BALTIC SEA ENVIRONMENT PROCEEDINGS

No. 79

TRANSPORT SECTOR INVESTMENT DECISION-MAKING IN THE BALTIC SEA REGION

HELSINKI COMMISSION
Baltic Marine Environment Protection Commission

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Transport Sector Investment Decision-Making in the Baltic Sea Region

by

THE INSTITUTE FOR TRANSPORTATION AND DEVELOPMENT POLICY

for the

HELSINKI COMMISSION
PROGRAMME IMPLEMENTATION TASK FORCE (HELCOM PITF)

and

BALTIC 21
(An Agenda for the Baltic Sea Region)

Authors:

Dr. Walter Hook,
Executive Director, ITDP

Deike Peters, MSUP, MIA
Director of Environmental Programs, ITDP

Magdalena Stoczkeiwicz,
Polish Ecological Club,
CEE Bankwatch Network

Dr. Wojciech Suchorzewski,
Professor, Warsaw University of Technology

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Institute for Transportation & Development Policy **www.itdp.org**
115 W. 30th St., Suite 1205 • New York, NY 10001 USA tel 212/629-8001 • fax 212/629-8033 • mobility@igc.org

Report Cover Sheet

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16.	**Abstract** The project reviews trends in transport infrastructure investments in the Baltic Sea region. It investigates the decision-making process at the international financial institutions and by national governments which led to these trends and makes suggestions as to how this process could be better integrated with environmental goals aimed at the protection of the Baltic Sea. For international lending, the project compares policies and procedures at the World Bank, the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Nordic Investment Bank (NIB), and at the EU (especially the EU PHARE Programme and the new ISPA funds). For national-level decision-making, case studies were prepared for Poland and Latvia. Transport investments, particularly in Central and Eastern Europe, have been insufficiently focused on environmentally sustainable modes such as (commuter) rail and public transit. The prioritisation of funding for international corridors is likely to further divert resources away from necessary investment into maintenance and local and national-level infrastructures.		
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16.	**Kurzfassung** Dieses Projekt untersucht Verkehsinfrastrukturtrends im Ostseeraum. Es erforscht die verkehrsbezogenen Entscheidungverfahren für Investitionen der internationalen Finanzinstitutionen (IFIs) und der nationalen Regierungen im Ostseeraum, die zu diesen Trends geführt haben, und macht Vorschläge, wie diese Verfahren besser mit Umweltzielen vereinbart werden können, die auf den Schutz der Ostsee abzielen. Die Weltbank, die Europäische Bank für Wiederaufbau und Entwicklung (EBRD), die Europäische Investitionsbank (EIB), die Nordische Entwicklungsbank (NIB), und die EU (besonders das EU PHARE Programm und der neue ISPA Fonds) werden bezüglich ihrer Verkehrspolitik und Kreditvergabekriterien verglichen. Für Entscheidungsverfahren auf nationaler Ebene wurden Polen und Lettland als Fallbeispiele untersucht. Verkehrsinvestitionen sind besonders in Ostmittleeuropa in unbefriedigendem Masse umweltgerechten Verkehrsmitteln wie (Regional- und S-Bahnen) oder ÖPNV zugute gekommen. Die Favorisierung von Krediten für internationale Korridore wird wahrscheinlich Geldmittel für notwendige Wartungsarbeiten und Investitionen auf nationaler und lokaler Ebene noch weniger verfügbar machen.		
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Table of Graphs and Figures

(All graphs are for the period 1992-1998, unless otherwise noted)

Glossary of Abbreviations and Terms Used

ACEA	Associacion des Constructeurs Europeens d'Automobile (Association of European Car Manufacturers)
AGC	UNECE Agreement on rail transport networks
AGCT	UNECE Agreement on combined transport
AGR	UNECE Agreement on road transport networks
BAT	Best Available Technology
BKV	Budapest Public Transit Authority
BOD	Board of Directors
BOT	Built-Operate-Transfer (Private Concession Road Building Scheme)
CAS	Country Assisstance Strategy
CD	Council Directive (European Union)
CEE	Central Eastern European
CFC	Chlorofluorocarbons
CIS	Commonwealth of Independent States
CO	Carbon monoxide
CO_2	Carbon dioxide
COM	Commission of the European Communities (European Union)
COP	Country Operational
Crete Corridor	Trans-European Network corridor designated at the Pan-European Transport Conference in Crete
DG2	European Commission Directorate General for Economic and Financial Affairs
DG7	European Commission Directorate General for Transport
DG11	European Commission Directorate General for the Environment
DG16	European Commission Directorate General for Regional Policy and Cohesion
DTS	Acronym for a Polish Highway between Katowice and Gliwice
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECMT	European Conference of Ministers of Transport
ECU	European Currency Unit (replaced by the euro in 1999)
EIA	Environmental Impact Assessment
EIB	European Investment Bank
Emme/2	Transportation Modelling Programme
ERI	European Round Table of Industrialists
ERR	Economic Rate of Return
FRR	Financial Rate of Return
G24	Group of 24 (countries)
GDP	Gross Domestic Product
GIS	Geographic Information Systems
gmina (polish)	Polish district level government
GNP	Gross National Product
HDM III, IV	Highway Design and Maintenance Model (World Bank), Versions 3 & 4
IBRD	International Bank for Reconstruction and Development (i.e. World Bank)
IFC	International Finance Corporation (part of the World Bank Group)
IFI	International Financial Institution
IMF	International Monetary Fund
INRETS	French Transport Research Institute
IRR	Internal Rate of Return
IRU	International Road Transport Union
ISPA	The EU Pre-Accession Facility for Applicant Member States
IWW	Institut für Wirtschaftspolitik und Wirtschaftsforschung, Uni Karlsruhe (Institute for Economic Policy and Research, University of Karlsruhe, Germany)
JICA	Japanese International Cooperation Agency

LRA	Latvian Road Administration
LRT	Light Rail Transit
LSRD	Latvian Road Safety Directorate
MAV	Hungarian National Railroad
MECU	Millions of ecu
MENRF	Ministry of Environmental Protection, Natural Resources, and Forestry (Poland)
MEPRD	Ministry of Environmental Protection and Regional Development (Latvia)
MOF	Ministry of Finance
MOT	Ministry of Transport
NEA	Dutch Consulting Company
NEFCO	Nordic Environmental Finance Corporation
NGO	Non-Governmental Institution
NIB	Nordic Investment Bank
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
NPAA	National Programme for the Adoption of the Acquis (Poland)
O&D studies	Origin - Destination Studies (used in transport modelling)
OD	Operational Directives (World Bank)
OECD	Organization for Economic Cooperation and Development
OP	Operational Policies (World Bank)
PHARE	EU Grant Assistance Program for Central and Eastern Europe
PKP	Polish Railway Agency
PM	Particulate matter
SAS	Staff Appraisal Report (public World Bank project documents)
SEA/SEIA	Strategic Environmental Impact Assessment
SECAP	Secretariat European des Concessionaires d'Autoroutes de Peage (European Secretariat of Toll Road Concessioners)
SO_2	Sulphur dioxide
TEN	Trans-European Networks
TEN-T	Trans-European Transport Networks
TERN	Trans-European Road Network
TINA	Transport Infrastructure Needs Assessment
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
US EPA	US Environmental Protection Agency
VASAB	Vision and Strategies in the Baltic Sea Region (Spatial Planning Initiative)
VAT	Value Added Tax
voivodship (polish)	Polish province level government
WHO	World Health Organisation
zl	Zloty (Polish currency)

Transport Sector Investment Decision-Making in the Baltic Sea Region

Executive Summary

Current transport infrastructure investment decision-making by both national governments and International Financial Institutions (IFIs) in the Baltic Sea region remains poorly integrated with environmental goals such as those aimed at protecting the Baltic Sea. This document reviews the transportation investment decision-making process at the IFIs and by national governments, and makes suggestions as to how this process can better integrate environmental protection goals.

TASK I: Review of the Existing Infrastructure Decision-Making Process at the IFIs in the Baltic Sea Region

Overview of IFI Lending in the Baltic Area

The major International Financial Institutions (IFIs) and funding agencies currently involved in the financing of transportation infrastructure in the Baltic Sea Countries include: the European Investment Bank (EIB), the World Bank, the European Bank for Reconstruction and Development (EBRD), the Nordic Investment Bank (NIB), the Japanese Export-Import Bank, and the PHARE program of the European Community. A new funding mechanism, ISPA, the Pre-Accession facility of the European Community, will also be set up by the year 2000, replacing PHARE in the countries of Central and Eastern Europe which are planning to join the European Union.

In terms of the scale of their lending, the EIB is by far the most important of the IFIs, accounting for 92% of all IFI transport sector lending in the Baltic countries. Differences between the IFIs relfect, to a certain extent, the geo-political concerns of the countries which dominate them. The vast majority of total lending is targeted to the Northern and Western Baltic countries. Sweden and Denmark together account for over 50% of total IFI transport sector lending.

Total IFI transport loans to the Baltic Region as a whole have been reasonably equitably distributed between modes. In the CEE Baltic Countries, however, IFI lending has been disproportionately targeted to the road sector. Grant funds from the PHARE program have also disproportionately benefited the road sector. Overall, financial support for new roads, road rehabilitation and bypass roads has been forthcoming, particularly on international corridors but also on national highways. In the rail sector, however, although some track rehabilitation has been done on international corridors and some rail operation modernisation has been financed, an enormous backlog in unmet maintenance and rehabilitation needs remains – particularly in Poland. Urban public transit and commuter rail have, with very few exceptions, received no financial support from the IFIs or PHARE.

This situation is in part responding to, but also in part contributing to, a dramatic shift in traffic in the region from public transit and rail to private motor vehicle and truck. A result of this shift is the sharp increase of several kinds of emissions in the CEE countries which pose a potential threat to the Baltic Sea – particularly NOx, but also lead. The growing trend towards road-sector financing at the expense of other modes, particularly in the CEE countries, is in part

the result of a decision-making process which is poorly balanced between modes, and is largely isolated from medium and long term environmental concerns.

Differences in the Mandates of the IFIs and Differences in Leveraging Policy Change

Some of the differences in the lending activities of the IFIs are a reflection of their different mandates. The World Bank was established as a development bank, and its current areas of concentration are poverty alleviation, environmental sustainability and economic restructuring to enable economic growth. These sometimes contradictory objectives are translated into lending portfolios and projects via country-specific strategies and sector policies. All of its lending is targeted to the public sector. The EBRD's mandate is specifically focused on promoting growing private sector activity in the CEE region. The EIB's mandate is to further European economic integration and to promote the interests of the European Union, broadly defined.

Lending at interest rates below commercial rates gives the IFIs the possibility of requiring certain policy changes or institutional changes as a condition of a loan. All of the IFIs use conditions written into the loan contract as a way of leveraging policy changes. Conditions that borrowing country rail companies or public transit companies must reach certain cost recovery targets are a standard part of IFI loan conditions. Many World Bank highway loans were used to encourage the development of better road maintenance systems, contracting out of road services, etc. It is difficult for outsiders to know about these conditions, as the actual loan agreements are not available to the public. Nonetheless, interviews with borrowers indicate some differences between the IFIs.

The EIB claims that transport policies and institutional structures within the borrowing countries are a matter for the borrowing country. While all agree that EIB loan conditionality is the weakest by far among the IFIs, interviews with borrowing country government officials do indicate that EIB loans are also used to leverage certain policy changes. Rail sector loans to the Hungarian Ministry of Transport from the EIB reportedly included a condition that 1000 kilometres of rail lines be removed from the National Railroad's (MAV) public service obligation, allowing the rail operator MAV to close the lines. Other requirements in loan agreements were raised during negotiations. Without a transport policy, but with the capacity to demand or require policy or institutional changes through loan conditions, the prerogative of EIB staff to make up their own policy is considerable.

The EBRD is somewhere between the World Bank and the EIB in terms of its use of loans to leverage policy changes. Their loans to the rail sector generally include provisions requiring the implementation of a restructuring plan developed in co-operation with the borrowing government or railway, and often include cost recovery targets as well. These restructuring plans often involve cutting service to areas with low traffic density, laying off workers and increasing fares. Some reforms are critical to rail system financial sustainability but may have adverse implications for ridership and emissions in the short term at least. Nonetheless, the EIB's lending conditionality is weaker in the rail and transit sector than the World Bank's, enabling them to make far more rail sector loans than the World Bank. They can also, under certain conditions, loan to sub-national governments without a national government guarantee, which made possible one of its public transit loans. Generally, the policy changes pursued by the use of loan conditionality at the EBRD are based on its Transport Operations Policy. Although it states: "The document does not attempt to prescribe transport policies for the Bank's countries of operations," EBRD lending is nonetheless used to encourage national government policies which it supports.

The World Bank's lending conditionality tends to be the strictest. While this conditionality is applied in a manner similar to the EBRD, the result has been no lending at all to rail or public transit in the corridor.

Both the EBRD and the World Bank tend to require cost recovery ratios in rail and transit loans, which over time reduce the level of subsidy to these sectors. At the same time, however, loans to the road sector rarely include similar conditionality aimed at reducing road sector subsidies. EBRD lending to private concession highways in fact has been used to encourage greater government subsidies to the sector.

Differences in Transparency Among the IFIs

There are major differences between the IFIs in terms of the transparency of their operations and the ability to access information about their activity. The World Bank is by far the most transparent, with its loan appraisals, economic, environmental and financial analysis, its transport policies and country strategies all available to the public before a project is approved by its board. The EBRD releases only project information documents to the public, but the Environmental Impact Assessments (EIAs) are released, and its transport policy is public. The EIB is the least transparent. It has no transport policy or country strategy outlining its policy priorities, its loan appraisal documents are not even available to borrowing governments, let alone the public, and in practice it is up to the borrowing government whether or not to release EIAs to the public.

To some extent the differences between the World Bank on the one hand, and the EBRD and EIB on the other, are a reflection of the fact that the World Bank only lends to governments, while the EBRD and EIB lend roughly 60% of their funds to the private sector. However, there is no clear reason why the EIB's and the EBRD's information disclosure policies should differ.

Biases in Loan Appraisal at the IFIs

The EBRD and the World Bank use similar economic and financial criteria, and these criteria suffer from similar biases. At both, lending to the rail and public transit systems requires a financial as well as an economic analysis, while standard road projects are not subjected to a financial analysis which assesses the impact of the project on the borrowing government's finances. For toll road projects, the EBRD claims it performs both a financial analysis and an economic analysis, and that the project must meet its minimum standard for both; but in loan appraisal documents submitted to the EBRD board the economic analysis tends to be absent. It is well known that for toll road projects the economic rate of return tends to fall as the financial rate of return rises, depending on the toll level, so the Board's ability to assess project feasibility requires both types of analysis. The economic and financial appraisal methodologies used at the EIB are unknown, but given the fact that they have funded several projects known to have an economic rate of return below the cost of capital, their lending eligibility criteria appear to be looser than at the other IFIs.

While the World Bank has on occasion (i.e., the Warsaw Metro project) required an alternatives analysis, none of the IFIs require an alternatives analysis which considers comparable economic rate of return (ERR) or financial rate of return (FRR) for other modal or demand management options for reaching the same mobility and access objectives. Impacts of road projects on rail lines in the same corridor, impacts on non-motorised road users, and social and environmental externalities are still not included in economic appraisal, though some work is being done to eventually incorporate external costs.

While all of the IFIs require an EIA, these EIAs rarely include projected emissions effects from generated traffic, and none of them require a Strategic Environmental Impact Assessment (SEA).

Differences in Approach to International Versus National and Local Traffic

Considerable difference of opinion exists between the IFIs regarding the importance of international, national and local corridors. The World Bank – and to some extent the EBRD – generally allows all projects with an economic rate of return above a certain cut-off (20% or so) to be eligible for financing regardless of whether or not they are part of an international 'corridor.' The EIB is also able to fund any project with a sufficient economic rate of return, but is 'encouraged' to fund those projects which lie in the corridors identified as priorities at the Pan-European Transport Conferences (the Trans-European Transport Corridors) or through the EU-led TINA (Transportation Infrastructure Needs Assessment) process. PHARE and ISPA are only likely to fund projects which are part of the Corridors or have been identified in the TINA process as a priority. Because PHARE also funds feasibility studies, however, which are prerequisites for IFI funding and are only performed in the Corridors, even loans from the World Bank and the EBRD are likely to be concentrated in the Corridors. Countries know that projects identified as part of international corridors are more likely to receive low interest loans and grants from the IFIs, and are thus anxious to have their investment priorities included in the TEN Corridors and its Connectors. This functions as a powerful incentive for national governments to prioritise international corridors. In the case of Poland, for example, in all recent Polish national transport policy decisions, plans and programs it is declared that priority is given to the modernisation and development of transport infrastructure in the Crete corridors and other routes of international importance.

However, in some instances these projects are not the most viable. Due to the lower density spatial pattern of CEE countries, there is a tendency for the needs of international traffic/transport and, in particular, long distance transit movements to be overestimated. The most viable projects are those which serve both short- and long-distance movements. However, if these projects are not on the *list of transport corridors*, there is less chances that they will be co-financed from the EU funds.

Unlikely to be viewed as of international importance are local roads and streets, branch railway lines, commuter railway lines, and all public transport. Because the EU expects that roughly 75% of the costs of financing the EU Corridors will be borne by the national governments, (CEPS, 1998, p. 12) national level investment is likely to be increasingly targeted to improving those routes carrying international traffic. This is particularly troubling since the economic importance of these routes in comparison with domestic routes is not known with any great certainty.

Particularly troubling are the ramifications of this approach for urban public transit systems. Because urban ring roads or bypass roads are considered part of international traffic corridors, they are eligible for EU funding, and have received extensive funding from the PHARE program, the EIB, and the other IFIs as well. For bypass roads around small cities, these are important investments as they re-route polluting and dangerous truck traffic out of small town centres. However, in middle-size and larger towns, a lot of the traffic using these bypasses is likely to be local, rather than international traffic. In major cities, like Warsaw and Riga, it is likely that as much as 90% of the traffic on ring roads will be local traffic rather than international traffic. As such, these routes directly compete with urban public transit systems for urban trips. Because urban public transit is, if not ineligible then certainly not encouraged by EU

funding guidelines, this structure of EU funding is undermining the competitiveness of urban public transit systems. For this reason, in cases where funding from EU institutions is being directed at a ring road, similar funds should be made available for urban public transit to avoid this unintended externality.

Differences in Approach to Prioritisation of Maintenance, Rehabilitation/ Modernisation, and New Development

In both the road and rail sectors, the IFIs have prioritised maintenance, rehabilitation, and new construction differently. Until recently, nearly all of World Bank road lending in the region was targeted to road maintenance, road rehabilitation, and bypass routes around small towns. Various diagnostic studies of transport systems in the region indicate that compared with other investment options, maintenance has the highest benefit/cost ratio, with rehabilitation and modernisation of existing infrastructure the next highest. This is particularly visible in case of railways where, for instance, through rehabilitation of tracks and modernisation of traffic control a radical improvement of operational effectiveness has been achieved.

The EBRD's focus on private Build-Operate-Transfer highway projects, which in the CEE Baltic countries tend to be implemented on new highways, has led to their involvement in more new road construction projects than the World Bank, but they have also financed road maintenance projects in the region.

The EIB, by contrast, has since the early 1990s focused entirely on new road construction. This emphasis by the EIB indicates a danger that the focus of the EU on corridors will encourage investments into new infrastructure construction at the expense of maintenance and rehabilitation of existing infrastructure. To the extent that new construction projects require matching funds, they take money away from maintenance activities and other investment projects, but these matching funds requirements tend to be lower for EU money than from the other IFIs. It is also conceivable that if the EU were not financing the new road construction projects, that national governments would then invest in them out of their own resources and neglect maintenance needs nonetheless.

Conclusions of Task I

IFI decision-making practices in the Baltic region as a whole are fairly balanced between modes. In the CEE countries, however, their activities have been heavily focused on road projects, and insufficiently focused on rail, commuter rail, and public transit. They have also been too heavily focused on new construction at the expense of rehabilitation and maintenance, and too focused on international corridors relative to national routes of greater economic and social importance.

It would be inaccurate to say that the cause of these biases in lending lie primarily with the IFIs, as the IFIs are largely responding to national government priorities. Public transit loans from the World Bank have been blocked by unwillingness of national government to guarantee the loans more than by their own lending criteria. Most national governments are more interested in new, high-profile projects than in more mundane ongoing maintenance needs.

But it would also be inaccurate to say that the IFIs bear no responsibility for the misdirection of some of this lending. Prioritisation of international corridors by the EU has concentrated investment into these corridors, in part at the expense not only of other, potentially more important national corridors, but also at the expense of other urgent transport needs such as

transit rehabilitation and road maintenance. Over-zealous efforts to reform rapidly rail and transit systems in need of restructuring has stopped the World Bank from lending any money to those sectors.

It is also problematic that those new construction projects which are the most environmentally sensitive have tended to receive their funding from the IFI with the weakest environmental due-diligence (the EIB), rather than from the IFI with the strictest environmental review procedures (the World Bank). The powerful and growing role of EIB financing in the region has undercut to a certain extent the sincere efforts by the World Bank and the EBRD to improve environmental due-diligence, and to encourage the prioritisation of road and rail spending on upgrading and maintenance rather than new construction.

TASK II: Review Of Existing Infrastructure Decision-Making Process In Helcom PITF Member Countries

Introduction

An extensive review of the decision-making process in each of the HELCOM PITF member counties was beyond the scope of this project. Participants at the first HELCOM PITF transport workshop in Berlin also expressed doubts that a detailed review constituted a desirable use of HELCOM PITF resources. Since decision-making in all EU member states is already moving towards convergence due to EU regulations, directives and norms, it was decided that it was most useful to take a closer look at the present state of decision-making in the transition countries. Latvia, the lead Eastern country for the BALTIC 21 transport initiative, and Poland, the largest and most advanced Baltic applicant for EU membership, were selected as the two case studies. This selection had the additional advantage of being able to compare planning capacities and the differences in decision-making in a small and a large country.

Transport Sector Decision-Making in Latvia

The environmental impact assessment (EIA) process that is applied to major transport investments is quickly becoming synchronised with EU legislation, an a new EIA law with much improved requirements and public participation procedures was passed by parliament in December 1998. Given the challenges of European harmonisation, staff are insufficient to handle current administrative demands. Citizens have the right to initiate EIA processes and can also appeal decisions affecting the environment that ignore civil and legal rights. Latvian citizens are granted the right to transparent and reliable information on planning issues.

There are presently no mechanisms that formally co-ordinate land use and transport planning in Latvia, and new developments are not planned according to the level of public transport access. Traffic congestion is mainly a problem in Riga, which has recently enacted strict parking regulations in the old city. Riga is also presently developing a new traffic master plan with PHARE assistance. Accuracy in traffic forecasting is severely diminished due to the fact that there are no up to date household surveys.

Funding for road transport in Latvia is organised through the State Road Fund, which mainly gets its revenues from excise fuel taxes and vehicle registration fees. A regularly scheduled increase in the excise tax will help revenue for road maintenance, which was severely neglected between 1991 to 1997. Both the rail and public transport sector are also in severe financial difficulty, and the Road fund actually also supports both modes.

Small harbour development is seen as an important focus for future investment, and the potential role of short sea shipping is viewed as significant. Despite EU interests along north-south axes, major transport flows are still oriented along east-west lines, originating at the ports, although the collapse of the Russian economy had important impacts on Latvian trade. Latvia remains committed to its role as a transit country, which is problematic from an environmental perspective. There is no valuation of the cost that transit truck traffic is imposing on the national transit routes. Road safety records are worrisome but have recently been addressed by transport officials. A national policy on bicycling is being developed.

Transport Sector Decision-Making in Poland

Poland is one of the few countries in the world that have carried out a Strategic Environmental Assessment of their national transport policy. Project-level EIAs are currently approved by a National Commission on Environmental Impact Assessment which is under the national Ministry of Environmental Protection, Natural Resources and Forestry. However, resources at the Environment Ministry are not sufficient, and no capacity exists to determine conformity of transport plans or policies with ambient air quality legislation. Currently, there is no national bicycle plan or policy. There will be a process of defining critical rail routes to make them eligible for national funding. Citizens now have the right to sue for compliance with environmental laws. National level transport infrastructure master plans are only legally binding when translated into local level plans.

How much co-ordination there is between land use and transport depends on the local master plan. Generally, cities require major developers to do accessibility studies before granting building permits. Cities can control developments by requiring parking controls and limits.

The newest tax laws require that 30% of the value added tax revenues raised on gasoline go to national road investments. Only a 20% increase in national road maintenance expenditures could bring the road system into a state of good repair by 2005. Road user revenues are not earmarked and no Eco taxes are imposed on motorists. There is no reliable data on Polish cost recovery for railways. Local road user revenues are slightly lower than municipal expenditures but the data is poor. Road user safety costs accounted for about 4% of total road user revenues raised. There is no formal, required relationship between taxes and road safety expenditures. Parking fees in Poland are quite low. Urban decision makers increasingly give attention to sustainable modes. Trams already frequently operate on exclusive right of ways. Bike networks have been developed in Krakow. There are also extensive pedestrian areas in Krakow, as well as smaller ones elsewhere.

