA) in 2004 and Sustainable Urban Mobility in Asia (SUMA) Program as a follow-up in 2006, see, e.g., *Partnership for Sustainable Urban Transport in Asia (PSUTA)*, CAI-Asia, http://www.cleanairnet.org/caiasia/1412/article-58616.html (accessed 9.05.2010).

Chatterton T., *Managing Transport Impacts in Asian Mega-Cities*, Air Quality Management Resource Centre, Tunis 2008, http://new.unep.org/pcfv/PDF/Tunis-IUAPPA-ManagingTransportAsianMegaCities.pdf.

China: Building Institutions for Sustainable Urban Transport, EASTR Working Paper No. 4, The World Bank, Transport Sector Unit, Infrastructure Department, 2006.

Defining an Environmentally Sustainable Transport System, Commission Expert Group on Transport and Environment, European Commission, 2000.

Demographia World Urban Areas & Population Projections, 6th Annual Edition March 2010, http://www.demographia.com/db-worldua.pdf.

Energy & Transport in Figures, Statistical pocketbooks *2006* and *2009*, DG TREN, European Commission 2006 and 2009, http://ec.europa.eu/transport/publications/statistics/doc/2009_energy_transport_figures.pdf.

Environmentally Sustainable Cities in ASEAN, http://www.aseansec.org/network_activities.htm.

EST! Environmentally Sustainable Transport. Future, Strategies and Best Practices, Synthesis Report of the OECD project on Environmentally Sustainable Transport EST presented on occasion of the International *EST!* Conference 4th to 6th October 2000 in Vienna, Austria.

Europe at a Crossroads. The Need for Sustainable Transport, European Commission, DG for Press and Communication, Brussels 2003.

Fabian B., *Financing Urban Transportation in Asia: Importance of Carbon Financing in Achieving SUT and AQM*, 3rd UNCRD Regional EST Forum in Asia, Singapore 2008, http://www.uncrd.or.jp/env/3rd-regional-est-forum/doc/37_Climate%20Change-CAI-Asia.pdf.

Green paper: Towards a New Culture for Urban Mobility, Brussels 2007, COM (2007) 551 final.

Olson P., Nolan K., *Europe's Most Congested Cities*, http://www.forbes.com/2008/04/21/europe-commute-congestion-forbeslife-cx_po_0421congestion.html.

Our Common Future, Report of the World Commission on Environment and Development, United Nations, 11 December 1987, http://www.un.org/documents/ga/res/42/ares42-187.htm.

Paradowska M., *Unijne metody internalizacji kosztów zewnętrznych transportu a sytuacja w Polsce*, Zeszyty Naukowe "Logistyka i Transport" MWSLiT 2006, nr 1 (2).

Partnership for Sustainable Urban Transport in Asia (PSUTA), CAI-Asia, http://www.cleanairnet.org/caiasia/1412/article-58616.html.

Platje J., *Institutional Change in the Polish Economy Since the 1970s – incentives and transaction cost*, Oficyna Wydawnicza "Nasz Dom i Ogród", Wrocław 2004.

Punte S., *Air Quality and Climate Change in Asia*, Clean Air Initiative for Asian Cities Center, CAI-Asia Center, Bangkok 2008, http://www.baq2008.org/system/files/p1_Punte+presentation.pdf.

Punte S., Fabian B., *Sustainable Urban Mobility in Asia (SUMA). Program and EST Linkages*, Clean Air Initiative for Asian Cities Center, CAI-Asia Center, Seoul 2009, http://www.uncrd.or.jp/env/4th-regional-est-forum/Presentations/25_PS3_CAI-Asia.pdf.

Smętkowski M., Jałowiecki B., Gorzelak G., *Diagnoza problemów rozwoju obszarów metropolitalnych i rekomendacja delimitacji obszarów metropolitalnych w Polsce*, Centrum Europejskich Studiów Regionalnych i Lokalnych (EUROREG), Uniwersytet Warszawski, Warszawa 2008.

Szczepaniak T. (ed.), *Transport i spedycja w handlu zagranicznym*, PWE, Warszawa 2002.

The EST Project, OECD, http://esteast.unep.ch/default.asp?community=est-east&page_id=8701F9E5-1FF6-4242-A1E3-0A61FFB82BFF.

Time to clear the air, *Environment for Europeans*, Magazine of the Directorate-General for the Environment, http://ec.europa.eu/environment/news/efe/20/article_2434_en.htm.

Transport and the Environment, EEA, http://www.eea.europa.eu/themes/transport/about-transport.

PROBLEMY TWORZENIA ZRÓWNOWAŻONYCH SYSTEMÓW TRANSPORTU MIEJSKIEGO W MIASTACH EUROPY I AZJI

Streszczenie: Rosnący poziom negatywnych efektów zewnętrznych transportu, szczególnie widoczny i odczuwalny na terenach zurbanizowanych, które cechują wysoka gęstość zaludnienia oraz ogromna liczba procesów społeczno-gospodarczych, wymaga podjęcia działań ukierunkowanych na stworzenie zrównoważonych systemów transportowych w miastach na całym świecie. Miasta europejskie oraz azjatyckie, pomijając występujące pomiędzy nimi różnice, zmagają się z ogromnym natężeniem kosztów zewnętrznych transportu drogowego i muszą opracowywać innowacyjne rozwiązania służące zrównoważeniu sektora transportu. Niniejszy artykuł zawiera przykłady kosztów zewnętrznych występujących w miastach Europy i Azji, a także zarysowuje podstawowe płaszczyzny współpracy, której celem jest przyczynienie się do zrównoważenia miejskich systemów transportowych w Azji i Europie.