The national transportation program developed in 1998 will not be subject to public hearings. The Warsaw metro region plan, however, was developed in consultation with over 40 public hearings, although meetings are only mandatory at the *gmina* (local government) level. For concession contracts should be open to the public by law, but are difficult to get in practice. Costs benefit analyses are not used on new construction.

Conclusions of Task II

Both Latvia and Polish environmental legislation are rapidly approaching EU standards, at least in print. Public participation requirements should nominally be up to Western standards as well. However, the enforceability of certain procedures and regulations is heavily dependent on administrative abilities and capabilities, which are frequently lacking. Both understaffing in environmental expert departments and lack of inter- and intra-agency co-ordination are important factors here. Sometimes the intricacies of environmental law-making, such as the shifting of responsibility for EIAs from the Polish national government to the province (*voivodship*) administrative level, have particular political economy and power ramifications; but these experiences cannot be generalised.

As in most other countries, currently used environmental and cost benefit assessment procedures are not sophisticated enough to include a full internalisation of social and environmental costs of the transport sector. Latvia in particular looks heavily towards transit traffic as a source of international income without any accounting of the environmental effects of especially

truck traffic. It is important to note that unless traffic modelling and air pollution monitoring capabilities in both countries are significantly expanded, few of the more ambitious environmental goals contained in recent environmental legislation can become a reality due to lack of enforceability.

There is presently no sufficient co-ordination between land use and transportation planning. Important opportunities for setting the state for a more sustainable land use and transportation systems are being missed here, especially by not requiring that new residential and commercial developments be accessible by environmentally sustainable modes. In these cases, the key question is not so much direct infrastructure investment decision-making as investing into a solid spatial planning decision-making structure.

It also seems that not enough efforts are being made to keep the public transport infrastructures in both rural and urban areas sufficiently competitive to keep the countries from becoming increasingly auto-dependent. Public investment programs rarely have clear priorities for funding for more sustainable modes of transport. Latvia's use of state road funds for investments in the rural bus fleets is an especially laudable effort in this context. Although underrepresented as an issue in the distributed questionnaire, rail restructuring emerges as a key area of debate in both countries, as does the potential for water-based transport.

While there is a general recognition that a better development of the public transport, rail, shipping and particularly combined transport sectors is crucial for sustainable transport development in the future, it continues to be significantly harder to attract funding for these more sustainable modes than for the road sector. Insufficient prioritisation of these more ecologically sustainable modes in national, regional and local transport legislation and planning are only partly responsible for this, however. Public transport signal prioritisation, express lanes, traffic calming, pedestrian zones, bicycle paths, and sophisticated parking licensing schemes are all still significantly under-utilised methods and tools of transportation policy and planning in both countries.

Just like their EU counterparts and Baltic neighbours, Latvian and Polish officials struggle to make their transport systems more economically viable, more environmentally friendly and more socially equitable at the same time. Given the severe financial and administrative difficulties that these two transition countries face in the re-orientation and the upgrading of their transport infrastructures, it is obvious that the availability of international funding and the conditions under which these funds are provided will have a major impact on the future sustainability of their transport systems. On the other hand, major decisions to support more sustainable modes are taken at the national and sub-national levels. Several technical assistance and/or regional co-operation programs have helped decision-making at the local level, but as always, more could be done.

TASK I: Review of Existing Infrastructure Investment Decision-Making Process at the International Financial Institutions (IFI) in the Baltic Sea Region

Overview of IFI Lending in the Baltic Area

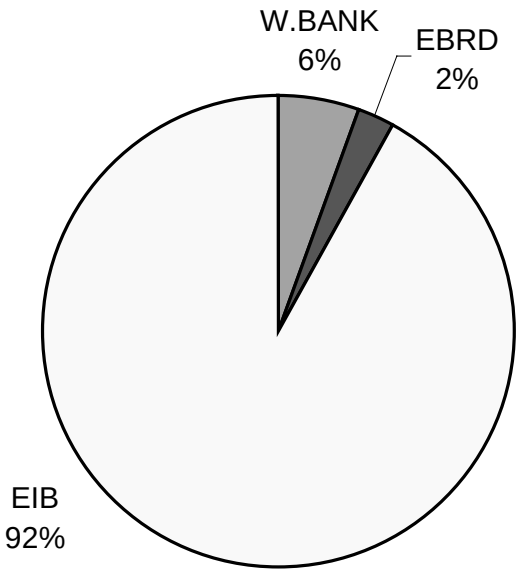
The major International Financial Institutions (IFIs) and funding agencies currently involved in the financing of transportation infrastructure in the Baltic Sea Countries are: the European Investment Bank (EIB), the World Bank, the European Bank for Reconstruction and Development (EBRD), the Nordic Investment Bank (NIB), the Japanese Export-Import Bank and the PHARE program of the European Community. A new funding mechanism, ISPA, the Pre-Accession facility of the European Community, will also be set up for the year 2000 to 2004 (and maybe beyond) for the Central and Eastern European (CEE) countries which are planning to join the European Union. This report will focus primarily on the EIB, the EBRD and the World Bank, although some mention will be made of the NIB, PHARE and ISPA as well. This section of the report also excludes IFI lending to Russia and the CIS countries, not because there was no transport-related lending to Russia and Belarus by the IFIs, but rather because this lending was not concentrated in the Baltic Sea region and thus seemed of marginal relevance to Baltic Sea concerns. Finally, the data presented here covers the years 1992 to 1998, primarily due to the availability of data and their relevance for present environmental concerns.

In terms of the scale of lending, the EIB is by far the most important IFI in the Baltic Sea region, accounting for 92% of all IFI transport sector lending in the Baltic countries (Graph I). While this is in part because only the EIB extends loans to the Northern and Western Baltic countries, the EIB also dominates in the CEE countries – where the EBRD and the World Bank are active – with 58% of total regional transport lending, compared to the World Bank's 31% and the EBRD's 11% (Graph II).

Differences between the IFIs reflect, to a certain extent, the geo-political concerns of the countries which dominate them. The World Bank and the EBRD are controlled by Boards of Directors appointed by member states, and voting at the board level is proportional to the level of paid-in capital. Members which do not pay-in capital but are primarily borrowers also have representatives on the Board, generally shared between several countries. The World Bank has thus long been a U.S.-dominated institution, though the level of this domination has been gradually weakening over the years; it currently controls roughly 18% of the votes and historically also controls the Presidency. U.S. influence is also strong at the EBRD, but less dominant. Most Executive Directors are appointed by, and controlled by, Ministries of Finance or Departments of Treasury.

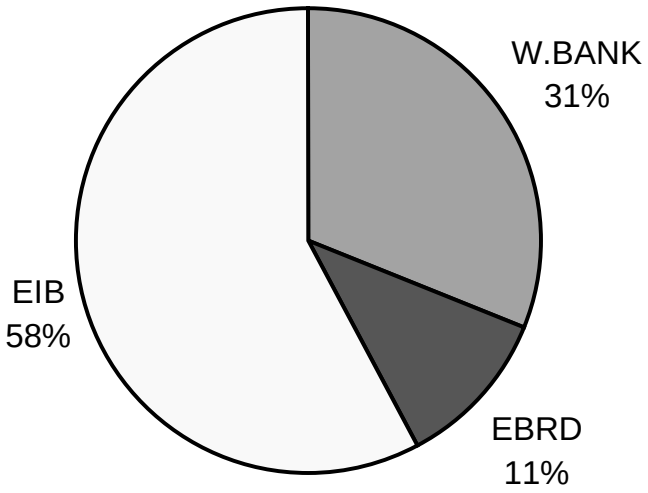
GRAPH I

SHARE OF TOTAL IFI LENDING IN THE BALTICS BY IFI



GRAPH II

SHARE OF TOTAL IFI TRANSPORT LENDING IN CEE BALTIC COUNTRIES

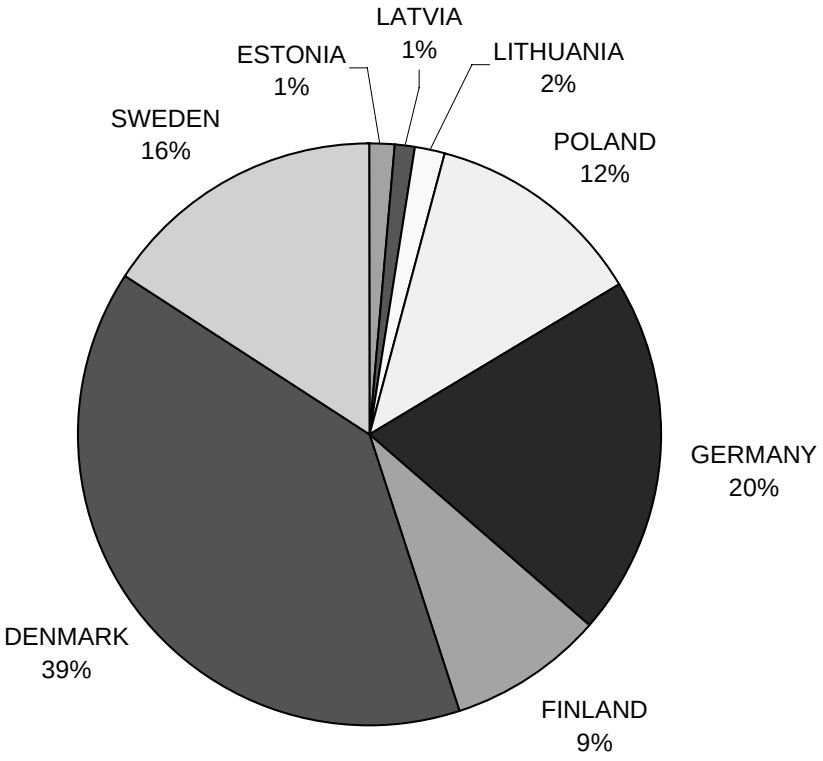


The EIB has a Board of Governors, consisting mostly of the Ministers of Finance or Ministers of Economic Affairs from the donor countries, i.e. the European Union member countries. In turn, these appoint the members of the Board of Directors. The Board of Directors is composed of 25 Directors and 13 Alternates; 24 and 12 respectively are appointed by the Member States, and one director and one alternate are appointed by the European Commission (EC). Most of the Directors are Directors of state development banks. Currently, the EC Directorate General for Economic and Financial Affairs (DG2) holds the EC-appointed Directorship, and the DG16 (Regional Policy and Cohesion) holds the Alternate position. This means that the DG7 (Transport) currently has no direct control over the EIB's transport sector lending.

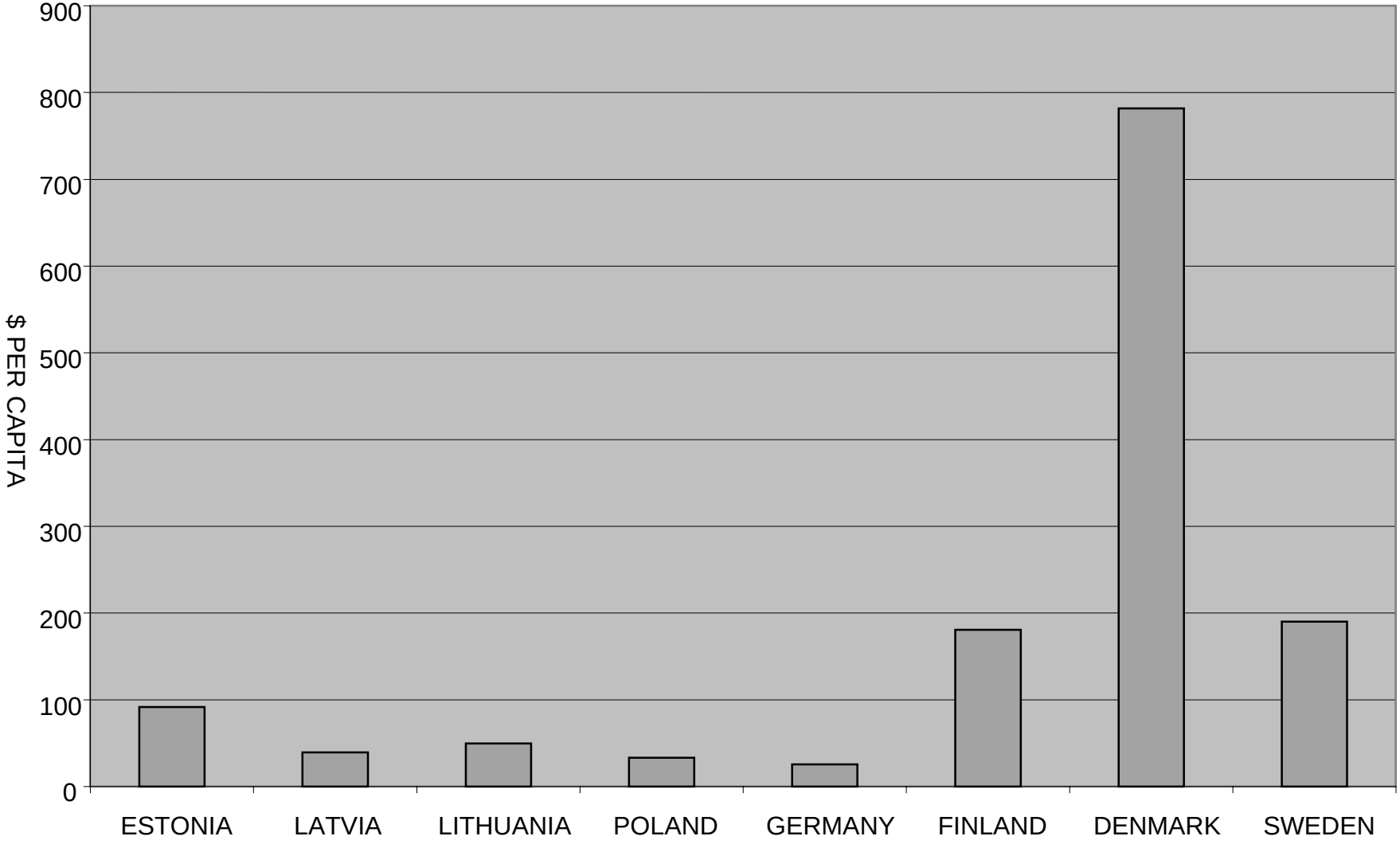
The vast majority of total lending is targeted to the Northern and Western Baltic countries (Graph III). Sweden and Denmark together account for over 50% of total IFI transport sector lending. This is largely because of the substantial EIB role in the enormously expensive combined rail and road bridge and tunnel that is being constructed between Sweden and Denmark, the road bridge between Denmark and continental Europe, and related projects. On a per capita basis, Denmark and Sweden still come out to be the largest recipients of transport sector IFI lending, while Germany receives the least per capita (Graph IV).

GRAPH III

TOTAL IFI TRANSPORT LENDING BY COUNTRY



GRAPH IV
TOTAL IFI LENDING PER CAPITA



In absolute terms, total IFI transport loans to the Baltic Region have gone more heavily to road projects than to rail projects or other alternatives (Graph V). As a share of total loans, roads received 36%, rail and public transit together received 20% and the road-rail bridge between Denmark and Sweden received 15%. If we consider the road/rail link half road and half rail, and if we consider only roads, rail, and public transit loans, roads received 61% compared to 39% for rails and public transit. Compared to modal split for both passengers and freight in the region, however, this ratio seems reasonable. Regionally, roughly 83% of total passenger kilometres travelled are by car, while 17% are by public transit or rail regionally (Petersen, et al., 1998, p.17-19). For freight, roughly 72% of total ton-kilometres are travelled by road and 28% by rail, all other modes excluded. Thus, for the region as a whole, IFI lending from 1992 to 1998 has been targeted more towards the rail sector than could be justified by rail's relative share of either passenger or freight traffic.

Broken down by sub-region, however, the picture looks quite different. The Northern and Western Baltic countries received IFI (in this case, only the EIB) lending for rail in an even greater share than can be justified by rail's mode share in the sub-region (Graph VI). Of total transport sector lending in the north-western Baltic countries, 27% went to roads, 18% to rail, and 19% to the road-rail bridge between Sweden and Denmark. Air traffic, which has considerable environmental consequences, received 16%, while oil exploration in the North Sea received 9%, and motor vehicle manufacturing received 7%. In the North-western Baltic countries, from an environmental perspective, EIB lending for airports, oil exploration, and motor vehicle manufacturing are of greater concern than the level of road sector lending per se, though the fact that the road lending is primarily for new construction related to the new land connection between Sweden and Denmark is worthy of investigation for its regional modal shift ramifications.

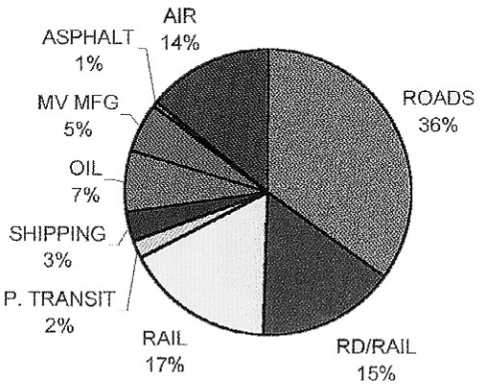
If just road and rail are considered, 57% went to roads and 43% to rail, while the road sector carries 85% of passenger kilometres and 83% of freight kilometres, compared to rail which only carries 15% of passenger kilometres and 19% of freight kilometres. In the Northern and Western Baltic countries, then, if just road and rail are considered, the EIB's lending has favoured rail.

In the CEE Baltic countries, however, IFI lending has been much more heavily targeted to the road sector (Graph VII). Roughly 60% of total IFI transport lending in the CEE Baltic countries went to roads, compared to 20% for rail and 5% for public transit. If all other modes and investments are excluded, rail and public transit received only 29% of total IFI lending in the CEE Baltic countries, compared to 71% for the road sector. At the same time, however, 34% of total passenger kilometres travelled are accounted for by the rail and public transit sectors, compared to 66% for the road sector. The biased nature of this lending against rail is even more apparent in the freight sector, where currently 59% of the freight by ton is moved by rail, compared to only 41% by the road sector. In the CEE Baltic countries, then, there is preliminary evidence that the nature of IFI lending has enhanced rather than discouraged the shift from rail and public transit towards greater use of private motor vehicles.

Taken overall, then, IFI lending in the Northern and Western Baltic countries has tended to encourage more sustainable modes, though investments into airports, motor vehicle manufacturing and oil should be mentioned, while in the CEE Baltic countries the IFIs have encouraged a process of potentially environmentally destabilising motorisation.

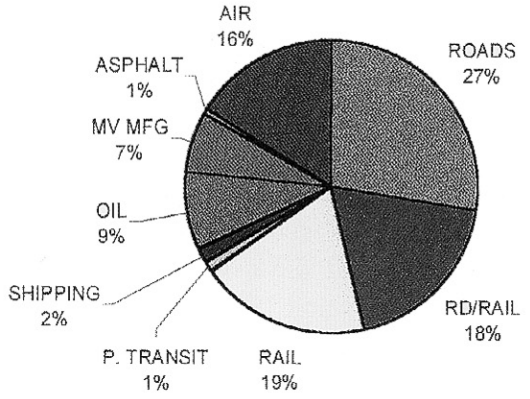
GRAPH V

TOTAL IFI TRANSPORT LOANS TO BALTIC SEA COUNTRIES BY MODE



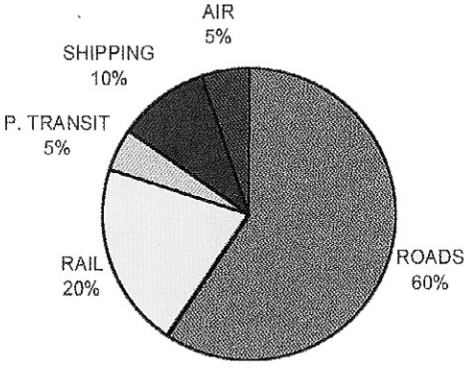
GRAPH VI

TOTAL IFI LENDING (EIC) IN NORTHWESTERN BALTIC SEA COUNTRIES



GRAPH VII

TOTAL IFI TRANSPORT LENDINGTO CEE BALTIC SEA COUNTRIES



These regional figures, however, mask a considerable amount of national variation (Graph VIII). Denmark's borrowing has been more heavily focused on roads, Sweden and Finland on rails, while German borrowing has been concentrated on airports. Latvia has borrowed much more for rail, while Lithuania and Poland have borrowed much more for roads. These significant differences at the national level indicate that at least to some degree the direction of IFI lending is driven by the requests of the borrowers rather than as a result of any biases in the nature of IFI decision-making favouring less sustainable modes.

The activities of the IFIs have also varied in terms of the modal concentration of their lending. EIB lending – EIB being by far the largest lender – closely reflects total IFI lending in the region, and is quite evenly distributed between modes, and more heavily focused on rail lending than can be accounted for by rail's mode share (Graph IX). In the CEE Baltic countries, however, EIB lending has been more heavily focused on roads, despite the predominance of rail and public transit use in the region, with 60% of total EIB transport lending being focused on roads between 1992 and 1998 (Graph X).

Total World Bank transport lending in the region has been even more heavily focused on roads, with 77% of their lending going to that mode (Graph XI). The last major rail loan by the World Bank in the region was made to Poland in 1990. Only a modest $3 million loan went to Estonia for public transit. The EBRD, by contrast, (Graph XII) has dedicated a much greater share of its total lending to rail and public transit in the region than have the other two development banks, and only 28% of its transport lending has gone to roads.

While the World Bank's lending has been by far the most heavily dominated by road lending in the region of any of the development banks, over 95% of this road lending has gone to maintenance and upgrading of existing infrastructure and bypasses for small towns (Graph XIII). Both EBRD road loans in the region and EIB road loans in the region have been heavily focused on new construction. The environmental ramifications of new road construction are much more serious than for maintenance and upgrading of existing infrastructure.

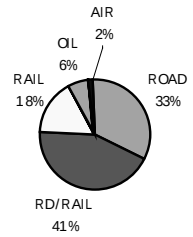
While the modal breakdown of IFI transport sector lending is an important indicator of their level of commitment to sustainability, to a great extent the IFIs work together and the division of lending activity between the banks has as much to do with a division of labour as any fundamental policy differences between the IFIs. There are, however, important differences in the priorities and objectives of the different IFIs which have a significant influence over the pattern of their lending. These differences are the subject of the following section.

Finally, there are major differences between the IFIs in terms of the transparency of their operations and the ability to access information about their activity. These differences have had a direct effect on the ability of this paper to draw general conclusions about the various institutions. While this issue is taken up in the following section, Figure 1 quickly shows differences in the relative level of transparency between the three IFIs, with the World Bank being by far the most transparent, the EBRD somewhat less so, and the EIB the least transparent.

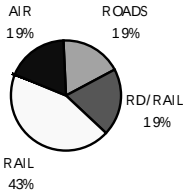
GRAPH VIII

NATIONAL VARIATIONS IN BORROWING FROM IFIs

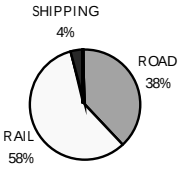
DENMARK'S BORROWING BY MODE



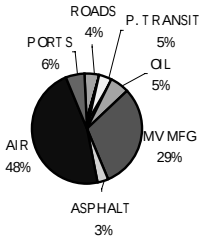
SWEDEN'S BORROWING BY MODE



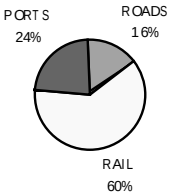
FINLAND'S BORROWING BY MODE



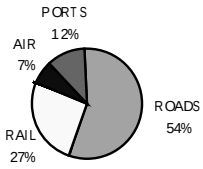
GERMANY'S BORROWING BY MODE



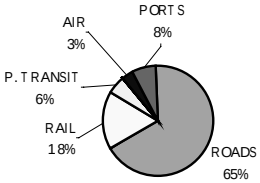
LATVIA'S BORROWING BY MODE



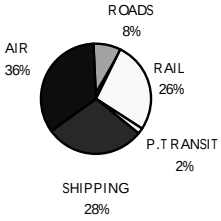
LITHUANIA'S BORROWING BY MODE



POLAND'S BORROWING BY MODE

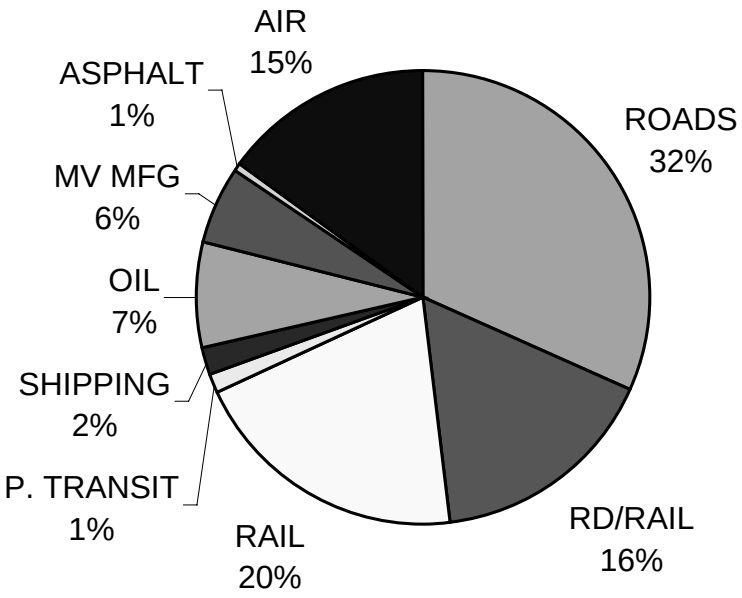


ESTONIA'S BORROWING BY MODE



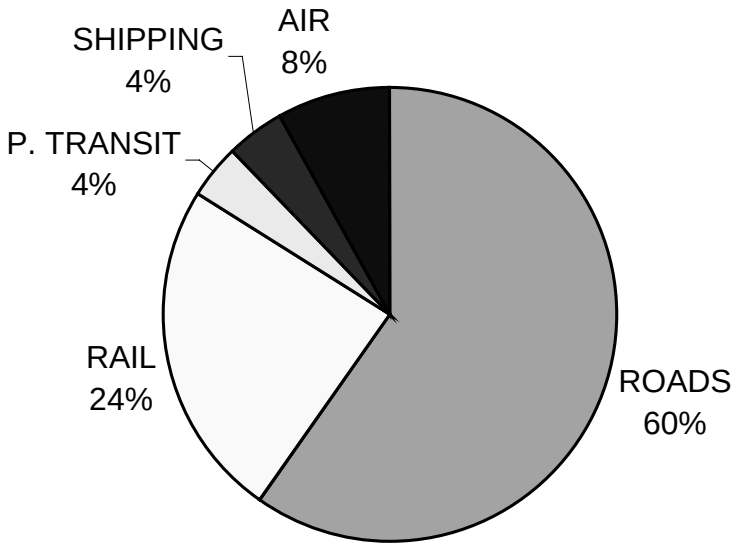
GRAPH IX

TOTAL EIB TRANSPORT LENDING IN BALTIC SEA COUNTRIES



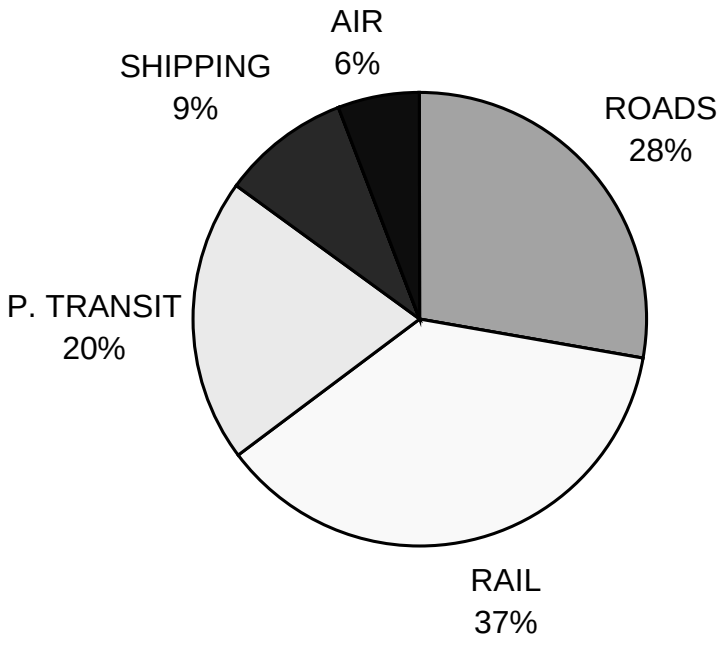
GRAPH X

TOTAL EIB TRANSPORT LENDING IN CEE BALTIC SEA COUNTRIES



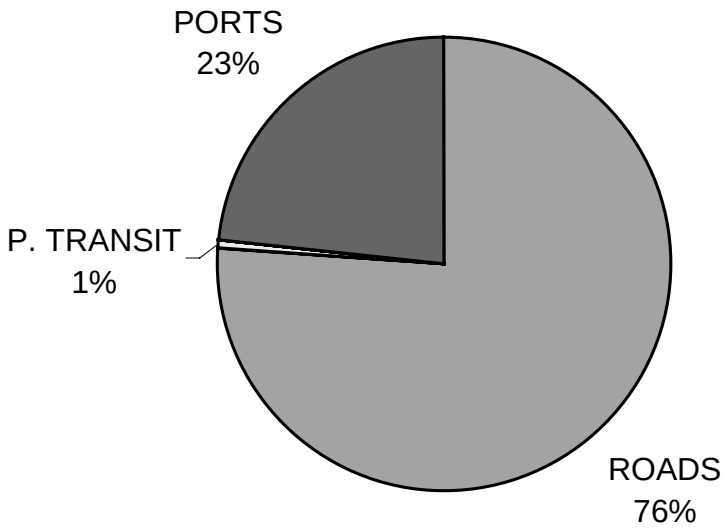
GRAPH XI

TOTAL WORLD BANK LENDING IN BALTIC SEA COUNTRIES



GRAPH XII

TOTAL EBRD TRANSPORT LENDING IN BALTIC SEA COUNTRIES



GRAPH XIII

SHARE OF IFI ROAD LOANS DEDICATED TO MAINTENANCE IN BALTIC SEA COUNTRIES

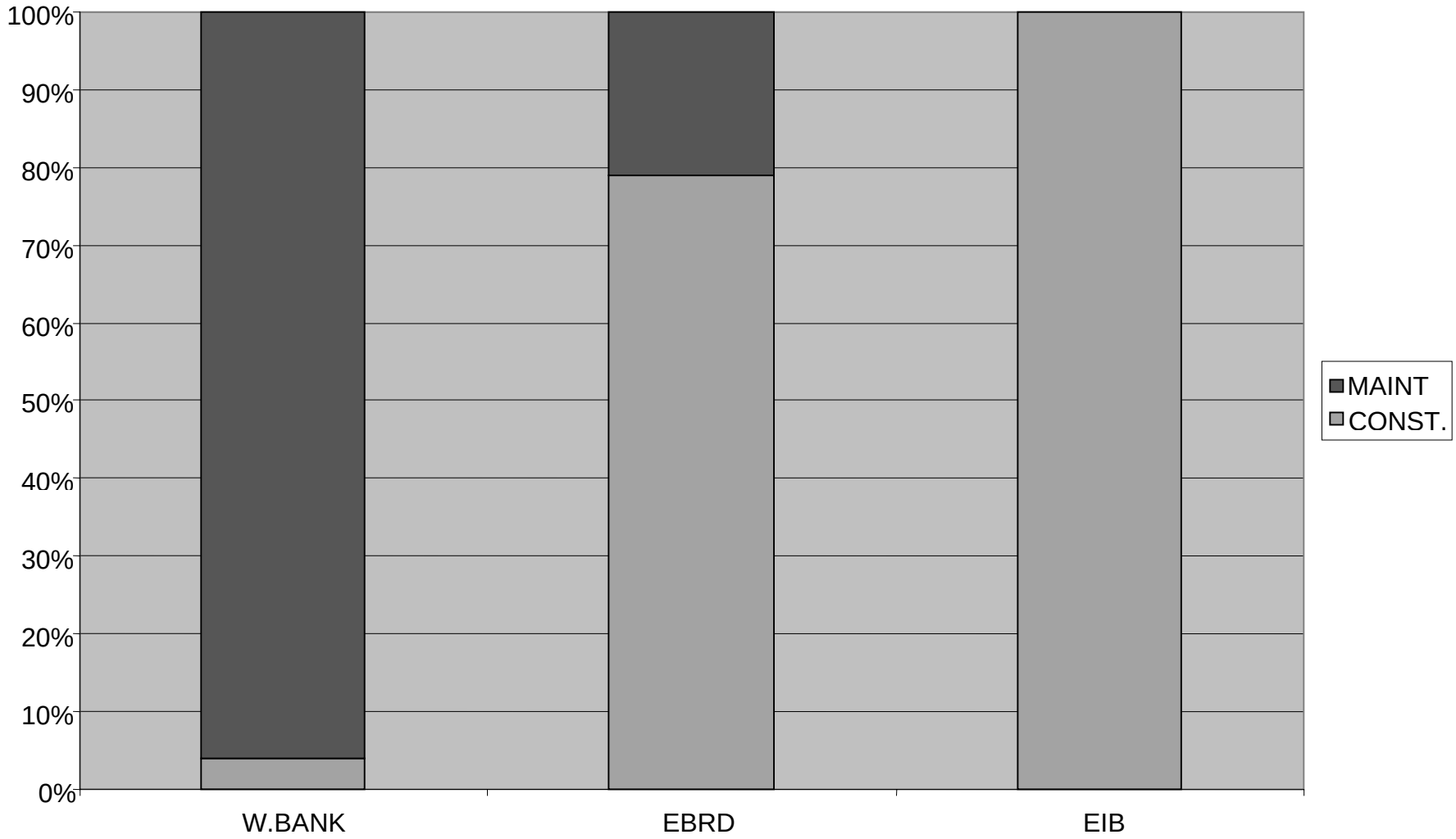


FIGURE I

DIFFERENCES BETWEEN IFI'S REGARDING INFORMATION DISCLOSURE

	WORLD BANK	*EBRD*	*EIB*
EIA	**YES**	**YES**	**NO**
SECTOR PAPERS	**YES**	**YES**	**NO**
LOAN APPRAISAL	**YES**	**NO**	**NO**
ECONOMIC APPRAISAL	**YES**	**NO**	**NO**
FINANCIAL APPRAISAL	**YES**	**NO**	**NO**
COUNTRY STRATEGY	**YES**	**NO**	**NO**
PROJECT SUMMARY	**YES**	**YES**	**NO**
PRESS RELEASE	**YES**	**YES**	**YES**
LOAN AGREEMENT	**NO**	**NO**	**NO**

PART A: The World Bank

Overview of World Bank Institutional Structures and Policies

The World Bank has "one overarching goal: helping its borrowers reduce poverty. It is a partner in strengthening economies and expanding markets to improve the quality of life for people everywhere, especially the poorest" (Annual Report, 1998, p. viii). While poverty reduction is the World Bank's primary mandate, the majority of its lending is not directed to projects which have any direct poverty alleviation goal. Rather, the requirement that each project demonstrate an Economic Rate of Return that is above 10% to 12% is taken as sufficient evidence of the positive growth impact of its projects. Growth, in turn, is assumed to lift up the poor from poverty. A more complete articulation of how the World Bank intends to address poverty can be seen in the following comments from the 1993 Annual Report:

"In the course of its 50 years of existence, the World Bank's overall development goal has evolved from a simple emphasis on national income growth with trickle-down effects to a more complex challenge that includes three main objectives to support economic development in developing nations: poverty reduction, economic adjustment and growth , and environmental protection and improvement" (World Bank, 1993, p. 57).

The tools available to the World Bank for addressing this broad agenda, however, are limited. It is, after all, a lending institution. It does not give grants, except for certain types of technical assistance related to projects. Unlike the other IFIs, with the exception of the International Finance Corporation, (IFC), its private sector lending arm, it can only lend to national governments. It also requires a 40% match of national government funds, so national commitment to the project must be strong. What the World Bank is able to do to address its mandate thus must result from the projects it finances, or the policy changes that it can leverage with its lending.

The World Bank's broadly-defined development goals are translated into a lending portfolio in several ways which parallel the division of the Bank into sectoral specialisation's and regional specialisation's.

For certain issue areas, the World Bank develops 'Operational Policies,' and 'Operational Directives'. Operational Directives (ODs) tend to cover such controversial issues such as resettlement or environmental evaluation on which the World Bank, usually under pressure from its critics, has found it necessary to take a clear and well articulated position. As such, an OD tends to have a stronger influence over staff behaviour, and violations of an OD would be seen as serious by the World Bank's Inspection Panel should a major violation be brought to its attention, though until now the level of recourse for borrowers or affected parties for violations even of a World Bank OD has proven to be minimal. Operational Policies (OP) are somewhat weaker and more general statements of policy, and they have been developed for several sectors, like Energy, Forestry, and Telecommunications. An OP tends to be a fairly clear statement of policies for a sector.

In the transport sector, there is no specific OD or OP, though several of them are relevant to transport projects, particularly the OD on environmental appraisal and resettlement. The transport sector has only what is called a "Policy Review." A policy review is a periodic review of World Bank lending in a particular sector, reviewing experience learned, and outlining future directions in Bank lending activity. The reason the World Bank does not have a transport-specific OP is complex. The OD and the OP were initiated in the late 1980s and 1990s under

pressure from government officials, the World Bank's Executive Directors, and NGOs who wanted to make the World Bank staff more accountable, and its lending better targeted to its development goals. The political pressure for a transport policy was not as strong as it was for an OP on other sectors, and came later, at a time when the World Bank's board was moving away from OPs as being too cumbersome and restrictive on World Bank operations, while not being a terribly effective tool in any case.

The decision to perform a Transport Sector Policy Review resulted from concern that extensive World Bank highway lending may be encouraging an unsustainable and inequitable process of motorization. The result of this effort is a publication called Sustainable Transport: Priorities for Policy Reform. While this text is not official World Bank policy in any legally binding sense, it represents the most complete articulation of World Bank policy in the transport sector to date. It was developed with considerable input from professionals within and outside the World Bank, and with considerable input from NGOs. Everyone involved in its development felt at least that their concerns had been listened to, and were reflected in some way in the document. As such, it has a significant amount of 'legitimacy. Further specific elements of this policy will be discussed below. In a general way, then, the Transport Sector Policy Review gives a certain coherence to the World Bank's overall transport sector lending approach.

While a full review and critique of Sustainable Transport: Priorities for Policy Reform is beyond the scope of this paper, a few key points that have influenced World Bank transport lending activity in the Baltics will be stressed. The document stresses the importance of three types of sustainability: economic and financial, environmental, and social. While all projects have to follow the Operational Directive on Environmental Assessment, this OD is entirely procedural and nowhere states that the World Bank will not fund environmentally damaging projects. Most importantly, Sustainable Transport focuses on the importance of accurate pricing signals, or what in the EU is called 'getting the prices right'. "The key to medium term environmental sustainability is the integration of environmental concerns with economic incentive structures. Prices that internalise environmental effects and market mechanisms (such as trading permits) should be used more than at present." (World Bank, 1996c, p. 56) The report endorses the use of congestion pricing, and increasing fuel prices and parking charges as a traffic demand management measure and a way of internalising environmental costs. At the same time, the report, when addressing economic and financial sustainability, stresses increasing the private sector's role in trucking, rail, air and marine operations, and in the provision of infrastructure. It focuses on giving governments the ability to create an enabling framework for competition among private providers of services. The policy supports increasing the financial self-sufficiency of railroads, public transit agencies, and to some extent highway agencies. It also encourages contracting out of the provision of transport services and infrastructure construction and maintenance, and the corporatisation of infrastructure-providing agencies. It also encourages a greater degree of user-responsiveness in the provision of transport services.

The increase in the level of private sector involvement in transportation services was encouraged by the World Bank in order to address three problems that they feel have resulted from government mismanagement in the transport sector. Most importantly, maintenance of roads, railroads, and public transit systems has been neglected. Sometimes this neglect, they contend, has resulted because "well intentioned attempts to protect the poor by keeping fares at uneconomically low levels have led to the physical deterioration of the vehicle fleet and to a reduction in the services provided by many urban bus companies." (p. 34) They also contend that government mismanagement has led to a lack of responsiveness to user needs, pointing out that public transit agencies often fail to serve low income, peripheral areas. Finally, they claim that public

sector labour costs tend to be higher than private sector labour costs, and is therefore more expensive.

Their solution to pursue policies which free enterprises from unnecessary government regulation and control, and the not-so-subtle agenda here is to weaken public sector trade unions. According to the Policy Review, "the level and structure of prices should only be constrained if there is a real danger of monopoly exploitation." (p.49) The policy recognises, however, that "As long as road use (particularly scarce urban road space) is underpriced, however, the financial viability of public transport will be prejudiced, and a 'second-best' case can be made for setting public transport fares in such a way as to compensate fore the undercharging of private road transport." (p.58)

The World Bank's overall transport policy, to directly affect lending at the national level, first must be reflected in a borrowers' 'Country Assistance Strategy' (CAS). Before any loans are made in a country, the World Bank develops a CAS for each country. The CAS is drafted by the country department in consultation with the borrowing country and other IFIs, and is reviewed and approved by the Board of Directors. It indicates the level and type of assistance to be provided to the country in total and the priority areas needing investment. The transport sector as a whole may be identified, or a particular mode within the sector may be identified as a priority at this stage.

If the transport sector or one mode in the transport sector is identified as being of particular importance in the CAS, the World Bank staff may decide to develop a Transport Sector Strategy or subsector strategy either for a region or a particular country. In the Baltic Region, the World Bank has not produced any regional or national transportation sector strategies. They produced an important working paper on Road Maintenance and Safety in the CEE countries, which pointed out that the main problem in the CEE countries was not the lack of roads per se, but the poor condition of the roads, which was a major cause of exceedingly high levels of deadly traffic accidents. This study also pointed out that the economic rate of return on investments into basic maintenance and upgrading were in the range of three times higher than for new road construction projects, indicating the economic importance of the enormous backlog of unmet maintenance investments in the region. (World Bank, 1994c)

Each country will then develop a specific lending program for the transport sector. Generally priority projects are suggested by the borrowing country and the World Bank mission will select from among them those projects most consistent with its sector and national strategy. If a transport project is consistent with its transport sector policy and its country strategy, it will then be subjected to a series of project specific evaluation criteria.

Once all of the necessary sorts of appraisal are completed, they are compiled into a Staff Appraisal Report, recommending to the Board of Directors that they approve the loan. Since 1994 these SARs, along with the EIA for the project, must be available to the public at least 30 days before the vote on the loan by the Board of Directors, and be allowed to comment.

Rejection of a loan by the Board of Directors is comparatively rare. The views of a Board Member from a donor country with a particularly strong economic interest in a "borrowing" country tend to be deferred to by the other Board Members. There have, however, been occasions where the Board of Directors have rejected loans if environmental or resettlement consequences are particularly egregious.

Inter-Modal Biases in Transport Sector Lending Criteria

In theory, each project is then subjected to an economic analysis, (internal rate of return analysis) financial analysis, environmental impact assessment (if necessary-social sector loans do not require EIAs), a technical feasibility study, and sometimes other forms of analysis. In the transport sector it is typical for the World Bank to require a 'cost-recovery analysis,' for example, which measures the degree to which a public transit authority, rail agency, road agency, or road sector is recovering its costs from user fees.

It is important to note that the analysis of the feasibility of the project, and hence the economic and financial analysis, is only required once the mode (road, rail, public transit) has already been decided. This means that for any particular corridor, the question of whether the investment will be directed to the railroad or the road sector is decided in negotiation with the borrower, and the criteria of the decision are not transparent, rather than being based on any clear comparison of the relative costs and benefits of different approaches to meeting the same access and mobility needs. In other words, the ability to use 'least cost planning' or any serious intermodal alternatives analysis are made virtually impossible by the fact that the project analysis only takes place after the modal orientation of the project has already been decided.

Because the economic and financial analysis have only been used to compare alternative routes within a particular mode, and have never been required to compare building a road, to upgrading a rail line, to implementing a host of traffic demand management measures, the analytical methodologies have become mode-specific, and do not generate results which are comparable across mode. In fact, World Bank staff familiar with the capabilities of cost benefit analysis agree that it should not be used for intermodal comparisons, but only as a method for prioritising investments within the same mode. (interview with Chris Hoban, 1994)

The various analyses required to determine feasibility of a project are the responsibility of the borrowing country government, who generally will hire consultants to perform the actual analysis. The World Bank will then review the analysis for methodological soundness, but will not require that a particular methodology be applied, so long as it is consistent with 'good practice.' This means, of course, that there is considerable latitude in the way in which cost benefit, financial, and environmental appraisals are performed. This is not to say that the World Bank has not tried to provide consultants and borrowers with the analytical tools which it deems acceptable. In 1992 it developed the extensive Environmental Sourcebook, which outlined the types of environmental impacts that should be identified in a World Bank project. Further transport-sector EIA methodological recommendations can be found in Roads and the Environment: A Handbook, (World Bank, 1997) which states "The guidelines in this handbook are not necessarily official standards for World Bank projects but rather should be regarded as general indications of good practice to assist road agencies in dealing with environmental issues." (p. xiii) While this book does mention some important, often ignored issues like the 'severance' problem (disruption of cross-community travel by walking, bicycling, and other traditional modes, p. 114 - 116), it does not touch on most of the more controversial EIA issues, such as whether increased emissions from induced traffic should be included in the EIA, or how, or whether the environmental impacts of induced real estate development resulting from road construction needs to be evaluated.

It is important to note how World Bank lending differs from private sector lending, so that differences with the other banks can be made clear. The World Bank (exclusive of the IFC), unlike the EBRD or the EIB, only loans money to governments. It is therefore only lending money with a sovereign guarantee. A private bank, once it obtains a 'sovereign guarantee,' is

not necessarily going to spend further money investigating how the government is going to use this money. Rather, it is going to be concerned only with the credit-worthiness of the borrowing government per se, and will use perhaps 'political risk analysis,' or it may simply rely on the country's rating by Standard and Poors, or on the fact that the IMF or the World Bank have agreed to extend them credit. The World Bank, if it were just another Bank operating on 'sound banking principles', would also not need to investigate the specific use of a sovereign loan so long as the borrowing government was credit-worthy. However, as the mandate of the World Bank is to alleviate poverty and promote economic growth, it has to demonstrate that its projects will lead to 'economic growth.'

For these reasons, the ultimate criteria of loan viability from the World Bank is their economic analysis, which is taken, if mistakenly, by World Bank staff, as an indicator of its economic growth impact. While the required internal rate of return (IRR) required on specific projects may vary depending on the country and the circumstances, the World Bank will not make a loan to a project with an internal rate of return below 10(%), as a rule of thumb. For some projects, like the Roads II project in Poland, only routes which have an IRR over 20(%) were considered eligible.

Because most road projects funded by the World Bank are standard, untolled road projects where the borrower is the Ministry of Transport or a Roads Directorate, it is not entirely clear how a financial analysis or a cost recovery analysis would be performed for such loans. In the past, the result of this was that cost recovery and financial rate of return for roads projects was often ignored, despite the potentially significant fiscal impacts of road projects. Recently, the World Bank is increasingly requiring some assessment of the degree to which road user revenues are sufficient to cover road sector expenditures. This is being driven in part by a legitimate concern about implementing their policy of full cost recovery within each mode, and in part out of a concern that the government be raising sufficient funds to at least maintain their existing roads. In the case where a country has a 'road fund', with an income based on earmarked tax revenues, they can look at the impact of the project on the income and revenues of the road fund, as in the case of the Latvia Highway Project of 1997. In cases where there are no specific road funds, the Bank may require an analysis of the degree to which road user charges are covering their expenditures and long term maintenance needs, as was the case in the Roads II loan in Poland. There remains a lack of agreement as to whether to treat consumption taxes or value added taxes on fuels as road user revenues, but in general the total revenue from fuel excise taxes in the Baltic sea countries is considerably greater than the level of total spending on roads, with the additional revenue much greater in the Northern and Western countries than in the CEE countries. The World Bank has used its policy leverage to increase fuel taxes in these countries, with a particular concern to increase the level of road rehabilitation and maintenance for economic and safety reasons.

While the World Bank may require a road sector cost recovery analysis, and may recommend that a country increase its fuel taxes, as they have done in most of the Baltic countries, it is rarely made a hard condition of road sector lending. Bank staff argue that this is because the issue of fuel taxation is beyond the level of influence of the Roads Directorate. Making road loans conditional on increased cost recovery in the road sector has thus met with limited success. In the rail and transit sectors, by contrast, increased cost recovery targets are a standard component of loan conditionality. This unequal pressure for cost recovery has only worsened price distortions already encouraging greater use of private motor vehicles and trucking at the expense of rail and public transit.

Furthermore, while rail and transit loans always require a financial analysis, road projects rarely if ever are required to pass a financial analysis. The World Bank does not require a close analysis of the impact that a road loan will have on the finances of the Ministry of Transport or the Road Agency, or the Government per se, though they could be significant. Since the primary source of road user fees is fuel taxation, and many project appraisals estimate that the project will result in reduced fuel consumption, the project-specific financial impact in such a case should be negative. If this is the case, it is entirely possible that road loans may actually worsen a country's indebtedness, even if the road sector as a whole is paying for itself.

As a result, the possibility exists that a loan to a public transit system or rail system will be refused on the grounds that the project is unable to pass a financial analysis or unwilling to comply with the cost recovery requirements proposed by the World Bank, while road-sector projects with a similar financial rate of return and similar cost recovery levels would be funded.

This bias in their lending criteria was discussed extensively inside the World Bank in 1996. Bank staff contend that the cost recovery ratios are primarily used as a way of ensuring that transit and rail agencies are allowed to raise fares sufficiently to cover the devaluation of fare revenues by inflation and to pressure the agency to make efficiency improvements, but that there are no fixed cost recovery requirements that are applied across the board. Where they have been applied (as in Budapest) they have had the paradoxical and unintended effect of encouraging the transit authority to cut ongoing maintenance spending as a way of reducing system costs. As such, cost recovery ratios should be seen as one of many policy reform objectives, rather than a fundamental basis of project appraisal, and should therefore not be the basis of the refusal of a loan.

Regarding financial analysis, the Bank decided that a project need not have a positive financial analysis so long as the IRR was sufficiently high. It is rarely difficult to justify World Bank loans to public transit or rail lines from a financial perspective, as almost all of the loans have gone to rail system maintenance or upgrading, which greatly reduces the operating costs and fuel consumption of the system. Much more at issue is how much of their road lending would be justifiable if it were required to pass a project-specific financial appraisal.

Thus, the World Bank, on a policy level, now holds that the IRR is the final determinant of project feasibility in the transport sector regardless of the mode, although this has yet to translate into much significant change in their appraisal procedures. This leads us to the question of whether IRR methodology itself is free from modal bias.

Biases Within Road Sector Economic Appraisal

Currently, in the road sector, IRR is generally performed using the Highway Design and Maintenance Model (HDM), which is currently at Version III. HDM III is quite robust when measuring vehicle operating cost savings from maintenance and upgrading projects on intercity roads. For new construction, particularly in urban areas, however, the HDM model is quite limited. It has several fairly significant flaws:

a) It currently has no way of dealing with congestion

b) It does not identify economic costs to alternative modes in the same corridor caused by the project being evaluated.

c) It completely ignores the project's impact on all non-motorised road users, which is less of an issue in the Baltics, but in Asia is a serious flaw.

d) Environmental, social, and safety costs can be added but are not intrinsic to the model.

Currently, work is underway at the World Bank on updating HDM III, and HDM IV promises to correct some of these problems, although quantification of external costs is likely to remain controversial. Until they are corrected, however, any claims that IRR levels in any way reflect economic growth impacts will be inappropriate, and the ability to use the IRR in the road sector for comparison to the IRR achieved in any other sector also will be inappropriate. In the public transit and rail sectors, meanwhile, the techniques for IRR are somewhat clearer, since traffic on the railroads tends to be restricted to the vehicles of a single agency, and travel speed and maintenance cost improvements are easier to calculate since they are internal to a single agency. Little has been done, however, to include in rail or transit sector IRR analysis benefits resulting from the avoidance of further modal shift to the road sector, such as reduced congestion on the roadway, and reduced social cost externalities.

Requiring a least cost appraisal of different modal solutions to a single mobility or access problem in the same corridor may force the World Bank to develop criteria for economic and financial analysis that were more consistent between modes and take into consideration inter-modal effects.

World Bank Road Sector Lending in the Baltic Region

The vast majority of World Bank transport sector lending in the Baltics has been targeted to road rehabilitation and maintenance projects, although they are currently planning to fund a significant expansion of the Tallinn-Tartu highway in Estonia. The World Bank has made road upgrading and maintenance loans to all of the CEE Baltic countries. World Bank highway loans to Poland and Lithuania include the construction of many bypasses of secondary cities, and a lot of resurfacing and improvements on exiting roads, while the loans to Latvia and Estonia are exclusively targeted to maintenance, bridge repairs, and upgrading. The internal rate of return (IRR) on their bridge rehabilitation project in Latvia was 197, an extremely high rate of return, much higher than is ever achieved for new construction projects. These projects are quite similar in their objectives and their approach. All of them are intended to upgrade certain sections of the national network to EU weight standards, which is likely to be required during the accession process. Heavier truck weights are creating considerable damage to the roads, with significant economic and social costs resulting from increased accidents and wear and tear on the vehicles. In Poland these road loans have also been used to leverage increases in trucking fees to cover the extra roadway damage that they cause. As the loans require competitive bidding for the contracting work they have also encouraged greater use of private contracting in road maintenance, and increased capacity among road maintenance contractors.

The World Bank loan for Port Access in Poland also included a lot of new road construction. Previously, access to the Ports of Gdansk and Swinoujscie was primarily by rail. With the rapid shift to trucking, the Ports were losing long-distance travel to trucking. The improved port access for trucks, while compromising rail's dominance of port access trips, no doubt will improve the competitiveness of the Gdansk and Swinoujscie port intermodal trips, which have considerable environmental benefits over long-distance truck traffic.

The World Bank in all their road projects requires that a cost benefit analysis be performed to determine project eligibility. This created the impetus for the Polish government to

perform cost benefit analysis on its national road system. Prior to the Roads I loan, cost benefit analysis was not used to prioritise road investments, and it is still only performed for maintenance on existing roads, not for new construction. The desire to receive World Bank loans was a significant impetus for performing this level of analysis.

The maintenance of existing road infrastructure is certainly unassailable from an environmental, safety, and social perspective. Urban bypasses around smaller cities are also usually positive as they divert truck traffic out of small town centres. However, Poland is currently building bypasses around Warsaw, Krakow, Poznan, and other major cities where the majority of trucks are actually going to that city rather than bypassing it. As such, these bypass roads are serving to attract real estate development investment away from central cities to suburban areas and encouraging a process of unsustainable suburban sprawl.

With the exception of the IFC, the World Bank does not make loans directly to the private sector. As such, they have not been extensively involved in the financing of Build-Operate-Transfer private concession highway projects, so their position on them is not well articulated.

World Bank Rail Lending in the Baltic Region

The World Bank, since 1992, has not made any rail sector loans in the Baltics. (There was a joint road-rail loan to Poland in 1990). There have been negotiations underway with the World Bank, the EIB, and the EBRD for a major rail loan to Poland, but until now it has not been approved. As in other CEE countries, the World Bank has been trying to use loans to the rail sector to encourage restructuring of the railway agency PKP. PKP, like most CEE-country rail systems, is more profitable on the freight side and cross-subsidises passenger operations with freight revenues. The World Bank is opposed to cross-subsidies, and is pressuring PKP to reduce subsidised passenger fares by increasing fares and closing less utilised lines or converting them to bus service. PKP has been more resistant to institutional change than some of its CEE-country counterparts, as legal changes required as part of the accession process to the European union, such as the separating of legal responsibility for tracks and rolling stock, have been delayed by conflict between the Ministry of Transport and the unions.

Again, without any specific lending history, the World Bank's influence in the rail sector has been limited to the influence they have gained by offering loans on a conditional basis that were ultimately not accepted. Nonetheless, the direction of this influence is easy to discern from their policies and activities in the region. Rail restructuring in the CEE countries is a complex and contentious issue. Their focus on financial and economic self-sufficiency and a reduction of subsidies and cross subsidies has led to recommendations, usually through restructuring plans drawn up by consulting companies, recommending increasing fares, closing less used lines and concentrating investment into those more heavily utilised lines would lead to a more sustainable rail system. Whether this approach, which may alienate ridership in the short run, may be necessary to maintain ridership levels in the long run, is a matter of considerable debate. Cost recovery requirements on rail loans by the World Bank to Hungary and Bulgaria arguably helped to ensure that fare prices have been allowed to rise at the rate of inflation, which otherwise the government would not have allowed, leading to worsening debts in the sector.

In regions where the Bank has made rail loans, the benefits of the new investment into the rail system have been considerable. This new investment usually has to be met with matching funds from the national government, and thus it leverages a certain level of political commitment from the government to upgrade the rail system. In Bulgaria, recent railway loans ensured that at least a certain amount of new investment was channelled to the rail sector, which

without World Bank involvement would no doubt have been reduced to zero by the IMF-imposed austerity measures. The fact that the Baltics did not receive any rail loans from the World Bank is thus quite ominous from the point of view of long term rail sustainability. While many elements of the conditionality the Bank was trying to impose were somewhat justified, the inflexibility of these conditions has probably hurt the long term prospect for rail in Poland.

World Bank Public Transit Lending in the Baltic Region

The only policy review done specifically in the Baltics was their Urban Transport Review for Poland (1994). This document, written primarily by S. Mitric with the assistance of W. Suchorzewski, reflects the World Bank's policy towards urban transport sector lending in Poland. The report made several suggestions, some of which have since been implemented in Poland. It supported the creation of municipal corporations focused solely on operating municipal public transit systems and laying the groundwork for future privatisation, and this has more or less been accomplished. It also recommended reducing the dependency of these transit agencies on central government subsidies through increasing the fares and the provision of earmarked tax revenue sources at the national and local level. While fares have indeed increased, and financial self-reliance has increased, no source of national tax revenue other than the general revenues passed from the national to the local government has been dedicated to public transit. As a result, in many cities, public transit systems remain starved for investment capital.

The primary difference of opinion between the Polish government and the World Bank, which ultimately led to no World Bank loans being issued for public transit in Poland, was over the Warsaw metro. The Polish government was primarily interested in public transit funds to complete the Warsaw Metro, and was unwilling to authorise national government guarantees for any other urban public transit investments, which it felt were matters strictly a local concern. The World Bank, by contrast, felt that the Warsaw Metro was a waste of money, consuming an enormous amount of public transit investment while serving a minimal number of passengers. The World Bank, while clearly opposed to funding the Warsaw metro, did not refuse outright to fund the Warsaw metro, but they required that an alternatives analysis be performed where one of the options considered was running light rail in the existing metro tunnels which would then continue above ground (using the existing tramway right-of-way), and another was the so-called "moth-ball" option. The World Bank, in conjunction with several municipalities, identified several other projects which they felt were much more important, involving bus replacement, tram track and rolling stock upgrading, and a host of more modest improvements in the surface system, but the Polish government refused to provide the necessary government guarantees for these projects. As a result, the World Bank has lent no money in Poland for public transport.

Nevertheless, the World Bank recommendations concerning urban transport policies (promoting pubic transport in general and upgrading of trams in particular) had a visible impact on Polish cities. In the last years at least 5 major cities adopted transport policies called 'sustainable transport policies.' In Krakow and Katowice, tram rehabilitation projects have been initiated and Lodz plans to follow them.

The only concrete example of a public transit loan in the Baltic region from the World Bank was a $3 million loan to Estonia for the repair of public transit vehicles, and the loan was part of a much larger $30 million rehabilitation loan not focused specifically on transport. There were also two large public transit loans to Russia in 1994 and 1995, but whether they affect the Baltic Region was unclear so consideration of them has been excluded from this discussion.

Nonetheless, we know from interviews and behaviour in neighbouring Hungary (most of the same World Bank personnel were involved) that increasing the transit agency's financial self-sufficiency has been pressed by including in the loan agreement the requirement that the cost recovery ratio (defined as the percentage of total system operating costs including depreciation that are covered out of fare revenues) be increased to a level significantly higher than current levels. Negotiations over loans have focused considerable attention on these cost recovery requirements.

The 50% cost recovery requirements imposed on the Budapest Public Transit Authority (BKV) as part of its $40 million loan were consistent with the World Bank's policy of promoting 'financial sustainability' as stated in Sustainable Transport. As this loan went through in 1995, the results of this loan are now fairly well known. By imposing a 50% cost recovery limit, BKV raised its fares quite sharply. Opinion is mixed as to the effect that these fare increases have had on ridership. On the one hand, since the loan went through, fares have increased faster than the inflation rate. At the time of the loan, however, fares had dropped significantly in real terms since their 1990 levels as they had failed to keep up with inflation. That BKV fares today are roughly what they were in real terms in 1990 indicates that the cost recovery requirements helped to maintain financial sustainability at BKV, which without the loan covenant may have faced declining farebox revenue. This evidence supports the claims of Bank staff that these cost recovery covenants were intended to allow the transit agencies to raise fare prices at rates consistent with the inflation rate, and that otherwise the systems would have been starved for cash and vehicle and track maintenance would have declined (see Hook, 1999, forthcoming).

Another positive effect of the cost recovery requirement was that it probably helped to slow down and ultimately cancel a rather wasteful planned 4th metro line construction in Budapest. The cost of depreciation of the new capital created by this new metro line would alone have made it virtually impossible for BKV to comply with its cost recovery targets. While ultimately not determinant, it was a factor in the discussions around the 4th Metro line.

At the same time, public transit agencies have tried to meet these cost recovery requirements in other ways which have also alienated riders. Unfortunately, cost recovery is maximised by putting the maximum number of passengers on a single bus or tram, and this is best done by cutting service frequency and lines. Indeed, this is what BKV did, which has helped to alienate riders. Rather draconian crack downs on fare evaders, while fair and a good way to increase revenue, are also problematic in the sense that purchasing tickets is sometimes administratively difficult, with ticket machines not working or only accepting exact change, and with ticket windows frequently closed. This too has alienated some riders.

Most seriously, the cost recovery targets have been met in part by allowing the rolling stock and the tracks to deteriorate. As maintenance costs are included as a cost, while unmet maintenance needs are not, cost recovery targets can be met by simply avoiding maintenance. While the loan also included requirements that the system be properly maintained, the cost recovery covenant seems to have been more carefully monitored.

World Bank Port Investments in the Baltic Region

The World Bank also published a Poland Port Sector Study in 1995 which recommended the establishment of 'landlord' port authorities and the privatisation of 'stevedoring and other port services, and it funded the Poland Port Modernisation Project in 1996. This project is mainly focused on improving port facilities but also includes funds for improving road and highway connections to the port and the dredging of the Szczecin - Swinoujscie Fairway.

While there are fairly significant concerns about the environmental consequences of the dredging of the fairway, other construction-related causes of water contamination, and the risks of spillage from the shipping of hazardous and polluting materials, at the same time the modernisation of port facilities and their links with road and rail traffic make possible the diversion of truck traffic from more environmentally damaging overland routes.

Conclusions: World Bank Transport Lending in the Baltic Sea Countries

While the policy direction pressed by the World Bank and their actual lending portfolio in the Baltics, taken piecemeal, is unobjectionable from a sustainability perspective, taken as a whole the overwhelming preponderance of road sector lending remains troubling. Even though these loans have been directed towards road rehabilitation and maintenance, the overall portfolio has helped to ensure that roads are maintained, while doing little to improve the maintenance of rail and public transit systems which are also in a state of severe deterioration. While road sector loans have been used to press for increases in road user charges, this has helped to maintain the level of aggregate investment into the road sector. While the negotiating position of World Bank staff for rail and transit systems was quite well founded, the strictness of the restructuring requirements ultimately led to no loans of any kind to these sectors in the Baltic countries, which certainly did not help to improve or maintain the share of rail and transit in the region. As each World Bank loan requires a 40% match of national or local government funds, a loan locks a significant share of domestic government funds into projects funded by them. In the annual budgetary competition for funds, this helps ensure financial support for road maintenance.

The primary problem in the case of public transit was less the strictness of World Bank lending criteria and more a tendency by the national government to refuse sovereign guarantees for upgrading and maintenance of public transit systems, and a tendency by both the national government and municipalities to request money primarily for subway and other glamorous new construction projects, rather than more basic surface system upgrading and maintenance. The strictness of World Bank lending criteria in public transit probably helped to delay extensive further work on the ill-conceived Warsaw metro, and the ultimate adoption of a more cost effective and sensible tram improvement plan, which the World Bank may be more open to funding.

PART B: The EBRD

Overview of EBRD Institutional Structures and Policies

The EBRD was established in 1991. Article 1 of the Agreement Establishing the EBRD states the Bank's purpose as being "to foster the transition towards open, market-oriented economies and to promote private and entrepreneurial initiative in the countries of central and eastern Europe and the Commonwealth of Independent States committed to and applying the principles of multiparty democracy, pluralism, and market economics."

Article 2 states that the "Bank shall assist the recipient member countries to implement structural and sectoral economic reforms, including demonopolisation, decentralisation and privatisation to help their economies become fully integrated into the international economy." Article 2 also requires the Bank to "promote in the full range of its activities environmentally sound and sustainable development."

As its mandate is to promote private sector initiative, it has a mandate to direct at least 60% of its loans to private sector recipients or public agencies undergoing privatisation. Unlike the World Bank, which loans only to governments, (though it has a private sector lending arm, the International Finance Corporation), the EBRD not only can lend directly to the private sector, it can also lend directly to Municipalities under certain circumstances without a national government guarantee, and it can make equity investments in specific consortiums (they took an equity stake in the M1 Motorway Consortium in Hungary).

As their focus has been much more on privatisation and restructuring than the other two IFIs, their lending has focused much more heavily on the rail sector than the other IFIs, using their loans to leverage restructuring. Their lending in the highway sector has been targeted to new roads being built under Build-Operate-Transfer private concession agreements. Their ability to lend to Municipalities without a national government guarantee, first done in Krakow for the 'Fast-Tram' project, is critical to future public transit lending in the region.

Like the World Bank, the EBRD started with the assumption that the environmental monitoring and review process in the borrowing countries was not up to the standards that the donor countries would like to achieve. The EBRD claims that its

> "operations are structured to meet national and existing EU environmental standards, or where EU standards do not exist, national and World Bank standards. If these standards cannot be met at the time of Board approval, operations will include a programme for achieving compliance with national and EU or national and World Bank standards." (EBRD, 1997, p. 11)

Like the World Bank, they did not rely entirely on the EIA laws of the borrowing country but have since 1992 had their own Environmental Policy. This policy required a full EIA not only "whenever required by law," but also when a project fell within any of the following categories: "public infrastructure projects, development of a greenfield site, expansion of an existing facility onto undeveloped land, and projects with the potential to cause environmental impacts outside the area occupied by the project. Following the World Bank, the EBRD first 'screens' projects and then assigns them to category "A" requiring a full EIA, category "B" requiring a partial EIA, or category "C" requiring no EIA. While new road or rail projects tend

to be given a category "A", requiring a full EIA, there has been some controversy regarding the categorisation of certain road projects.

The EBRD has done less work identifying best practice in transport sector EIA than the World Bank, and relies heavily on World Bank material in this regard. They have done more work in-house than the World Bank on rail restructuring than the World Bank, and have a reputation of having the best technical assistance for railway restructuring of all the IFIs. The EBRD has also apparently agreed to work on developing a methodology for SEA. (EBRD, 1997, p. 15)

The EBRD has had a Transport Operations Policy since 1992. Further developments in their transport sector thinking were articulated in the 1993 "Transport Sector: Issues and Options." Their Transport Operations Policy was then extensively revised in 1997. The 1992 policy was developed before the EBRD had any track record of lending in the transport sector. For this reason, it was decided to develop a new policy in 1996 based on the lending experience of the intervening years. The new Transport Operations Policy was passed by the Board in the summer of 1997.

The development of this Transport Operations Policy was done based on internal Board initiative rather than as a result of NGO pressure, and was developed with far less extensive consultation from the NGO community. None of the major NGOs working on transport issues in Central and Eastern Europe even knew of its existence until just before it went to the Board.

The final draft of this Transport Operations Policy was strongly criticised by those NGOs who were able to get copies of the draft and allowed to comment under the auspices of their Executive Directors. The thrust of the criticism, echoed in the comments of the U.S. and German Executive Directors, and perhaps others, was the evident contradiction between their approach to the road sector and the public transit sector. For the roads sector, the EBRD said that based on its own project experience (M1-M15 Highway in Hungary, A4 in Poland), it was clear that new highway projects could not be made profitable as purely private-sector initiatives, and that the level of public sector subsidies would have to be raised in order to ensure project viability. At the same time, the draft policy recommended that no future loans be made to public transit, as few public transit projects had proved to be 'bankable' due to continuing subsidies from the government. Governmental and NGO critics pointed out that sovereign loans for public transit, roads, or rail were equally 'bankable' so long as they had a 'sovereign guarantee,' and equally risky so long as they did not. The M1-M15 highway loan was made without a government guarantee, and exposed the Bank to significant direct financial risk. Its public transit loan to the Municipality of Budapest carried a sovereign guarantee, and more or less succeeded in its objectives. That the EBRD should encourage governments to increase subsidies to less environmentally sustainable road sector loans, while encouraging governments to decrease public transit subsidies or refusing to lend to them at all, was not only logically inconsistent, it would also seem to be in contradiction to their environmental sustainability objectives.

The EBRD decided to focus primarily on lending to transport 'operations' rather than infrastructure. They agreed to lend to TENs infrastructure projects only where EBRD involvement would help to mobilise additional private sector capital (meaning for Build-Operate-Transfer highway schemes) or where there is a clear restructuring objective, as in the case of rail operations. (EBRD 1997, p. 29)

The broad thrust of the policy is that major transportation services should be privatised, while major transportation infrastructure may remain in public hands. This is broadly consistent

with the World Bank's approach as well as with emerging European norms. Like the World Bank they also stress the privatisation of the construction of major transportation infrastructure rather than its being performed by a state agency. Like the World Bank and the EU, the EBRD supports subsidised rail or transit fares only when they are subsidised by a state welfare agency or under a public service contract to a public agency rather than being made the responsibility of the rail or transit operating agency per se. Lending at ports should be focused on privatised port services and operations, or to the port itself if for the purpose of leveraging the privatisation of port services.

Ultimately, their approach to public transit lending was made somewhat less restrictive than the original draft, but it remains more restrictive than its approach to roads or rail. Despite the fact that full cost recovery remains elusive in the U.S. and most of Western Europe, the stated goal of EBRD lending in the sector continues to be full cost recovery though they acknowledge that it will not be achievable overnight. EBRD lending in the public transit sector is to be allowed, but only if subsidies to the sector are either zero, or restricted to public sector subsidies under a fee for service contract, or compensation for travel privileges/ exemptions awarded by public authorities to persons with special difficulties. The main difference is that in the rail sector they will give loans if they further progress towards this restructuring, a significant indicator for which is the cost recovery ratio, while in the public transit sector loans will be made only if these goals have already been achieved. In the road sector, the EBRD will only fund projects where the level of public subsidy is sufficient to make a BOT profitable, which tends to mean an increase rather than a decrease in the level of subsidy. As in the rail sector, but not in the public transit sector, it will fund road maintenance projects if they furthers transition objectives like the private contracting out of road maintenance, but do not require this. The mandate to limit its sovereign lending to 60% tends to limit the level of road maintenance lending.

Like the World Bank, the EBRD also has country-specific strategies, and their transport lending in that country must be consistent with its country strategy.

EBRD Economic and Financial Appraisal in the Transport Sector

The economic and financial appraisal criteria of the EBRD are similar to those of the World Bank, with virtually all of the same strengths and weaknesses, with one important difference; loans that are going to the private sector, while subject to an environmental appraisal, are assessed almost entirely on financial criteria, and IRR or cost benefit analysis is rarely employed. Loan appraisal documents presented to the Board of Directors for the A4 BOT highway project in Poland for example, did not include a cost benefit analysis..

There is no clear reason why cost benefit analysis would not be necessary for private sector loans, or if it is not necessary, why it would be necessary for public sector loans. If the justification is that the EBRD's mandate is to promote the private sector, rather than economic growth per se, then the appraisal criteria even for public sector loans should be focused on the degree to which the project promotes the private sector rather than aggregate social benefit, which is what IRR is supposed to measure. For sovereign lending, from the perspective of sound banking principles, the main issue is the degree to which the government can be trusted in honouring its guarantee, rather than the economic importance of the ultimate use of the funds, or the cost recovery ratio.

The current use of different criteria for public sector and private sector loans opens up the possibility of modal bias, although the modal distribution of EBRD lending in the region has been quite well balanced. Nevertheless, as there are no fully private sector rail or public transit

companies yet in the Baltic countries, the removal of cost benefit criteria from private sector projects only makes it easier to justify EBRD lending to BOT highway schemes.

It is well known that in BOT highway projects, the economic rate of return and the financial rate of return tend to contradict each other. The higher the tolls placed on any given road, the lower the level of traffic, and hence the lower the economic benefit of the road. At the same time, the higher the tolls tend to be, the higher the financial rate of return tends to be. In the case of the M3 highway in Hungary, for example, the Hungarian Ministry of Transport pointed out that the project was either economically viable but not financially viable, or financially viable but not economically viable. It is likely that the same was true for the A4 highway funded by the EBRD in Poland. If that is the case, the lack of a cost-benefit analysis of the project may indicate that it would not have been within EBRD standards. So long as no cost benefit analysis is necessary only on private sector projects, and private sector projects are only in the road sector, the result of this selective use of evaluation criteria will be to facilitate an increasing number of loans to the road sector.

In terms of lending to the public sector alone, EBRD evaluation criteria are roughly the same as those of the World Bank, with road projects not requiring a financial analysis, and rail loans focused on restructuring and insisting on maintaining a certain 'Working Ratio', which is another way of calculating the cost recovery ratio. While difficult to prove, the EBRD has the reputation of being somewhat more lenient on the level of cost recovery they are demanding than the World Bank, and having better technical assistance and understanding for rail restructuring, which perhaps may explain why they have been able to make substantially more rail loans than the World Bank in the Baltics.

The EBRD's transport lending in recent years has followed its Transport Operational Policy. By the end of 1996, transport sector loans accounted for 19% of EBRD lending. Like the World Bank, the EBRD's lending is restricted to the CEE countries, and does not lend in the Northern and Western Baltic Sea countries.

EBRD Roads Sector Lending in the Baltic Region

The EBRD was responsible for preparing the feasibility study for the Via Baltica in conjunction with the Nordic Investment Bank and national ministries of transport in the Baltic countries. Since then, in Lithuania they paid for the construction of five bypasses of smaller cities, the Panevezys Bypass, and the upgrading of some existing city streets in Kaunas to serve as a south-eastern bypass, and the repaving and upgrading of existing sections of the Via Baltica. In Latvia, they funded the Jelgava Bypass. While many of these investments were part of the 'Via Baltica,' the EBRD was careful to point out that these investments were justified not because they were part of the Via Baltica so much as because they were justified by local traffic demand, and because of the potential local environmental benefit of diverting truck through-traffic out of the city centres. In each case the loans were a small component of much larger loans, the bulk of which were directed towards road maintenance. According to the EBRD, in Lithuania, which has built many more expressways than any of its neighbouring Baltic Countries, "there is some evidence that past expenditures have supported extension of the motorway network at the expense of maintaining the other major arteries. The EBRD has both financed road maintenance in the Baltic countries and used their pressure to leverage greater spending on road maintenance. Their road maintenance loans in Latvia were also used to leverage reforms in the management of the Latvian Road Department, which were successful in helping to make the Latvian Road Authority one of the most politically autonomous road agencies in the region, with a sincere commitment to basic road maintenance before ambitious new road construction plans

are initiated. The EBRD also financed a study of road user charges cost recovery in Latvia which was used primarily to justify increasing the fuel tax for the purpose of improving road maintenance. In Lithuania, the restructuring work in the highway side was done by the PHARE program, so was not a focus of the EBRD transport loan.

More controversial has been EBRD funding of the A4 Operate-Transfer concession motorway between Krakow and Katowice. The Katowice - Krakow highway was built with 100% public money, but will be turned over to a private consortium - Stalexport, to operate. It will become a toll highway from July of 1999. The fees are relatively high: 10 zloty for cars and 21 zl for trucks (60 km, 1USD = 3.5 zl). The predictions are that after implementing fees the traffic on this part will diminish by 40 %, pushing the current traffic onto parallel roads. While the revenues generated from the concession fees will help to pay for the cost of the highway's construction, the local emissions ramifications of the diverted traffic has raised a lot of local criticism to the plan.

The EBRD, of all the development banks, has been the strongest proponent of the BOT approach to new highway construction, providing technical support to governments in assisting the BOT approach, and in some cases taking a direct equity stake in BOT projects. Lending for this BOT highway was seen as consistent with their mission of encouraging private sector involvement. The BOT approach in Poland, enthusiastically embraced by the Polish Government in the mid-1990s, has foundered largely because expected revenues have been well below projected, as most CEE motorists still prefer to take slower, parallel routes rather than pay the tolls. Because the EBRD decided to focus in Poland on BOT highway projects, and very few of the proposed BOT projects have actually gone forward, the EBRD's new motorway construction lending in Poland has been quite limited. The conclusions of the EBRD in their new transport policy, that the level of government subsidies to BOT highway schemes will have to be increased if they are to be financially viable, is increasingly the view of the Polish Government as well.

EBRD Rail Lending in the Baltic Region

The EBRD has lent money extensively for rail system modernisation in the Baltic countries, with extensive rail sector loans to Estonia, Latvia, Lithuania, Poland, and Russia. The loans themselves have gone for both rail track renewal, maintenance equipment, and rolling stock. The Lithuania loan was for the track renewal program for the line connecting Sumskas (Belarus Border) to the Klaipeda Port, which plays a key role in the ability of rail in the region to maintain its modal share of transit traffic to the Baltic sea port. The loan also includes funding for marshalling yard equipment and specialised track maintenance equipment. As the rail loan was part of a package to the entire transport sector, the focus of the loan on leveraging rail system restructuring was less than on rail-system specific projects, and rail restructuring in Lithuania has been driven by PHARE studies rather than IFI loans per se. While neither EBRD road nor rail lending to Russia is included in our graphic distribution of IFI lending, as most of it is not located in the Baltic region, nonetheless, the rail loan includes the modernisation of the rail line between Moscow and St. Petersburg, so it will be discussed here. Importantly, the EBRD is the only IFI lending money to the rail sector in Russia, as the EIB is not active in the country at all and the World Bank is focused entirely in the road and public transit sectors. The loan modernises the Moscow - St. Petersburg, Moscow - Nizhni Novgorod and Moscow - Samara lines, and a data communications network. The loan is used to leverage the establishment of a commercial track maintenance entity and the development of a modernisation/commercialisation strategy. The restructuring requirements here are not terribly strict and by and large constructive. The

EBRD's rail lending in Poland was joint-financing with the EIB for upgrading the rail link between Berlin and Warsaw to allow relatively high speed (160 kmph).

In the CEE countries in general, the EBRD has the reputation of having the best technical assistance for rail restructuring of any of the IFIs, and the quality of this technical support is said to be their competitive advantage for rail lending. Interviews with government officials also indicate that, while the EBRD is more strict in its demands for rail sector restructuring than the EIB, it is far more 'reasonable' than the World Bank and open to working with national governments in the direction of positive reform rather than making the implementation of the reforms a condition of the lending. Like World Bank rail lending in other parts of the CEE region, this lending tends to be accompanied by conditions which are linked to the implementation of a restructuring plan that they encourage the government to approve that is usually a modification of a plan developed by private consultants hired by the EBRD. These restructuring recommendations generally follow the requirements of the EU rail sector guidelines (the separation of the legal responsibility for the track and the rail service, as discussed below), but also include controversial measures such as the closing of extensive rural lines and replacing them with buses or cutting them all together, the reduction of service frequency, the lay-off of thousands of rail union employees, the spin off of subsidiary enterprises not directly related to rail service provision, ending cross subsidies from the freight sector to the passenger sector, and increasing tariffs. The loans also tend to include cost recovery targets which tend to drive up rail tariffs and reduce government subsidies to the rail system. None of these conditions were observed in loans to the Baltic countries or Poland, but pre-1996 information was difficult to access. The issue of rail sector restructuring and its long term sustainability ramifications are complex, but the EBRD's approach seems to be reasonable.

It is nonetheless disappointing that aside from the Berlin-Warsaw rail line, rail lending in Poland has been limited. Some critics of the high speed rail line contend that this capital intensive project has taken funds away from more pressing maintenance and rehabilitation needs.

EBRD Public Transit Lending in the Baltic Region

After nearly deciding to pull out of the public transit sector all together, the EBRD has made two loans for public transit in the Baltics since the publishing of their new transport policy, both to Poland. One, for the City of Wroclaw, was part of a flooding reconstruction loan, and as such was not really a public transit project per se, though loans for reconstruction of the flood damage were used to modernise the public transit system. More interesting was the recent loan from the EBRD for the Krakow Fast Tram project, the first major EBRD public transit loan since the issuance of its new Transport Operations Policy. While the EIB also participated in the loan, it was initiated by the EBRD.

The Krakow Fast Tram loan managed to overcome some of the obstacles to public transit financing that had obstructed public transit lending from the World Bank and the EIB. Public transit lending by the IFIs in the Baltics has been hamstrung on the one hand by the fact that many national governments were unwilling to provide sovereign guarantees for public transit projects which it considered only of local and not of national interest, while they were unable to lend directly to the private sector because most of the transit systems remain in public hands with varying degrees of autonomy. At the same time, local governments and national governments tended to be primarily interested in capital intensive Metro projects, which most of the IFIs felt were of dubious economic importance, and preferred instead to fund much more cost effective improvements in the surface systems.

The EBRD was able in the case of Krakow to make a loan to the Krakow public transit authority with a guarantee from the Municipality of Krakow but without a national government guarantee. In order for this to be acceptable, the Municipality had to agree to a careful credit evaluation by Standard and Poors, which was paid for by the PHARE program, at a cost of ECU830,000. Krakow, being a well managed municipality, was approved by Standard and Poors, though not at the highest credit rating. The EBRD also required, mainly for political reasons, a financial model of the entire city budget. The major financial risks related to the project are that it represents a significant share of the Municipality's budget (roughly one half of the entire budget), and all the revenues are in Polish Zlotys, while the loan has to be repaid in ECUs. If the Zloty declines substantially, the municipality may have trouble covering the loan. Finally, the public transit authority in Krakow is structured much as the EBRD's transport policy stipulates a transit company must be structured in order to be eligible for financing; it is a wholly-municipally owned joint stock company, which operates with subsidies as part of a public service contract with the Municipality.

The Krakow fast tram is an interesting compromise between a metro and a standard tram system, based on a system in operation in Zurich. The vehicles are virtually the same as standard modern low-floor tram vehicles, and their speeds are no different from a standard tram. The time savings to passengers comes essentially from three elements: a) a section of the system will operate in a tunnel that was previously constructed for the metro that was never constructed, b) additional dedicated right of way on surface streets, and c) a sophisticated traffic signalling system automatically changes traffic lights on city streets to correspond with tram arrival. The project's sponsors claim that the system is only 30% more expensive than a standard tram system, and costs 1/5 of a standard metro and 1/10 of the bomb-proof Warsaw metro. The plan is to implement the entire project within 3 years. By calling it a "Fast Tram," rather than just a standard tram with a better signalling system, the project sponsors were able to sell the project politically. Similar fast tram projects are now part of Warsaw's new master plan, though fighting over the Warsaw Metro continues. Lodz is apparently in negotiations with the EBRD for a similar or related project. A major complaint about major public transit infrastructure projects, like the Warsaw Metro project, is that they undermine the financing available for routine maintenance on the existing transit system. Krakow, however, has been a leader in modernising its existing public transit fleet, which is now one of the best in Central Europe. The project itself will modernise 25% of the whole tram network, (in contrast to the EIB-funded Budapest Metro project which would have provided service for only 5% of the transit system's riders), and the Municipality plans to continue to replace 7km of tram track a year to bring the entire system into a state of good repair.

Conclusions: EBRD Transport Lending in the Baltic Sea Countries

EBRD lending to railroads in the Baltic Sea countries has played an important role in nudging these institutions towards more modern management structures which will be critical to rail system survival when these countries join the EU. Their focus on lending to rail operations, rather than merely for infrastructure, is particularly important given the reluctance of the World Bank and the EIB to lend for railroad operations, which essentially excludes them from financing critical rolling stock modernisation. The EBRD rail sector restructuring requirements are not as strict as those of the World Bank, ensuring that these institutions receive much needed investment capital, while their technical support for restructuring has the reputation of being the best among the IFIs.

The EBRD's lending for public transit operations has been far more limited than it might be due to its rather prescribed conditions for public transit system lending. Their loan to the Budapest public transit company, BKV, was particularly successful in both modernising the surface public transit system, with demonstrable emissions reductions resulting from modernising their over-aged bus fleet. The loan was also used to leverage the municipality into implementing a downtown parking control program that has considerably improved downtown traffic. Given the success of this loan, and the promise of the Krakow public transit loan, it is unfortunate that the EBRD has not provided more loans for public transit system modernisation. Some of their lending requirements, such as the requirement that the transit authority already be restructured, should be relaxed so that loans could be used instead to leverage such management changes, as would be more consistent with their approach in other sectors.

Their support for highway maintenance and ring roads has also been unobjectionable, as poorly maintained roads cause severe safety problems and the wear and tear on vehicles contributes to their emissions.

Of greater concern is the EBRD's continued, though increasingly chastened support, for BOT highway projects. Support for BOTs in the future should at a minimum require that they be subjected to a cost benefit analysis and have a rate of return consistent with those of other transport projects supported by the EBRD. While experience with BOTs in the Baltics is limited to their loan to the A4, IFI lending for other similar projects around the world have raised several areas of concern. First, governments are poorly equipped for assessing the real financial risks they face when signing concession contracts. Second, BOTs often have the result of dramatically increasing the level of government subsidy to a highway project. Third, they are basically a way for governments to dramatically increase their spending on new construction above and beyond what they can really afford, but at significant cost in later years. Fourth, BOTs are often used as a way of avoiding environmental and social due diligence. Finally, most financial managers contend that when all is said and done, a BOT is a very expensive way of financing highway construction, largely due to unquantified risks and transaction costs. The EBRD needs to think much more carefully about the ramifications of BOT highway lending are for aggregate sector cost recovery levels, public accountability and transparency, and environmental due diligence, before further lending of this type.

PART C: The EIB

Overview of EIB Institutional Structures and Policies

The European Investment Bank is the House Bank of the European Union. Article 130 of the 1956 Treaty of Rome contained the provisions for its creation as an autonomous body with its own statue and legal status. The EIB is owned by the member states of the EU, who provided initial paid-in capital as part of the provisions of the Treaty. But the Bank is financially independent from the EU, it is not dependent on the European Union's budget, nor is it subject to annual budget negotiations of the member states. Increases in the EIB's capital, such as the recent doubling of its assets to establish its Pre-Accession Facility was decided on as part of European treaties, such as the recent Treaty of Amsterdam in 1997 (not yet ratified). Unlike the World Bank and the EBRD, where fundamental changes in their governance can be leveraged by applying political pressure during congressional or parliamentary budget negotiations, parliaments wishing to leverage changes in the EIB would have to do so as part of pan-European treaty negotiations, since holding up capital contributions to the EIB from national governments would place their country in violation of the European Treaties.

The EIB is not really a development bank comparable to the World Bank and the EBRD. Its mandate is not poverty alleviation, economic development, or private sector development, but rather to fund projects which foster European integration and to "give practical expression to the Unions policies, especially those aimed at achieving balanced development, integration and economic and social cohesion of the Member Countries." (EIB, 1994 Annual Report). As such, the transport policies of the European Union institutions are to some extent the policies of the European Investment Bank, but the relationship between articulated EU policy and the lending activity of the EIB is weak, and the level of EU oversight of the EIB is minimal.

It is currently the largest financial institution in the world, raising ECU23 billion in 1997. Because the EIB's mandate is to support 'European Community interests' in very general terms, the definition of these interests is left broadly open to the interpretation of EIB staff. It has an obligation by statute to further the objectives of Community development co-operation measures, which include sustainable development (Art. 130 u. and w. EC Art. 177, and 179 Amsterdam). The Amsterdam treaty also requires that environmental requirements be integrated into the definition and implementation of community policies and activities, in particular with a view to promoting sustainable development. (Art. 130. R. 2 EC; Art. 3 c Amsterdam)

Unlike the EBRD and the World Bank, the EIB has no specific mandate from the Treaty of Amsterdam, Maastricht or Rome to provide technical assistance or policy advice. Unlike the World Bank and the EBRD, which develop their own internal policies and use their lending to leverage national-level policy changes consistent with their mission, the policy-making apparatus which governs, albeit indirectly, the lending activity of the EIB, takes place through the European Union institutions rather than at the EIB itself. Less concerned about the policy leverage, the EIB is more likely to enter into a project that is already well developed, sometimes even once the project is already being implemented. The only hard requirement they have is that the project must not have completed the EIA.

In theory at least, all the transportation-related policies of the European Union are binding on the EIB, and the EIB participates in the policy dialog within EU institutions. For lending within the EU, this structure makes considerable sense, as all the borrowers are members of an organisation developing a common policy framework in the sectors in which the EIB is active. For lending outside the EU, however, EU policy is far less clear, and the EIB has a much freer

hand. While to a certain extent it could be argued that policy changes in the borrowing countries are more appropriately pursued through the accession process rather than by EIB staff members, the reality remains that the EIB's autonomous structure, coupled with secretive and vague lending criteria governing billions of ECUs of lending, gives EIB staff enormous leverage to demand policy changes from borrowing country governments but no clear guidance on how this leverage should be used, and how it can be held accountable.

Unlike the World Bank, the appraisal reports for specific loans, and many of the policies and procedures of the EIB are classified and thus not open to review by NGOs, affected parties, or even borrowing country governments. The EBRD loan appraisal reports are also restricted to Official Use Only, but are more readily available. Thus, what is known about these policies and procedures is based on what can be deduced from interviews with EIB staff and borrowing governments. The EIB justifies this greater secrecy on the grounds that its borrowers are predominantly from the private sector, and its clients demand a greater level of confidentiality. Why this would not also apply to the EBRD, however, is unclear. Like the EBRD, the EIB lends to both the public sector and the private sector, and although it has no mandate to lend a particular share of its lending to public versus private borrowers, the division generally ends up at roughly the same 60%/40% split that the EBRD mandates.

The EIB staff is divided into several Directorates, two of which have the most direct bearing on transportation lending, the Lending Directorate and the Projects Directorate. There is a separate Directorate for Lending Inside the EU and a Directorate for Lending Outside the EU. The Lending Directorates sets the broad outlines of lending operations in a given country, and for operations outside the EU sets the credit limit for that particular country. It is then up to the Projects Directorate to decide whether the money will be directed to rail, roads, or public transit. For issues of sustainability, then, the decision-making procedures inside the Projects Directorate are the most relevant.

When the EIB appraises a project, they first look at the legal and administrative framework within the country. Even though the EIB is largely distinct from the European Commission, like the Commission it is still bound by statute to adhere to all relevant and binding EC legislation.

Within Community Law, there is a Doctrine of Direct Effect, which says that national implementation of a community-sponsored project has to be consistent with the *acqui communautaire*, even where the rules are not necessarily clear. The more clear the EU directives and regulations, the stronger the effect that this doctrine has. For procurement rules, for example, the EU rules are very clear. For environmental issues, where criteria for non-compliance are much less clear, the requirement is far weaker.

The main leverage that the EIB has over the borrowers, or the project's 'promoters', is that it can refuse to finance the project, and it can require that environmental covenants of the EU are complied with before the loan is approved. It is thus during the loan negotiation phase that the EIB has the most leverage to assure compliance with EU environmental directives.

Even within the European Union, the directives are not easily enforced by Community Law directly. Rather, environmental directives tend to be enforced only when they are translated into permit conditions at the national level. It is up to the competent authorities in each country to identify the appropriate permit conditions, and it is the permit which obliges the project's promoters. Even within the European Union there is often a considerable gap between national legislation and the requirements of EU Directives, particularly in the environmental area, and the

leverage that the Community has over the member states for non-compliance (though formally they can take the delinquent member to the European Court of Justice) is quite weak.

While inside the EU violations of environmental directives can be somewhat enforced through the granting of permits at the national level, the procedures for which must be consistent with EU regulations, for lending outside of the European Union, there is no mechanism to ensure that the permit conditions are consistent with EU Directives, and if they are not, it is not at all certain that this will stop a loan from going through.

Because the EIB began its institutional life lending within the EU member states, and the EU member states have all agreed to comply with the Acqui Communautaire, it was not seen as necessary to set up a parallel set of EIB-specific environmental impact assessment procedures, or an EIB-specific transportation policy. This means that, in theory at least, the EIB's lending should follow the Directives and Policy pronouncements of the European Union institutions. As such, a determination should be made whether its loans are consistent with European Union policies and directives. A review of all EU environmental Directives and policy statements relevant to transport sector lending at the EIB is beyond the scope of this paper, but EIB lending in relation to some important elements of EU transport policy will be discussed in Section E below.

When making a transport loan outside the EU, the EIB staff first determine whether the country's legal and administrative framework is consistent with EU Directives. If it is fairly consistent, and the reputation of the borrower is reasonably good, they are likely to scrutinise the project less carefully. When it is not, the EIB staff ostensibly will scrutinise the project's environmental compliance more carefully, though in practice their capacity to do so is quite limited. Essentially the EIB project staff member has to fill out a single page check list which asks such questions as whether public hearings were held or not, the environmental sensitivity of the location, the category of Community legislation to apply (EIAs are compulsory for some types of projects, and up to national legislation for others), whether the EIA is completed, etc. The project director goes through the thousands of pages of EIA materials and checks off these boxes on this single sheet of paper, and this is what is presented to the Board for loan approval.

The EIB has not developed an internal staff with specific expertise in environmental impact assessment appraisal. Unlike the World Bank or the EBRD which have extensive staff trained in environmental appraisal of projects, the EIB has virtually no one on staff with these skills. A single project officer is responsible for reviewing over a dozen major transportation projects and whether the EIA performed for each project is in conformity with European Union Directives. As each EIA may be thousands of pages long, and the project officer is trained as a banker rather than an environmentalists, his ability to determine whether the EIA is in compliance with EU directives is quite minimal.

For example, there is a box on this appraisal sheet to check whether or not a public hearing was held on the EIA for the project. This is confusing because in fact there are two project-specific permits requiring an EIA, one is a 'Location Permit,' which identifies a specific corridor for a particular transportation project. The other is a Project Specific Analysis. While EU Directives on EIA require that the EIA be presented in a public hearing to affected populations and interested parties, it sometimes happens that only the 'location permit' EIA is presented at a public hearing, and not the 'project specific EIA.' This will not stop a project from going ahead, however.

In the case of a violation of an EU Directive by a project sponsor, the EIB has said that it does not feel that it is the appropriate agency to enforce a violation of this type. According to EIB legal staff, "The Bank's role is not law enforcement, it is to provide funds to implement projects in the interest of the community." Unfortunately, for lending outside the EU, there is no other institution with any mechanism for enforcing such a violation. An inquiry can be requested through the Ombudsman or the European Parliament, but thus far this mechanism has not proven to lead to any significant level of accountability.

Economic Appraisal at the EIB

The EIB is also required to perform a cost benefit analysis on its loans because under the Treaty of Rome it is obligated to 'distribute funds in a rational manner' (interview with EIB legal department). Currently, the EIB has said that its current economic evaluation criteria does not include the quantification of external costs, but it is currently developing a methodology for doing so. A concrete timeline for the introduction of external costs in its cost benefit analysis would therefore be in order.

The way in which cost benefit analysis is applied, however, is open to considerable latitude. The ERR is generally done by the project promoter, and if the EIB has made any clear statement of what it considers an acceptable methodology for ERR analysis, it is not open to the public, and experts familiar with the EIBs procedures point out that the ERRs are not done in a consistent manner.

The EIB has funded many projects where the IRR/ERR was below even the cost of capital, such as was the case of the Budapest Metro and the M3 highway in Hungary. The White Paper seems to grant them the latitude to do this. However, it justifies this only in the case where the benefits to non-users are sufficient to justify the project. Without a clear quantification of these 'external benefits,' and clear guidance on how these benefits can be quantified, simply allowing the EIB to fund projects with cost benefit ratios below the cost of capital would seem to violate their mandate to distribute funds in a 'rational manner'.

The EIB does not have a formal policy on BOT projects, but their staff have taken informal positions at several public forums, and their approach is much less supportive of BOT highway schemes than the EBRD and the DG7. Their essential argument is that BOTs are simply a more expensive, more risky, and less accountable way of raising the financing necessary to construct major new highways. As such, they have only funded sections of the Polish Motorway system which are not tolled, like the Poznan bypass, and untolled sections of the A2. They have also spoken against 'road funds,' agreeing with the IMF that earmarking of taxes only inhibits the flexibility of government decision-making, whereas the World Bank conditionally supports road funds for some purposes.

Overview of EIB Transport Lending in the Region

Because access to EIB loan appraisal reports is tightly restricted, in depth evaluation of their loans is much more difficult than for the other IFIs. Nonetheless, some observations can be made based on the information available in their Annual Reports, their own press releases, and from interviews with EIB officials and government officials from the borrowing countries that have had experiences dealing with the EIB.

In terms of the modal distribution of their lending, the EIB claims that they try to maintain a certain 'equilibrium' in their lending between modes. When EIB lending as a whole is

evaluated, the heavy preponderance of loans for airports at 15% seems questionable from a sustainability perspective, and the relatively insignificant 1% share of loans going to public transit is disappointing. The 32% going to roads and 20% going to rails seems a reasonable tilt in favour of rail given the relative modal split for the region as a whole which is heavily dominated by road transport.

EIB lending in the CEE countries, however, is heavily dominated by road lending, in a region where the rail systems are in a state of severe deterioration. Nonetheless, total EIB lending to the CEE countries' rail systems has been greater than that of the other two IFIs combined.

EIB Roads Sector Lending in the Baltic Region

In the road sector, the most striking thing about EIB lending in the Baltic Sea region has been the heavy preponderance of loans for new construction. While the EIB does have loans with a maintenance component in Lithuania, and made no road loans in Estonia or Latvia, in Poland all of their road loans have gone to new construction. This contrasts with the EBRD, which has funded new road construction projects primarily if they are BOTs, an approach which seems to be losing favour in the region, and with the World Bank, which has been financing primarily rehabilitation, maintenance and bypasses. The EIB, by contrast, has primarily funded the new construction of untolled highways. In the CEE countries, these loans are all in Poland. They funded important sections of the A4, the A2, the Krakow Ring Road, the Poznan 'Bypass,' (which actually cuts through the city), and most recently the DTS, a highway that passes through high density urban neighbourhoods between Katowice and Gliwice. Nearly all of these projects have been the focus of conflict with environmentalists for various reasons. The EIB claims that its focus on new construction in Poland is justified because a) they originally supported more road maintenance projects, but as Poland's economy is recovering they can increasingly afford new roads, and b) the World Bank is funding the rehabilitation and maintenance needs. In the Northern and Western Baltic countries nearly all of the road projects are related to the new Great Belt bridge connecting Denmark to the Continent, and access routes related to this bridge and the new road/rail bridge between Denmark and Sweden. Finland has also received significant loans for the construction of the E18 East-West Road through southern Finland, which links Russia to the Baltic Port of Tartu. EIB road lending in Germany has been minimal, and nothing has gone to Norway for roads.

The EU's approach to the 'affordability' of the new road construction in the CEE countries is outlined in their TINA progress report. This report stipulates the completion of the TINA network will require that the accession countries spend at least 1.5% of their GNP on the network. According to the DG7's calculations, the entire TINA backbone network and the additional components are easily affordable in Poland and Estonia, while in Latvia and Lithuania, only the backbone network is affordable based on this rule of thumb approach. Whether this assessment will have an influence over EIB lending in the region is difficult to say.

The EIB's position, that their focus on new construction is more a matter of division of labour with the other IFIs than a matter of policy, is partially true. The IFIs co-ordinate their lending priorities at the G24 meetings every year. However, it is also somewhat disingenuous, and there have been a fair number of cases where projects that were outright opposed by the other IFIs, such as the M3 in Hungary and the Budapest Metro in Hungary, were funded by the EIB over the objections of the World Bank. Based on conversations with other IFIs, it is more like the World Bank and EBRD decide through their internal policy making process what they are willing to fund, and those projects that they are unwilling to fund are then picked up by the

EIB which has much weaker internal policy guidelines, has a much weaker information disclosure policy, and lacks the staff to perform significant environmental due diligence.

Polish government officials, when interviewed, indicated that the EIA requirements of the EIB were much looser than those of the other IFIs. Environmentalists have raised concerns about many of the new construction road projects funded in Poland. The Poznan Bypass is not really a bypass as it cuts through a large part of the city and passes over the city's water supply. Environmental organisations have sued to have the construction stopped due to threats to the city's water supply. The lawsuits were dismissed, as the Polish Motorway law, which is probably in violation of the EU EIA Directive, makes it very difficult to stop a motorway project on environmental grounds. Objections to the DTS and the Krakow Ring Road are also likely on the grounds that as they both pass through heavily urbanised areas they may drive the air quality in the communities adjacent to the highway into violation of ambient air quality norms, which are about to be tightened by the Commission and extended to SO2 and NOx. It is not in the interest of environmental due diligence that the IFI with the weakest internal environmental review procedures is the one tasked by the G24 with funding most of the new construction projects, particularly those which raise the greatest environmental concerns.

It is also true that the level of new road construction in Poland may to a certain extent be compromising the ability of the Polish government to provide sufficient funds to maintain and rehabilitate the existing road network, and to maintain and rehabilitate even the priority corridors of the Polish rail system. Providing large loans for new road construction in Poland is thus not merely complimenting the lending activities of the other IFIs, it may also be compromising the maintenance and upgrading objectives of the World Bank.

EIB Rail Lending in the Baltic Region

In the rail sector, the EIB is lending money primarily for rail track improvements on international corridors, rather than for rolling stock for the rail companies themselves. By the time the CEE countries join the EU, routes on these international corridors will have to be made open to competition from Western European international rail consortiums which will be able to compete with national rail carriers. EIB rail sector loans therefore tend to go directly to the governments, rather than to the railroad companies themselves, which will be competitors to Western European railroads once international rail travel is deregulated. The fairly slow process of restructuring inside the CEE-region rail systems is likely to make it difficult for these railroads to compete with Western railroad consortiums with modern rolling stock, ticketing, and information systems. The EBRD, by contrast, has been lending money to the CEE-region rail companies primarily for rolling stock, as a way of leveraging the sort of restructuring mandated by the EU directives, and helping them to modernise and compete.

Like their road lending, the EIB's rail lending in the Baltic region as a whole has predominantly gone to improving access rail links related to the new road/rail bridge between Sweden and Denmark. Finland also received significant funds for an improved rail link between Turku, Helsinki and the Russian Border. At least for their lending to Baltic Sea countries inside the EU, EIB loans for rail have roughly paralleled the corridors which also received significant road development funding.

EIB rail lending in the CEE countries focused on improving the track infrastructure on the Tallin-Narva-Russian Border line in Estonia, and in Latvia will modernise and expand the rail capacity between the Russian Border and Latvian Ports. In Poland the vast majority of EIB rail lending went to bringing the Berlin-Warsaw-Moscow rail link up to higher speed standards.

They also funded the rehabilitation of the first section of the Warsaw-Terespol-Belarussian frontier railway line.

EIB Public Transit Lending in the Baltic Region

Given the focus of EU policy on European Integration, it is surprising that the EIB has made any public transit loans at all. The only public transit projects funded by the EIB in the EU Baltic countries are in Germany; two for commuter rail modernisation in Stuttgart, and one for tram and bus fleet improvements in Rostock. The only public transit loan in the CEE Baltic countries went to the Krakow Fast Tram project in Krakow. This project was initiated by the EBRD, and the EIB agreed to provide joint financing at a late stage in the project development. The Krakow Fast Tram project was described above. The EIB approved the loan accepting a commercial guarantee in place of a sovereign guarantee, making the loan possible. While the Krakow Fast Tram project has been criticised by some experts in the field as being a scaled-down version of the fascination with glitzy modern infrastructure at the expense of more practical ongoing improvements in the surface transportation system, it is a reasonable middle ground, and the balance of the Krakow transit system is in a state of reasonably good repair and the vehicle fleet age is declining. An EIB loan to the Budapest Metro was much more dubious from this perspective, as it was extremely costly and improved the trip for 5% of the passengers while threatening the quality of service for the remaining 95% of public transit passengers. Clearly, the EIB's willingness to lend to the Budapest Metro when the World Bank found the project not to be financially viable indicates a rather less rigorous economic appraisal by the EIB for public transit projects.

EIB Port and Airport Investments

The EIB has been extensively involved in airport and port modernisation in both the EU countries and the CEE countries of the Baltic region. In the EU countries, the largest recipient of airport funds was Germany, which funded the modernisation/expansion of many of its airports with EIB funds. Copenhagen also modernised its airport with EIB funds. The only major port loan for the EU countries went to Germany for a container terminal expansion at Bremerhaven, which is on the North Sea, not the Baltic.

In the CEE countries, they funded the modernisation of the Vilnius Airport in Lithuania, the modernisation of the air traffic control system and the passenger terminal at Tallinn Airport in Estonia. They also funded the improvements to the access channel to the port of Ventspils, and the reconstruction and the strengthening of the quays. They funded a small container terminal and roll-on/roll-off facilities at the Port of Klaipeda. They also funded the construction of a dry bulk terminal in the port of Muuga (Tallinn).

Without further information, it is difficult to say much about this lending except the obvious point that air travel is expanding dramatically with serious consequences for CO_2 emissions and NOx, though the particular role that these loans have had on this process is difficult to gauge in isolation of other factors.

Conclusions Regarding EIB Transport Lending in the Baltic Sea Countries

The EIB plays much less of a direct policy-making role than the other IFIs, as this role is assumed by the various branches of the European Commission. While EU policy does have an influence over EIB lending, as most of their transport funding is directed to the TENs and TINA-identified projects, (discussed below) the EIB has the latitude to fund projects that 'further EU

objectives' only in the most general of ways. Its environmental review and monitoring of transport loans being much weaker than for the other IFIs, and its accountability also much weaker, they have increasingly taken on the role of funding new construction projects which are the most likely to be controversial from an ecological perspective. While the modal split of their lending as a whole is quite reasonable, in the CEE countries it is heavily weighted to new road projects. As the cost benefit criteria used to make the decisions about investments are unclear to non-Bank staff, it is difficult to know whether this is the result of some bias in their evaluation criteria, a discretionary decision on the part of the staff, or mainly a reflection of the lending requests they receive from the borrowing countries. As their new loan facility for the CEE countries is targeted to meeting the requirements spelled out in the accession negotiations, the contents of these negotiations is likely to determine the direction of lending in the immediate future. Where they have made loans for rail and public transit, the focus has been on expensive new construction projects rather than on meeting the backlog of unmet rehabilitation needs. In the rail sector they have also focused on track improvement on international corridors, rather than on the rolling stock for rail companies, perhaps because these lines will be open to Western European competition once these countries join the EU.

The way in which the EIB uses its lending to leverage policy change is the least transparent element of its lending, and the cause for the greatest concern. Unless the EIB has a clear policy governing the goals toward which this leveraging is applied, the enormous staff prerogative in this regard seems inconsistent with accountability and environmental due diligence.

PART D: Other Infrastructure Funding Sources in the Region (PHARE, ISPA, NIB, NEFCO)

PHARE

PHARE, set up in 1989-1990, provides grant funds, rather than loans. At the beginning (1990-97), Phare funds were distributed based on a "demand-driven formula." It was mostly aimed at technical assistance for Central Europe (Restructuring, Institutional Capacity Building). Most of the projects were also connected to the preparation of future investment projects by means of pre-feasibility and feasibility studies. These feasibility studies were done only on the Helsinki TEN corridors. From the point of view of directing investment to road versus rail projects, the PHARE-funded pre-feasibility studies are critical because it is at this stage that an alternatives analysis is performed, which might compare investments into maintenance versus new construction, and into different modes. By providing funding for pre-feasibility studies which are prepared in such a way as to ensure project eligibility for IFI funding, and then circulating them to the IFIs, PHARE has helped to direct IFI lending to the TENs, (and implicitly, away from other possible investments).

PHARE has also funded a lot of studies related to the transition process, such as proposals for restructuring at Lithuania National Railroads, and Master Plans in some cities.

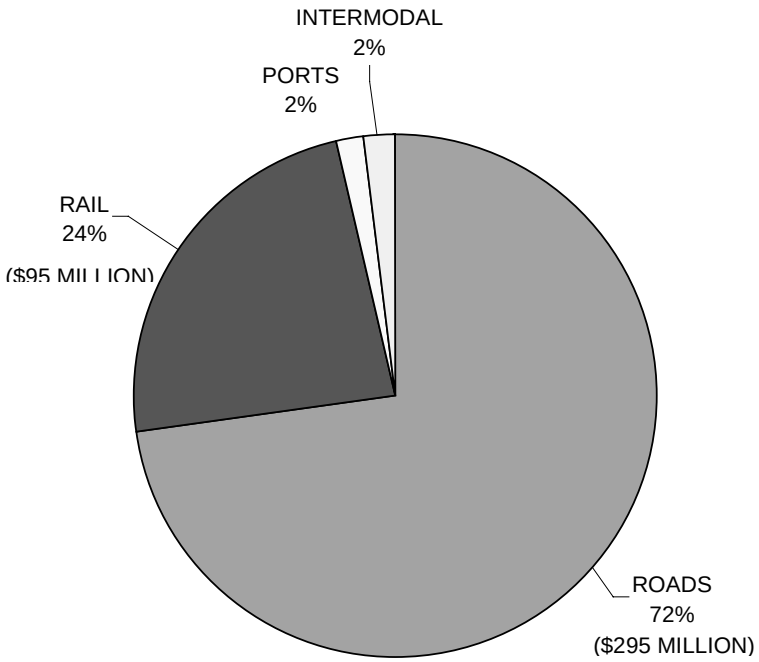
After the Summit in Copenhagen (1994), it became possible for PHARE to finance infrastructure in the region directly, with special attention given to boarder crossings. Other than for border crossings, PHARE can directly finance infrastructure projects if grant funds are necessary to make an IFI -funded project financially viable. Because the IFIs frequently require between 30-50% matching funds from the national government for major transportation loans, many CEE governments find it difficult to raise their share of the investment. PHARE funds can be used to meat half of the national government's matching funds. PHARE funding, therefore, has played a key role in making possible certain large infrastructure projects which otherwise would not have been financially viable.

PHARE has provided roughly $406 million in grant funds to major transportation infrastructure improvement projects in the Baltic countries of Poland, Estonia, Lithuania, and Latvia. (Graph XIV) Of this, $295 million, or 72% went to road projects. Of these road projects, 51% of them went to new construction projects, predominantly but not exclusively on the TINA core network. (Graph XV) "Bypasses" of smaller cities received 24% of the grants, although it should be pointed out that nearly half of these funds went to the Poznan Bypass which actually cuts through part of Poznan, and which has been very controversial among environmentalists. Another 14% went to road rehabilitation projects, mostly on the TINA network, and another 11% went to border crossings scattered throughout the region.

PHARE has also funded some studies on urban transport, but no urban infrastructure projects. Sometimes municipalities come with concrete projects, but they usually want to finance particular products (i.e. to buy trams from particular company), and PHARE can not support that because it has not been subjected to competitive bidding which is a requirement of all funding from the EU. But PHARE personnel also admit that municipalities are definitely not a priority for PHARE transport projects.

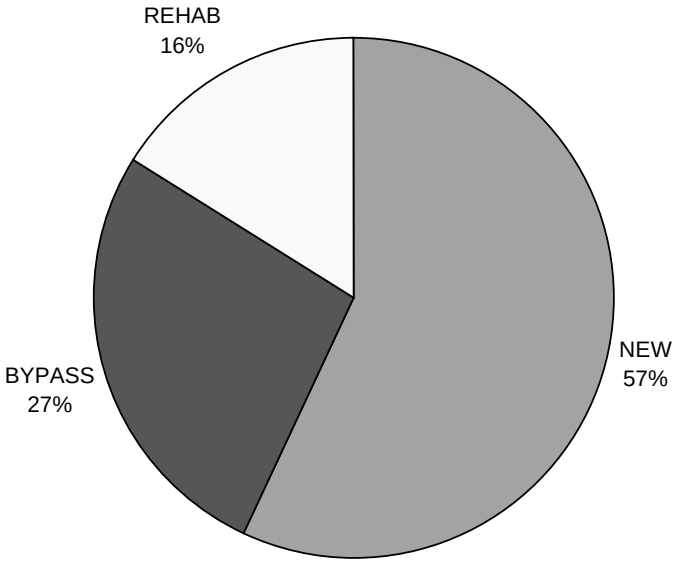
GRAPH XIV

TOTAL PHARE GRANTS BY MODE IN BALTIC SEA COUNTRIES



GRAPH XV

USES OF PHARE ROAD GRANTS IN BALTIC SEA COUNTRIES



Since 1998 the formula has changed from 'recipient driven' into "accession driven." The assumption is that Poland can present projects but it is the Commission which will decide according to accession priorities. The priority in transport is definitely the completion of the Crete corridors and its links identified in the TINA process.

All PHARE projects now are grounded in a document called "Poland: Accession Partnership" signed in early 1998. It is a document of the Commission, but prepared in co-operation with the Polish Government. It defines the priorities and areas of interest to both sides.

In terms of transport it says:

> "Efforts must be made to ensure the necessary legislation and effective implementation in road haulage (access to the profession, weights and dimensions, safety rules, road tax), the maritime sector (safety), and air transport. Financial transparency must be provided in the rail sector. Steps must be taken to ensure the future extension of the trans-European networks. Inspection bodies, in particular for transport safety, should be strengthened. At a national level there is a need to develop specific strategies for transport infrastructure development and financing."

Proposals for projects can be presented by both sides, but it must be in conformity with the accession priorities. Every year they agree on the yearly budget. Different ministerial bodies prepare project proposals, which are then assessed by the Committee for European Integration (Polish governmental body set up for the accession process).

The planned budget is then discussed by the Management Committee (organised by the Commission, with representatives from each EU member country, and dealing with all PHARE projects). Afterwards, the agreed upon package of projects – Country Operational Program (COP) – is signed into a governmental agreement between the government and the Commission.

The implementation is usually decentralised, done by different governmental bodies according to EU requirements (for example, on public bid). Since 1998 they decided to change the system a bit, to minimise the amount of implementing agencies. Now they plan to have a few sectoral ones (such as the Ministry of Transport, the Ministry Of Environment and the Ministry of Agriculture) and a special unit called Central Financing and Co-ordination Unit which will implement projects not linked to sectoral undertakings.

About 70% of PHARE funds are now planned for infrastructure investments, while the other 30% will go to capacity building, institutional restructuring, etc.

ISPA

ISPA, the planned pre-accession grant facility that will begin operating in 2000, is similar to the Cohesion Fund, and its rules and procedures are closely based on the rules and practices of the existing Cohesion Fund. Funding per country will be based on four criteria: a) GDP per head, b) surface area, c) population, and d) a weighting for countries with the greatest needs for investment in infrastructure. Co-financing from IFIs is not obligatory, as it is for PHARE. The Council of Ministers of the European Union still haven't decided up to what level the financing will take place (maybe even up to 75% of the project costs). ISPA will cover the ten PHARE countries which are currently negotiating for accession into the EU. It is envisaged that ECU500 million will go towards transport and an additional ECU500 million ECU will go to

environmental projects annually. In transport it is going to be mostly for roads and railways, airports and seaports. Once again, public transport is largely excluded from the eligibility criteria except to the extent that rail systems serve a dual function for both intercity and commuter travel.

The Nordic Investment Bank (NIB)

The NIB has only about 120 employees which is very little compared to other IFIs. Much like the EIB, 80% of their lending is in their donor nations, that is in the Nordic countries themselves. The major part of the remaining 20% is in South East Asia, the Russia, Czech Republic, Hungary, but also in Poland and the three Baltic States. They have also done a lot of transport projects in Turkey, and small industry development in India. They have a global loan facility much like they EIB. Their lending volume is about ECU2 billion annually. Maturity of projects loans is about 15 to 20 years.

Unlike the World Bank and the EBRD, the NIB does not have country-specific programs. They are very project oriented, and also very sponsor driven. Their project volumes are about 10 to 20 projects per project officer, so much like at the EIB, there is little time to actually initiate projects. So the projects that come to the NIB are usually in quite an advanced stage already.

Generally, the main criteria for NIB participation in a project is that there is "substantial Nordic participation" and interest in the project.

Overall, about 20 percent of NIB's lending is dedicated to environmental projects, decreasing pollution etc, energy and waste projects. Volume for this is about ECU1.2 billion. Unlike for their other projects, environmental projects do not need two Nordic partners. Since NIB is a member of Helcom, they have been financing many Baltic Sea projects, about 120 projects from 1990 on, especially regarding the Hot Spots in the region. (Unfortunately many of the Hot Spots are not economically viable projects.)

Transport sector project make up about 12 percent of their lending (this is a conservative estimate). Energy makes up about 20 percent. In the 1990s they have spent about 2.3 bio ECU on infrastructure.

The Helcom guidelines are an important issue that NIB takes into account beyond environmental project guidelines. For example, they stopped an oil terminal project in Lithuania that although it would have fulfilled national requirements would have created oil spillovers to the Latvian side and thus violated Helcom recommendations. So they cancelled the project. This is primarily because 4 out of 5 Bank owners are in Helcom .

NIB advertises itself as very social and human rights conscious, and they have indeed done social impact assessment in projects where appropriate, for example for a paper mill project in an area in Estonia with a large Russian minority population. However there are no social specialists in NIB, someone in the appraisal department has to do it.

Financial and Environmental Appraisal at the NIB

The NIB does its own in-house work for EIA. EIAs for big road projects are usually done by the state and NIB cannot really go beyond these assessments. In general, they require national environmental standards to be met, but if these are weaker than World Bank standards, then World Bank standards have to be met as a minimum. They do not require the countries to meet

the often even more stringent Nordic country standards. Projects in the Baltics also have to be in compliance with EU directives.

After the load application, the initial environment screening decides whether the project is an A, B or C project (these are similar to World Bank categories). Typical A project are power plants, bridges, tunnels, roads etc. Typical C projects are company mergers or the modernisation of the Polish telephone system that only required the exchange of equipment at the stations). The Environmental Reviews are always appendices to the loan applications. During the ongoing project operation, environmental audits are done (like at the EBRD). The project sponsor is asked to provide written EIA reports.

Environmental Audits have to be tailor-made, especially in shakier countries like Russia. Other project requirements include compliance audits and liability audits.

If EIAs are found in violation of environmental or public health laws, NIB claims that they would stop the project. To determine if major transport project violate national environmental and public health laws, the NIB has regional specialists.

NIB decides whether to do a cost benefit analysis for a project according to the affordability principle. If it is a big, old-time client applying for a small loan, NIB would probably not require a cost benefit analysis.

For transport projects, NIB does not require the quantification of environmental externalities, noise externalities, congestion externalities, effects on non-motorised users, generated traffic or the economic impacts of parallel corridors. They point out that even the EIB has just started to try to incorporate these factors into their cost benefit analysis.

In principle, there is an alternatives analysis required, but in practice the form varies. NIB always undertakes project visits, either themselves or by sending our a consultant.

The major transport project in the region which the NIB partially financed was a section of the Via Baltica. NIB financing focused, like PHARE funding, on the border crossings. There is still a 1 day wait for border crossings at the Polish-Lithuanian border. NIB has tried to help with customs clearing improvements, for example finding ways to do all the border papers for all countries in Helsinki and then be able to go all the way to Berlin.

The Nordic Environmental Finance Corporation (NEFCO)

NEFCO was set up in 1990 and only does environmental projects. Their whole staff consists of 9 people, three regional managers, project people and back office. There is always a Nordic partner involved in their projects, except when the project is a grant project. The reason they were set up was to be able to take more risk with projects, and not affect the NIB's credit rating. Their project are between 1 and 3 million per project, not to exceed 4 million. It's essentially a soft loan facility. A main difference between NEFCO and NIB is that the BOD for NEFCO consists of the Environment Ministers of the Nordic countries, whereas for NIB it is the Finance Ministers.

It should be noted in this context that the so-called Nordic Council of Ministers is a long-standing regional council set up in the 1950. It's a regional forum where the ministers for all resorts meet separately in regular intervals.

Right now NEFCO does not have any transport projects, but in principle there is nothing that keeps them from doing one. NEFCO also taps into existing twin cities programs, where Nordic municipalities team up with Baltic or Eastern European municipalities and exchange technical assistance.

NEFCO is planning to do more environmental projects in the east. Right now most project are in Poland. NEFCO has 4 or 5 Board meetings a year and they try to present a new project every time.

PART E: EU Transport Policy, the Accession Process and its Relation to Transport Infrastructure Investment Decision-Making at EU Institutions

The transportation infrastructure investment decision-making process in the Baltic Sea countries cannot be understood in isolation of the dramatic changes resulting from the collapse of Communism in the Eastern Countries, and the desire of Latvia, Lithuania, Estonia, and Poland to become members of the European Union. While the World Bank and the EBRD have their own internal policies as international development institutions, and their lending in the region is driven largely by these policies, the decision-making process at the EIB, PHARE, ISPA and other financial and grant-making institutions within the European Union will be heavily influenced by EU policy and the eventual contents of the accession treaties.

Most critical to understanding the nature, direction, and problems of EU transportation infrastructure funding activity in the region is an understanding of the way in which European transport investment priorities are set. Secondly, there is existing and evolving Community policy regarding the regulatory framework in which transportation services are provided. These regulatory issues are often the policy changes which IFI financing is attempting to leverage, and as such the approach of the different IFIs to regulatory reform often affects their investment decision-making. An important element of this is the co-ordination of user fees. EU institutions have become involved in transport user fee regulation because they can function as trade barriers, while at the same time play a critical role in traffic demand management and its important transboundary pollution ramifications.

The Emergence of a Common European Framework for Transportation Infrastructure Priority Setting

In divided Europe, a platform for the co-operation between Western and Eastern countries was provided by the United Nations Economic Commission for Europe (UNECE). The UNECE established international agreements on main transport networks for railways (AGC), roads (AGR) and combined transport (AGCT). Programmes such as Transeuropean North-South Motorway (TEM) and Transeuropean North-South Railway (TER) involved East-West co-operation. As a result of these agreements, by 1990, there were already international traffic routes between Eastern and Western Europe, called 'E' routes. These agreements functioned as a mechanism for co-ordinating national transportation investment priorities and route selection. However, the density of transport networks included into these agreements and programmes in the eastern part of Europe was much lower than in the Western part.

In the first period following the transition in 1989 a number of new initiatives were taken by the European Conference of Ministers of Transport (ECMT), OECD and regional groups of countries (Baltic, Black Sea, Central European Initiative, Mediterranean) to improve international transport and to reduce and eventually eliminate the differences between countries and regions. The Trans-European Network (TEN) within the EU and the T*rans-European Transport Corridors*, (which includes links with the TENs into Central and Eastern Europe and into the former Soviet Union) are the most important initiative.

The Trans-European Network and Trans-European Transport Corridors

The TEN process began in 1991 at the first Pan European Transport Conference, and was included in the Maastricht Treaty of 1992. The general rationale for developing a "Trans-European Network" is that a single Europe needs a single, coherent transportation system. Article 129c of the Maastricht Treaty reads as follows:

"In order to achieve the objectives in Article 129b, the Community:

- Shall establish a series of guidelines covering the objectives, priorities and broad lines of measures envisaged in the sphere of trans-European networks; these guidelines shall identify projects of common interest."

The concerns raised by the reunification of Germany, reflected in the EU "White Paper on Growth, Competitiveness, and Employment," led to further endorsement of the TEN concept by governments in December of 1993.

Specific corridors were identified at the Second Pan-European Transport Conference in Crete in 1994. The idea of supplementing the Trans-European Network (serving the European Union) with nine "layer 2 priority corridors" serving CEE countries was also adopted in Crete . Many, but not all of the routes that were eventually selected to become parts of the Trans-European Network concept were initially the "E" routes identified previously by the UNECE, but the dramatic changes in travel patterns required some changes and additional routes. The countries concerned, in the framework of the G-24 Transport Working Group and with the assistance of the European Commission and the International Financial Institutions undertook joint efforts to implement the programme by the target date of 2010.

While the ten Pan European Corridors are clearly understood as investment priorities, their legal and political status are ambiguous. For all corridors, Memoranda of Understanding were signed by interested countries, and they form the basis for further co-operation and for national partnership agreements. The corridors, however, do not imply exclusivity – Phare and the EIB have and continue to contribute to projects outside the corridors. The much larger structural funds will likely do the same as they become available. (CEPS, 1998, p. 10)

Trans-European Networks (TENs) and Trans-European Transport Corridors are thus essentially a series of 'Master Plans,' or maps of the main transport corridors. They actually consist of a 1990 high speed rail master plan, a 1993 combined transport master plan, a 1993 road master plan, a 1993 inland waterways master plan, and 1994 master plans for conventional rail, airports, and seaports. The European Commission developed the TENs in order to help member governments co-ordinate the development of critical international trade corridors, and provide a supposedly objective basis on which to determine eligibility for financing from European Union institutions, primarily loans from the EIB, and grant funds from the 'Cohesion Fund,' the 'Structural Funds,' and PHARE funds. Only the EIB and PHARE operate in the CEE countries. The Community agreed to support the financial efforts made by the Member States for the projects identified as part of the TENs, through feasibility studies, loan guarantees, interest rate subsidies, and outright grants.

The Trans-European Road Network (TERN) was developed by the Motorway Working Group of the European Commission's Infrastructure Committee. This group was made up of the Commission, member states, the European Conference of Ministers of Transport (ECMT), the UN Economic Commission for Europe, the International Road Federation, the Permanent International Association of Road Congresses, the Secretariat European des Concessionaires d'Autoroutes a Peage (SECAP), The European Round Table of Industrialists (ERI) (major corporations), the Association des Constructeurs Europeens d'Automobile (ACEA), the International Road Transport Union (IRU), the International Touring Alliance, and the European Investment Bank (EIB). Support for the TENs, and the power to identify which corridors qualify as part of the TENs has been thus dominated by the European Commission and business inter-

ests, with minimal input from NGOs or the European Parliament. Of the members of the Motorway Working Group, only the European Commission's Directorate General for the Environment (DG11) had any familiarity with environmental issues (Bina, 1995).

The first phase was thus the identification of the network, a network which consisted of road, rail, airports, ports, and a limited amount on inland waterways, and now it is moving to a project identification phase. Twelve priority corridors for Western Europe and nine for the CEE countries were initially identified in Crete in 1994. In 1997 at the 3rd Pan European Transport Conference in Helsinki, a 10th corridor was added (through the Former Yugoslavia), and several Pan European Transport Areas were defined, namely 'the Barents,' the Adriatic, the Black Sea, and the Mediterranean Sea, but not the Baltic Sea. There were already so many things going on in the Baltic Region they decided it would add to the confusion to create a Baltic Transport Area. Links between Europe and Asia, particularly through Central Asia, were also discussed.

The initial selection of the TEN and the Corridors at Crete was based on fairly political criteria rather than purely on traffic data. Every capital had to be on at least one corridor in order to ensure political support. Corridor Number 8 connecting Bulgaria, Macedonia, and Albania was basically added because otherwise no corridor would pass through Albania. Certainly the traffic on Corridor 8 will be too low to justify the construction of a new motorway or railway in this corridor for years to come. Greece, meanwhile, is planning to build a parallel corridor on the Via Ignatia from Thessaloniki to Dominitza. From 1993 to 1997, then, the corridors were more or less politically defined.

Of the 10 Trans-European Transport Corridors, four pass through Poland, and two corridors are of particular importance for the Baltic region:

- **Corridor I (Via Baltica/Rail Baltica):** Helsinki - Tallin - Riga - Kaunas - Warsaw with a branch Riga - Kaliningrad - Gdansk;

- **Corridor II:** Berlin - Warsaw - Minsk - Moscow;

The other two which pass through Poland are Corridor No. III connecting Kiev to Krakow, Katowice, Wroclaw, and Dresden and Berlin, and Corridor No. VI, connecting Gdansk to Zilinia.

Corridor I

The vast majority of both IFI loans and PHARE grant funds have been concentrated on these corridors. The **Via Baltica** (road corridor) is now reflected in a five-year Investment Plan for the period 1996-2000, which was prepared and approved by the governments involved. The plan provides for expanding the quality and capacity of 445 km of existing roads, the construction of 7 new urban by-passes (including the Riga bypass), improvements of signing and markings etc. The total cost of the programme implementation amounts to 172 million ECU (MECU), of which about half has already been financed both nationally and by the IFIs, and about half of which the countries involved are counting on loans not yet approved by the International Finance Institutions (IFIs).

Work on the **Rail Baltica** is less advanced. Several studies have been completed (some of them financed by the PHARE). To alleviate problems caused by different gauge, the feasibility of the standard gauge from Sestokai (Polish border) to Kaunas has been studied.

Corridor II

Corridor II, Berlin - Warsaw - Minsk – Moscow is important for Northern Europe because it can be seen as an extension of the Corridor I (Via Baltica/Rail Baltica) from Warsaw to Germany and other countries of Western Europe.

Road traffic study financed by PHARE for the Polish section of Berlin - Warsaw - Minsk - Moscow route was carried out in 1994/1995. As a result of international tender, the Polish consortium Autostrada Wielkopolska S.A. has been awarded the concession to built and operate a 360 km long stretch of the A2 Toll Motorway from the Polish-German border at Swiecko to Lodz. However, because of uncertainty with regard to predictions concerning *drivers' willingness to pay*, additional traffic study was demanded by the IFIs, and implementation of the project has been delayed.

Rehabilitation of the E-20 **railway** line Kunowice (German/Polish border) - Warsaw is underway and it is expected to be completed by 1999. The agreed technical standard is to allow speed 160 km/h and load 225kN/axle.

Progress has been made in increasing the capacity of border crossings. At the Polish/German border a new freight terminal Swiecko II was opened and simplified procedures are tested.

The Transportation Infrastructure Needs Assessment (TINA) Process

In 1996, the Commission initiated the Transportation Infrastructure Needs Assessment (TINA), an intergovernmental process involving the current EU member states and the pre-accession countries. PHARE funded an office in Vienna to perform the administrative work. An interim report was published in August of 1998, and the final comprehensive report is due in 1999.

The purpose of TINA, as defined by the Commission, were two-fold: 1) to select priority projects along the corridors, and 2) to add further network elements to provide 'connections' between the corridors. TINA's workplan focused on a) the definition and preliminary costing of the Backbone Network, essentially the Helsinki Corridors with some amendments, b) definition of additional network elements to TEN-equivalent levels, and c) project assessment and priorities.

The TINA process has identified a considerable number of routes of national and international significance which were not initially identified as TEN Corridors. These are justified as roads which "connect" the TEN corridors, and may be in due course formalised into an enlarged TEN.

By expanding the list of projects identified as priorities by the EU, the TINA process has essentially made EU funding more flexible for the accession countries. Accession countries tend to have a laundry list of projects they would like to see funded and hence deemed eligible for various sources of EU funding, while the EU would like investments to be focused on those links of greatest importance to Pan-European trade in order to avoid "opening the Pandora's Box of national requests for funding which has been laboriously closed during the five-year Pan-European process" (CEPS, 1998, p. 11). The initial TEN Corridors, then, primarily reflected Western European commercial concerns, as articulated by the Commission. These Corridors included some links, like the Via Baltica between Tallinn and Riga, which carry international

traffic but not a lot of total traffic, and excluded some links, like the road between Tallinn and Tartu, which carried little international traffic but a lot of total (domestic) traffic. Thus, the routes agreed upon are something of a negotiated political compromise between the EU institutions and the accession countries.

Relationship between the TENs, TINA, and the Availability of EU and IFI Funding

While the gap is narrowing with the effort to sign a memorandum of understanding between the EU and the IFIs regarding a common methodology for transport project assessment, in the early 1990s there was a considerable gap in approach between the development banks such as the World Bank and the EBRD on the one hand, and the EU institutions on the other, with the role of the EIB lying somewhere in between.

The World Bank and the EBRD tended to determine the eligibility of specific transport projects based on the estimated internal rate of return on the specific link included in the project. Whether the traffic was national or international, and whether the link was part of any 'international network', were seen as irrelevant to the economic importance of the link, and hence to its eligibility for financing. Accurate traffic flow data, however, are necessary to accurate internal rate of return analysis. Most of the member states have reasonably accurate traffic models. Poland, for example, has recently done 8 major origin-destination surveys for the whole of Poland, corridors and agglomerations, and many comprehensive traffic studies and forecasts have been done. While there have been big problems estimating toll-price-demand elasticity on toll roads, more traditional state of the art traffic modelling is available in most of the Baltic Sea countries.

The EU institutions, by contrast, when identifying the priority corridors, which is the first stage in project identification, did not rely heavily on cost benefit analysis, or even on solid traffic data. The EIB did do economic, financial, and technical feasibility studies for most of the 14 Trans European Network corridors identified at the Essen Council in 1994, but this was done on the routes selected, not as part of the selection process. Rather than basing the selection of the Corridors on those routes which could have been technically demonstrated to carry the most international or aggregate traffic, they relied initially on a map developed by the Motorway Working Group of the European Commission's Infrastructure Committee, a body heavily dominated by specific business interests. The basis of the selection of these particular corridors is not entirely clear, but it was not technical, and as a 'political' process, it was certainly not one open to all elements of society, as environmental NGOs, public transit experts, etc. were entirely absent. The TINA process simply added to this map those additional corridors which were more the priority of CEE-country governments; it did not address the more fundamental issue that the selection of the corridors themselves was not based on any hard technical information on traffic.

The EU institutions could have greatly strengthened their hand in 'avoiding the Pandora's box of national requests' by at least initiating their process of prioritisation based on solid technical and scientific criteria such as existed, and then included other criteria such as environment, regional and social equity concerns in a multi-criteria analysis. Reasonably accurate Pan-European traffic models exist which could be used to form a scientific basis for the economic importance of certain corridors over others based on higher current and projected levels of international traffic, but such information was not systematically utilised by the Commission as the basis of the TINA process, nor is this data housed at the Commission.

Now that the priority corridors have been identified, however, a methodology for prioritisation of funding within those corridors will also need to be developed. This process will be

assisted by a European-Wide traffic demand model which the PHARE program is currently funding. They are currently still only determining the viability of an aggregate demand model, and have not yet gotten to modal split and specific route assignment. For TINA they first want to know at least whether there is and there is likely to be any international and or domestic traffic on the backbone network corridors. They have good information on transit traffic, but this makes up a fairly minor part of total traffic on many parts of the network.

Phase I, which will completed in the Spring of 1999, is an origin - destination survey. There are three parts to the project; freight, passengers, and 'scenarios.' NEA is focused on the freight model, IWW on passengers, and INRETS on the scenarios. In many of the countries the team lacks reliable household survey data collected since the transition in 1990. Rail freight data is better, but in 8 out of 30 of the European countries involved they lack trucking data except for where the trucking companies are owned by the state. They will be able to model it anyway at least for international traffic based on international commodity flows. The only information they have on international passenger traffic is border crossings and some traffic counts at specific sites. Russia is not included in the study, but they have a way of including transit traffic coming from Russia. Specific route assignments in Russia, however, will not be possible with this model.

The mode split on the model will be done in the following way, at least for freight. In the Western part of the network, the modal split is primarily a function of a) the product being shipped and b) the tonnage, and c) the distance, and can be influenced by changes in the relative prices between the modes. In the CEE countries, the modal split is still highly unpredictable. For now, they are basically assuming that the commodity flows in the CEE countries will, by the end year (2015) move sharply towards a similar modal split as for Western Europe for the same commodity type, tonnage, and distance.

There is also a lack of reliable and comparable construction cost data in the many different countries of the EU and the accession countries. Thus, currently, not only are project benefits unreliable but also the cost estimates. PHARE has also funded a project to make cost estimates more reliable, which should also be completed in 1999. How better network traffic data will ultimately affect the prioritisation of funding from the EIB and the other EU funding institutions has still not been determined. While obviously the data will have an influence on decision-making, it is possible that these technical considerations will remain quite marginal to the decision-making process.

The relationship between the TINA process and the funding criteria of the EIB and the grant-making institutions at the EU remains ambiguous. While identification of Corridors and projects as 'Pan-European priorities' does not imply that only these projects can be funded by EU institutions, nonetheless, the process does tend to concentrate resources into these projects.

The EIB, like the World Bank and the EBRD, also uses cost benefit analysis to assess project feasibility on a project-specific basis, and does not automatically agree to fund a project just because it has been identified as a priority by the TINA process. Nonetheless, the EIB is

> "…making every effort to facilitate the close integration of the latter countries into the Union in a pre-accession context, and a particular feature of our lending in Central and Eastern Europe was support for road and rail Trans-European Networks along the corridors defined by the Pan-European Conference of Transport Ministers." (EIB, 1996)

In 1992, at the Edinburgh European Council meeting, and again at the Copenhagen Council and the Brussels Council in 1993, a special lending facility was established at the EIB called the Edinburgh Lending Facility. Infrastructure projects identified as part of the TENs in Western Europe were eligible for this ECU 7 billion in loans. While these projects had to fulfil the EIB's normal economic and financial appraisal criteria, this money represented an increase in aggregate funding being channelled specifically into the TENs. Of course, the EIB could simply reduce the money from their standard program that would have gone to the TENs anyway by the same amount, but the result seems to have been an increase in lending on TENs projects. This money was made available as part of an effort to lift Western Europe out of the economic slump of the early 1990s (EIB Annual Report, 1993, 1994). These special Edinburgh Facility funds disappeared by 1995.

In January of 1998, the ECOFIN Council member states and the European Commission "unanimously declared that they agree to the creation of a sizeable pre-accession support facility." (COM, 1997, p. 6) The Pre-Accession Facility doubled the EIB's available financing for CEE pre-accession countries, an increase of ECU3.5 billion between 1998 and 2000. The primary difference between normal EIB loans and loans from the Pre-Accession Window', is that most loans have both a guarantee from the European Community and a sovereign guarantee from the national government. With the Pre-Accession window, the EIB now only requires a 66% guarantee from the Community Budget, and the national guarantee can be replaced with a commercial guarantee. According to the decree,

> "Emphasis shall be given to integration projects and those facilitating the adoption of the *acquis communautaire* (with particular priority to be given to environmental protection) in areas like the development of transport, telecommunication and energy links (particularly TENS)…projects to be financed by the Bank shall satisfy its normal criteria of intervention notably those concerning economic, technical and financial aspects…" (Official Journal of the European Communities, 98/C 116/09, 16.4.98)

In the case of the Pre-Accession Facility, while funding of the Trans-European Network Corridors in the CEE countries is encouraged, funds are not specifically earmarked for this use. Again, the function of the TENS and the TINA process seems to have been to 'encourage' the EIB to focus on these projects, but it does not mandate this.

Not only can the EIB fund any transport projects not in the TENs, it can also fund more than one road project in the same corridor. While it is unsurprising that the EIB is currently financing the untolled sections of the A4 motorway in Poland (a section of Corridor No. 3, Berlin to Kiev), they are also funding the DTS, an urban arterial of regional rather than international significance that parallels the A4 in the same corridor. They are also funding several public transit projects, such as their co-financing of the Krakow Fast Tram, which are not part of the TENs/TINA network. If the EIB was only funding projects which promoted European integration and cohesion, the DTS and the Krakow Fast Tram would probably not have been eligible. That being said, the vast majority of EIB transport loans have gone to rehabilitation and new construction on the TEN corridors and routes identified in the TINA network, with only a handful of exceptions.

The EIB is guarding its independence from the DG7. Currently the DG7 is trying to get a MOU signed with the IFIs which spells out a 'Common Methodology for Project Assessment." World Bank, EBRD, NEFCO, Council of Europe Environment Fund, IFC, and NIB have already signed, while the EIB claims they don't have to sign because they are a 'sister institu-

tion.' As the Commission has two seats on the EIBs Board, it could in theory block projects which it did not support, but the representatives are currently not from DG7, and there has been no example of a Commission representative blocking an EIB loan.

The PHARE program's relationship to the TENs and the TINA process is similar. PHARE financed numerous feasibility studies in the corridors, which helped these projects attract financing not only from the EIB but from the World Bank and the EBRD as well. PHARE's transport infrastructure grants in its country programs have also concentrated on the corridors, but not exclusively. They have also financed numerous urban ring-roads not in the corridors, and also numerous border crossings not in the corridors.

It is likely that ISPA funds, over which the EU has greater control, will only be eligible for use on projects identified within TINA network, with a handful of fairly restricted exceptions.

Thus, the TINA process and the TENs have certainly helped to ensure that these corridors receive priority funding, first for feasibility studies from PHARE or one of the IFIs, then increase the likelihood of IFI loans, and finally will affect the use of ISPA funds and ultimately the allocation of Structural funds, if and when the accession countries join the EU.

The Ramifications for Regional Sustainability of the TEN/TINA Process

Conflicts Between Local, National, and International Needs

Countries know that projects identified as part of international corridors are more likely to receive low interest loans and grants from the IFIs, and are thus anxious to have their investment priorities included in the TEN Corridors and its Connectors. Before the modification of the TENs through the TINA process, there was considerable conflict over the selection of the priority corridors. Greater input from the national governments in the TINA process has mitigated this problem somewhat.

Nonetheless, it remains the case that EU money is much more readily available for projects which are arguably of international significance. Once a government has identified projects that are economically justified and fit into the eligibility criteria of the EU, they may count on EU co-financing provided that there are no 'external' constraints, such as limited budget envelope of PHARE or lack of state guarantee in case of EIB loans. This functions as a powerful incentive for national governments to prioritise international corridors. In the case of Poland, for example, in all recent Polish national transport policy decisions, plans and programmes it is declared that priority is given to the modernisation and development of transport infrastructure in the Crete corridors and other routes of international importance (for example, included into AGR, AGC and AGCT). The Crete corridors and the TINA process had a direct impact on the following three documents, all of which are critical to Polish national decision-making:

- *Transport Policy – a programme of restructuring transport system to meet requirements of market economy and new conditions of economic co-operation in Europe* – approved by the Government in 1995;

- *Strategy of the Maintenance and Development of the National Road System till 2015* – adopted by the Minister of Transport and Maritime Economy (MT&ME) in 1998;

- *Plan for the Development of Transport Infrastructure till 2015* – adopted by the Economic Committee of the Council of Ministers.

Consequently, EU priorities are translated into national-level plans in the accession countries, and this has led to prioritisation of projects aimed at the improvement of condition for long-distance international transport.

However, in some instances these projects are not the most viable. Due to the spatial pattern of CEE countries[1], there is a tendency for the needs of international traffic/transport and, in particular, long distance transit movements to be overestimated. The most viable projects are those which serve both short- and long-distance movements. However, if these projects are not on the *list of transport corridors,* there is less chances that they will be co-financed from the EU funds.

Unlikely to be viewed as of international importance are local roads and streets, branch railway lines, commuter railway lines, and all urban public transport. Because the EU expects that roughly 75% of the costs of financing the EU Corridors will be borne by the national governments, (CEPS, 1998, p. 12) national level investment is likely to be increasingly targeted to improving those routes carrying international traffic. This is particularly troubling since the economic importance of these routes in comparison with domestic routes is not known with any great certainty.

Particularly troubling are the ramifications of this approach for urban public transit systems. Because urban ring roads or bypass roads are considered part of international traffic corridors, they are eligible for EU funding, and have received extensive funding from the PHARE program, the EIB, and the other IFIs as well. For bypass roads around small cities, these are important investments as they re-route polluting and dangerous truck traffic out of small town centres. However, in middle-size and larger towns, a lot of the traffic using these bypasses is likely to be local, rather than international traffic. In major cities, like Warsaw and Riga, it is likely that as much as 90% of the traffic on ring roads will be local traffic rather than international traffic. As such, these routes directly compete with urban public transit systems for urban trips. Because urban public transit is, if not ineligible then certainly not encouraged by EU funding guidelines, this structure of EU funding is undermining the competitiveness of urban public transit systems. For this reason, in cases where funding from EU institutions is being directed at a ring road, similar funds should be made available for urban public transit to avoid this unintended externality.

Conflicts Between Maintenance, Rehabilitation/Modernisation, and New Development

In various diagnostic studies of transport systems in countries of the region[2] it has been pointed out that inadequate maintenance caused a very serious deterioration of transport infrastructure. Compared with other investment options, maintenance has the best benefit/cost ratio.

[1] Lower densities, longer distances between main urban centres, etc.

[2] E.g., by the World Bank, EBRD, Japan International Co-operation Agency, Danish Road Administration, Atkins etc.

In addition, efficiency of maintenance programs can be considerably increased, if a modern approach is applied in programming and management of infrastructure maintenance[3].

Rehabilitation and modernisation of existing infrastructure is probably the second most efficient strategy. This is particularly visible in case of railways where, for instance, through rehabilitation of tracks and modernisation of traffic control a radical improvement of operational effectiveness has been achieved.

There is a danger that the focus of the EU on corridors will encourage investments into new infrastructure construction at the expense of maintenance and rehabilitation of existing infrastructure. Investment projects in the international corridors are mainly financed from the external sources (IFIs, PHARE). To the extent that new construction projects require matching funds they take money away from maintenance activities and other investment projects, but these matching funds requirements tend to be lower for EU money than from the other IFIs. It is also conceivable that if the EU were not financing the new road construction projects, that national governments would then invest in them out of their own resources and neglect maintenance needs nonetheless.

Paradoxically, this situation may, however, change in the forthcoming years as the flow of EU-funds is expected to grow significantly, mainly due to the establishment of ISPA, which will replace PHARE from 2000 and is designed to promote infrastructure projects in the field of transport and the environment. The increased support from EU will automatically put the increased burden on the beneficiary country, which will need to provide an adequate amount of money as its own contribution to the project(s). The budget of ISPA will probably amount to 7 billion Euro to be spent in the period 2000-2006 for transport and environmental projects in the 10 candidate countries.

Accession Process and Investment in Transport Infrastructure

The EU institutions will also have enormous leverage over the prioritisation of transportation infrastructure investment decision-making through the bi-lateral negotiations that they hold with each of the states wishing to join the European Union.

During the accession discussions, the EU put considerable pressure on Poland to put its major transport infrastructure efforts in the Pan-European corridors crossing the country, which are intended to improve the linkage between Poland and EU Member States (two East-West corridors), and on the other hand, its immediate neighbours also applying for EU membership (North-South corridor and Via Baltica corridor).

The Europe Agreement will remain the basis for the EU's relations with Poland. However, the EU pre-accession strategy has been reinforced to enable assistance to be directed towards the specific needs of each applicant country as identified in Agenda 2000. A single framework for the EU assistance has been set up in the form of the Accession Partnership, which sets out:

(i) the priority areas for further work on preparation for membership;

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[3] E.g., Pavement Management System, Bridge Management System

(ii) the financial means available to help Poland implement these priorities;

(iii) the corridors which will apply to that assistance.

In March 1998, on the basis of the Accession Partnership, Poland drew up a National Programme for the Adoption of the Acquis (NPAA) in which the programme to prepare for membership has been clearly defined, involving national commitments to particular priorities and a timetable for carrying them out. One of the medium-term (1999-2000) priorities identified in NPAA for transport calls for 'provision of necessary investment for transport infrastructure so as to allow its future incorporation into a system of Trans-European Networks (TEN)'. This document contains a number of investment activities planned for completion over this 4-year period. The NPAA is to be reviewed annually in order to assess the progress of works and identify problems encountered.

It is not entirely clear the degree to which the completion of the construction or modernisation of the TEN corridors and other TINA-identified corridors will be made a condition for accession to the EU, but certainly CEE-country government officials either believe it to be a condition, or else are using this argument as a means of winning public support for the ambitious infrastructure investment plans.

But the TENs and other TINA-identified links are not the only possible transportation infrastructure investment requirements likely to be affected by the accession process. The required harmonisation of national law with certain EU directives will have particularly profound effects, depending on how they are dealt with in the negotiation process.

The Council Directive 96/53 establishing allowable axle load, dimensions and weight of vehicles requires that for primary road network a maximum axle load of 115 kN should be applied to the national road network. At present, in Poland, only new expressways and motorways are designed to allow for such an axle load standard. Other national roads of total length amounting to 17,000 km are either adjusted or admissed to carry traffic of up to 100 kN/axle. The cost of bringing the national network to EU will be enormous - it will be analysed and estimated in the Phare Multi-Country funded study "Costs and Benefits of Enlargement" to be completed in November 1999.

Formally, this problem has not emerged yet in Poland - EU relations as the screening exercise of Polish and EU legislation on road transport is still ongoing and the first round of consultations is planned in March 1999. Poland's official position on this problem is being worked out, however most probably at least 10-year derogation period will be requested as it was the case with some present EU Member States, e.g. United Kingdom.

Nevertheless, the need to adjust the international roads (E) and the most important national roads to European standards was taken into consideration in the preparation of programmes mentioned earlier, i.e., *Strategy of the Maintenance and Development of the National Road System till 2015* and *Plan for the Development of Transport Infrastructure till 2015.* It is envisaged that up to 30 % of all financial means of the General Directorate of Public Roads will be allocated to upgrading of above mentioned roads, including connections to border crossing points and ports. At present, 30 ongoing projects of this last group are financed from the PHARE funds. Most of them are on western and southern borders.

In addition, the special programme to adjust selected roads of strategic (defence) importance to NATO standards has been prepared. These standards, concerning bearing capacity of bridges, will be introduced in 1999.

Ramifications of the Harmonisation of Rail Regulations

EU policy regarding the rail sector is currently governed by Directive 91/440 of 29 July 1991 "On the Development of the Community's Railways," which ensures access to the networks of member states for international groupings of railway undertakings, and further developed in Council Directives 95/19 of June 19, 1995 "On the Allocation of Railway Infrastructure Capacity and the Charging of Infrastructure Fees, OJ No. L. 143 27. 5 95, and CD 95/18 of June 1995 "On the Licensing of Railway Undertakings," and further developed in the White Paper "A Strategy for Revitalising European Railways." These Directives and White Paper lay out a common legal framework for rail systems which will move the EU national rail systems to a position where in all countries the ownership of the tracks will be separated from the ownership and operation of rail transport services, with the track infrastructure tending to remain in state hands and rail operations commercialised and/or privatised and open to competition, at least on the international lines. (for a Review of the literature, see "Examination of Community Law Relating to the Public Service Obligations and Contracts in the Field of Inland Passenger Transport," NEA, 1998)

There is fairly broad consensus about this general direction to restructuring among the EU and the IFIs. In Western Europe this process is taking place at the national government level in co-ordination with the DG7.

Both EIB and EBRD rail lending is being used specifically to leverage these reforms, though in what ways is not entirely clear. A recent EIB loan to the Hungarian Ministry of Transport for rail track improvement included a condition which required that the national government's public service obligation be dropped from 1000km of rail lines, and the EBRD loan to the Hungarian National Railroad (MAV) included a provision that all conditions in the EIB loan must be adhered to by the borrower. Currently, the EBRD has suspended the loan to MAV for non-compliance with this provision in the EIB loan.

The EU White Paper on "Fair Payment for Infrastructure Use" and its Relationship to EIB Project Economic and Financial Assessment

The DG7's White Paper on "Fair Payment for Infrastructure Use: A Phased Approach to a Common Transport Infrastructure Charging Framework in the EU" touches on many of the issues central to the policy debates also touched on in the transport policies of the World Bank and the EBRD.

In the White Paper, the DG7 points out that there is a clear need for the development of a common framework for regulating infrastructure user charges for commercial vehicles because "infrastructure user charges affect the conditions of competition in the internal market." (COM, 1998a, p. 6). It is also intended to

> "improve the overall efficiency of the provision and use of European transport infrastructure, promote fair competition, safeguard the single market, and enhance the sustainability of the transport system." (p. 5)

Despite a recognition of its importance, the Commission does not feel it appropriate to propose a similar framework for passenger cars. "The Commission considers that, for reasons of subsidiarity, this decision is best left to the Member states." (p. 6)

The general principle for the development of this common framework is quite similar to the position articulated by the EBRD and the World Bank:

> "Infrastructure charges should…be based on the 'user pays' principal: all users of transport facilities should be charged for costs they impose at, or as close as possible to the point of use. Charges should be directly related to the costs that users impose on the infrastructure and on others, including the environmental and other external impacts caused by the users…The only charging approach that fully satisfies these criteria is marginal social cost charging: charging users for the costs, both internal and external, they impose at the point of use." (p.6)

While the EIB may not feel it is its role to push for the adoption of these changes in user charges or any other Community policy, this policy has direct bearing on their approach to two things: how cost benefit analysis is performed, and their approach to BOT schemes.

According to the White Paper:

> "As the high level group on infrastructure charging confirmed, investment decisions should be based on a full social cost-benefit analysis covering all costs and benefits to society, public and private. Since some of the benefits of individual projects might accrue to non-users of the network, for example reduced pollution resulting from replacing a dual-carriage way by a motorway or increased land values in cities connected to a High Speed Rail line, it could be highly inefficient to require all the costs of every individual investment project to be recovered from direct users. Imposing full cost recovery on the level of individual projects would therefore not only lead to major inefficiencies in transport use, it could also lead to significant distortions in investment decisions." (p. 8 - 9)

This would seem to indicate that the EIB is required to make its lending decisions based on a cost benefit analysis which includes all social costs. It also seems to imply that if the rate of return is below the cost of capital on a specific project, that it can still fund the project.

There is a fundamental problem with the TINA process (discussed below) that is identified in the White Paper on Fair and Efficient Pricing: the problem of "the case where infrastructure projects or sectors are in direct competition at the European level." (p. 11). Unfortunately, the additional policy requirements to address this problem were somehow deleted from the White Paper (section 5h is referred to, but there is no 5h). There are many cases where two ports, two airports, or two international rail or road categories are in direct competition with each other. Obviously, the costs and benefits of improving a port on the Baltic Sea are going to be determined to a certain extent by whether or not other adjacent ports on the Baltic Sea are simultaneously improved at the same time. There are no serious cases of parallel road or rail corridors to my knowledge in the Baltics, but there are major North- South corridors which can pass either through the Czech Republic or Slovakia, and East West Corridors which can pass either through Bulgaria, Romania, or Greece, and the way the TINA process has dealt with this

problem is to include all of these links in their maps, even, in the case of the Czech Republic, when the road runs into the sand on the other side of the border.

There should be a role for the EIB to use rational economic criteria such as cost benefit analysis to prioritise funding to those corridors which are likely to be the most important based on real economic, rather than purely political criteria. But as the House Bank of the European Union, it is not clear that the EU wants to accede this level of power to the EIB, nor is it clear that it should. To a certain extent it will depend on whether the EIB has a mechanism for doing cost benefit analysis at the regional level where investments in one corridor over another or one port over another can be compared based on rational economic criteria. Every cost benefit analysis for new construction must make certain assumptions about how much traffic is likely to operate on the new facility, and the accuracy of these projections are going to be determined by an accurate assessment of other, parallel infrastructure developments. Anecdotal evidence indicates no reason to believe that the EIB has the capacity or requirement for a cost benefit analysis that looks at the impact of a new road project on a parallel rail line, or a port project on an adjacent port, or an airport on a nearby airport, although measuring these effects would be critical to rational economic decision-making.

The White Paper also seems to imply a particular approach to BOT schemes. While the paper points out that new infrastructure tends to be financed in Europe by the public sector, "reliance on exclusively public financing can unduly constrain the level of provision of infrastructure and so increase inefficiency." (p. 10) This seems to endorse the approach of BOT highways. Because it endorses a full social marginal cost pricing approach, it is not clear whether full marginal social costs will be sufficient to cover the costs of new construction. In all but a small number of cases, traffic levels on toll roads have generated insufficient revenues to cover the full costs of construction.

> "In cases where such infrastructures are part of networks that are partly characterised by capacity shortages, the infrastructure managers are likely to be able to 'average out' deficits and surpluses across their networks. Where this is not possible and there are wider benefits then there would be a strong case for government subsidy, regardless of whether the infrastructure is publicly or privately owned."

EU policy, therefore, is perfectly amenable to BOT schemes, and tolerates extensive state subsidies for new infrastructure, be it for rail or road construction, and only requires cost recovery for ongoing maintenance, operating, and external costs. For new construction, the White Paper also allows the operator to charge prices greater than full social marginal costs:

"While charges above marginal costs are likely to reduce the socio-economic benefits of a project, this may be necessary if public finance constrains mean that the alternative is not to build the project at all….After a period of years, long enough for supplementary charges to recover investment costs and an appropriate return on capital, they should be discontinued." (p. 10-11)

The policy further states that:

> "Charges will be collected by infrastructure managers, be they public or private. This raises the question of the allocation of these revenues to different bodies (e.g. infrastructure manager/the state). And the use to which they are put. Naturally, the infrastructure manager would keep that part of

> the charges that are related to infrastructure costs (covering both infrastructure damage and scarcity/congestion). Charges related to other cost components would more logically accrue to the state." (p. 9 - 10)

The notion that the infrastructure operator, whether public or private, would keep all congestion charges, is particularly disturbing from a sustainability point of view. In conditions of down-town hyper-congestion, the marginal costs of road use could be enormous, and the capture of these revenues and their re-investment into the road sector would de-facto transfer the monopoly rents currently captured by downtown real estate firms and transfer them to road construction.

PART F: Conclusions of Task I

As a whole, IFI lending in the Baltic Sea region has been fairly balanced between modes. The majority of total IFI lending in the region went to the rail and road connections between Denmark and Sweden, and between Denmark and Continental Europe, and the infrastructure approaching these new links. This heavy lending was probably part of the negotiations which led to the accession of the Nordic Countries into the EU. In the region as a whole, the EIB is by far the most important lending institution, accounting for more than 90% of total lending in the region. In the wealthier countries, most of this lending as gone for new construction, and this is less problematic as there is a much less serious maintenance backlog on the basic transport network in the EU countries.

In the CEE countries, the World Bank and the EBRD have played a stronger role, though the EIB is still the largest lender in that region as well. In the CEE countries, the sustainability of IFI lending is problematic on several levels. First, it is more heavily weighted towards the road and airport sectors than towards the rail and public transit sectors, which are equally short of funds. Secondly, within the road, rail and public transit sectors, the lending has been more heavily weighted towards new construction than towards rehabilitation and maintenance than can be justified by comparative economic appraisal. Some important loans to ports and port access have helped to make shipping a viable alternative to land-based travel, but more needs to be done to provide sufficient environmental safeguards to ensure that growing shipping does not cause direct damage to the Baltic Sea.

While it would be inaccurate to say that the cause of this biased lending lies primarily or even mainly with the IFIs. In fact, the responsibility lies mainly with the borrowing country governments. However, it would also be inaccurate to say that the IFIs bear no responsibility for the misdirection of some of this lending.

The World Bank has perhaps done the most about the second problem, the lack of attention to rehabilitation and maintenance, and the least about the first problem, that all the money is going to roads and airports. The World Bank loaned virtually no funds at all for rail or public transit projects in the entire region. While their focus on road upgrading and maintenance is a good one, and is the most environmentally sustainable of all of the IFI road sector portfolios in the region, this lending cannot be taken in isolation of the activities of the other IFIs since their lending is to a certain extent co-ordinated. The fact that the World Bank was willing to provide billions of U.S. dollars for road maintenance in the region gave the other IFIs a free hand to lend for new road construction. With all three IFIs fulfilling an important part of the modernisation of the road systems in the CEE Baltic countries, the road systems are rapidly being modernised with lots of capital investment, though arguably road rehabilitation and maintenance continues to be sacrificed particularly in Poland to new construction.

In the rail sector, however, where there is a similar backlog of unmet rehabilitation and maintenance needs, the World Bank has provided no funding at all. While this has been compensated to some degree by EBRD activity in the sector, the aggregate figures nevertheless demonstrate that there remains a relative preponderance of road lending relative to rail lending in the region. While admittedly there have been problems with the railroads themselves regarding the speed of their restructuring to comply with EU standards and IFI recommendations, the road sector, port sector, and air sector have hardly been free of problems regarding the transition process.

The failure of the World Bank to provide loans for public transit in the region is perhaps the greatest disappointment. Such loans were limited by the resistance of national governments to providing the required sovereign guarantees, and borrowing requests for some misguided projects. Their policy advice in the sector has been largely sound and ultimately let to some positive changes in approach, particularly in Warsaw. Perhaps now that major transport infrastructure plans in Warsaw have been significantly modified, the possibility of World Bank involvement will resume. Nonetheless, their failure to make any loans in the sector, other than a very modest loan to Estonia, is highly disappointing given the dilapidated condition of public transit in many of the cities in the region. The EBRD has found ways to lend to municipalities without sovereign guarantees, and the World Bank should be able to find similar ways of doing more in the public transit sector, particularly for rehabilitation and maintenance of existing surface systems and commuter rail lines.

The EBRD has lent more for rail than it has for road projects in the region. This is probably the result of a division of labour among the IFIs, a division of labour in which the EBRD has the reputation of providing good technical support for rail restructuring. The preponderance of rail loans is not the result of any policy favouring rail lending, and more a result of their restrictions on public sector lending to 40% of their portfolio, and the related decision to focus on BOT highway projects in the road sector, at least in Poland. These BOT projects have experienced far more delays and problems than was originally anticipated. Their lending to the rail systems in the Baltics has been extremely important, partly because they have been willing to lend for rolling stock, communications and other investments critical to the long term competitiveness of the rail operating agencies themselves, while the EIB has restricted its lending to track improvements. Their pursuance of their restructuring agenda has, unlike the World Bank, not inhibited their ability to provide much needed loans. In Poland, however, their focus on the high speed rail corridor at the exclusion of other possibilities, while no doubt linked to the troubles that PKP has had restructuring, has nonetheless left Poland's railways to deteriorate.

The EBRD's road lending, with the exception of the A4, has largely been for road maintenance and rehabilitation. The EBRD would no doubt have played a much larger role in the BOT highway program had this approach been more successful – and with this would have been a host of problems identified elsewhere in the CEE region – but little of this lending materialised.

The EBRD's public transit lending, which was nearly cut all together as a matter of policy in 1996, has also been disappointingly modest and focused on high cost capital projects. Now that the Krakow fast tram project has developed a method of financing municipalities directly, this mechanism should be utilised more extensively for more modest public transit rehabilitation projects.

The EIB, meanwhile, has focused its road, rail, and transit lending disproportionately on new construction projects in a context where significant rehabilitation needs continue to go wanting. The predominance of EIB lending for new road construction projects is in part the result of a cynical division of labour among the IFIs where the least public and least accountable funding institution has been asked to finance the most controversial, most ecologically sensitive transportation projects. The powerful and growing role of EIB financing in the region has undercut to a certain extent the sincere efforts by the World Bank to improve the upgrading and maintenance record of the road, rail, and public transit sectors by locking in significant national level funding into new construction projects, particularly those in the TEN corridors. It has also

undercut the level of environmental due diligence for new transportation infrastructure projects in the region.

TASK II: Review of Existing Infrastructure Decision-Making Process in HELCOM PITF

Introduction

As noted in the initial project description, an extensive review of the decision-making process in each of the HELCOM PITF member counties is beyond the scope of this project. Participants at the first HELCOM PITF transport workshop in Berlin also expressed doubts that a detailed review constituted a desirable use of HELCOM PITF resources. Since decision-making in all EU member states is already moving towards convergence due to EU regulations, directives and norms, it was decided that it was most useful to take a closer look at the present state of decision-making in the transition countries. Latvia, the lead Eastern country for the Baltic 21 Transport initiative, and Poland, the largest and most advanced Baltic applicant for EU membership, were selected as the two case studies. This selection had the additional advantage of being able to compare planning capacities and the differences in decision-making in a small and a large country.

The following information is mostly based on numerous expert interviews carried out by ITDP researchers in the late summer and fall of 1998, largely following the questionnaire presented in the project proposal. The Questionnaire appears as an annex to this report. Available written materials were also used when appropriate. The Polish PITF members also supplied a full set of written answers to the questionnaire.

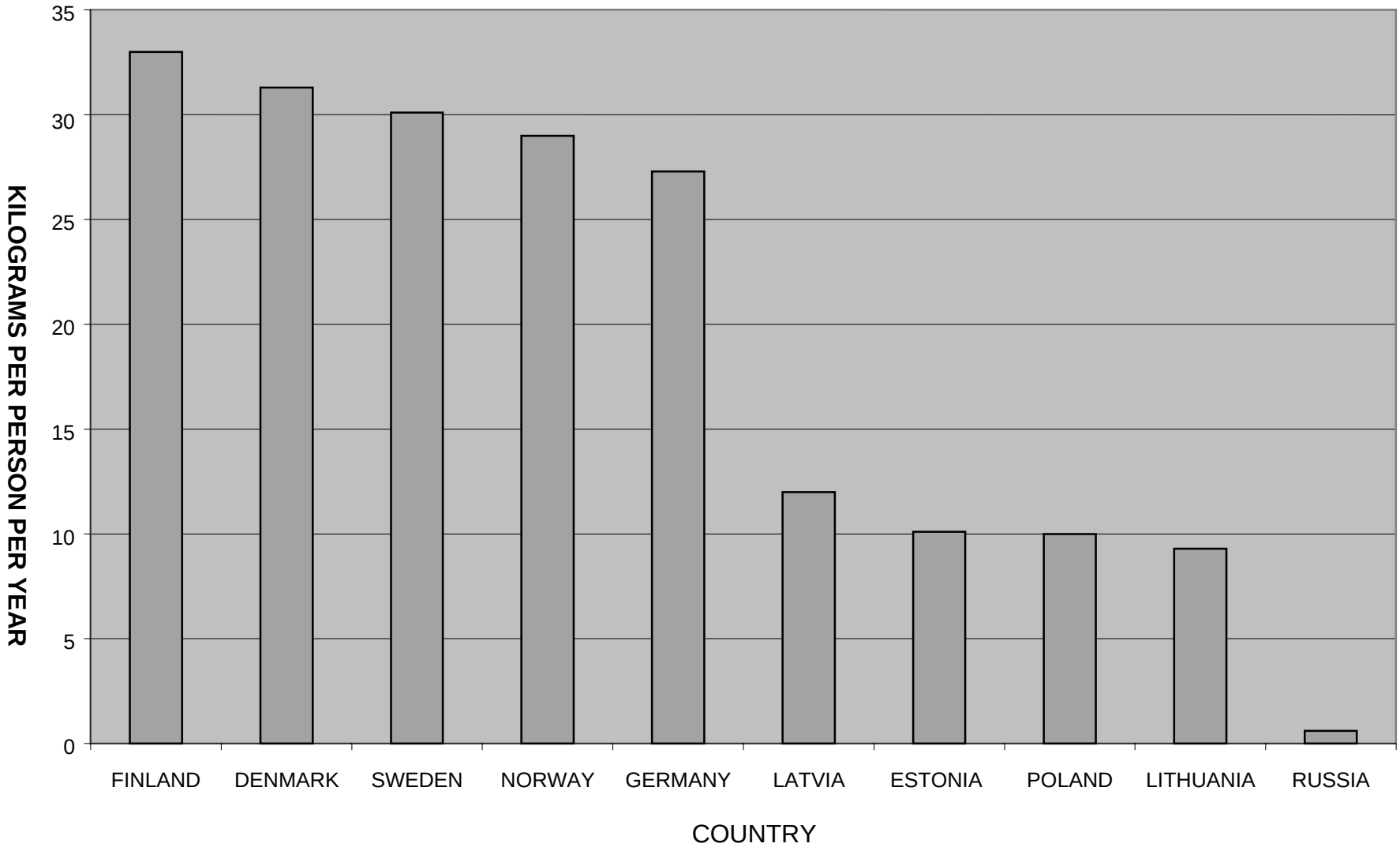
Background

In the Scandinavian states and in Germany, freight transport has been heavily dominated by trucking, and passenger transport by passenger car for the last two decades, and this dominance continues to increase slowly. In the Central and Eastern European Countries, by contrast, the freight sector is still heavily dominated by rail, and rail and public transit still plays a key role in passenger transit, though this is rapidly giving way to increasing car and truck use. As a result of this current position, today the vast majority of NOx emissions that affect the Baltic Sea come from Scandinavia and Germany rather than the CEE countries. (See Figure II.1-2)

In the Scandinavian countries and Germany, car mileage has been increasing around 3% a year for the last several years, and trucking has been growing by 5% a year. As a share of passenger kilometres travelled, passenger cars already account for 83% in the region as a whole, and trucks represent 72% of the total ton-kilometres travelled by road. Road and rail networks are extensively developed, and new road development has slowed considerably, with the exception of some high profile projects like the road-rail bridge-tunnel between Sweden and Denmark. Energy efficiency improvements and emissions controls have led to fairly sharp reductions in NOx and other emissions from passenger cars, but these measures have been insufficient to stop continuing increases in NOx and other emissions from trucking. Fuel efficiency in the vehicle fleet has slowed but not entirely stabilised CO_2 emissions. (Figures II.3 and II.4, from Petersen, et al., 1998)

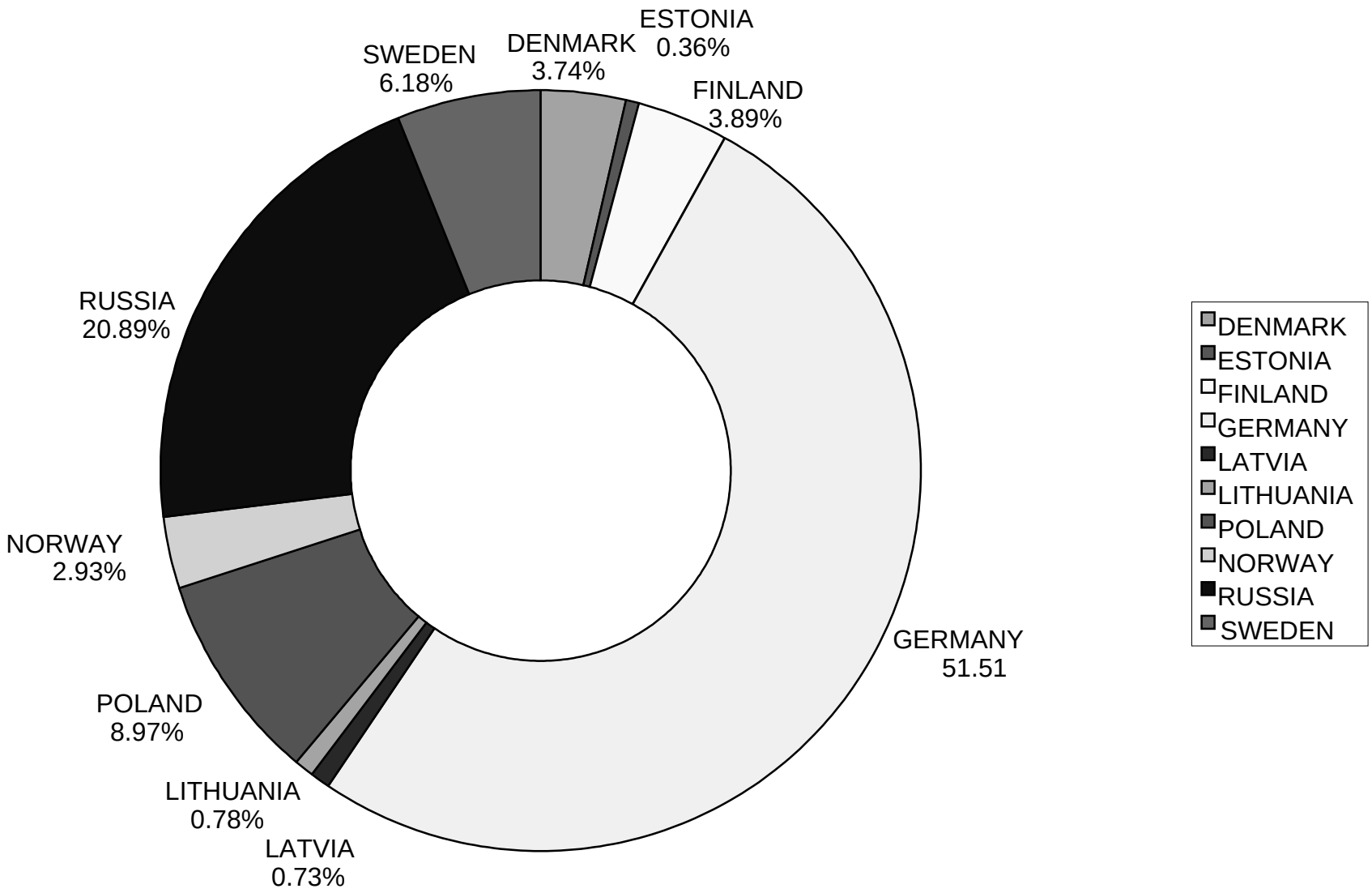
GRAPH XVI

TRANSPORT SECTOR NO_X EMISSIONS PER CAPITA



GRAPH XVII

SHARE OF TOTAL NO_X TRANSPORT EMISSIONS



Motorization rates in the CEE countries, by contrast, are more rapid. Growth in motor vehicle ownership and vehicle kilometres travelled in the 10% a year range are projected. NOx emissions from private cars are projected to continue increasing for another decade, and from trucks beyond 2030. In these countries, the network of **railways** is also well developed. The density or railways in Poland (7.5 km per 100 sq. km) is higher than average in the UE (6.2 km per 100 sq. km) and 49.2% of the network is electrified (37.8% in the UE) . However, the quality of infrastructure is low. In Poland, on the basic network (14.1 thousand km) as much as 25 per cent of the length of tracks are considered to be in unsatisfactory technical condition, the traffic control system is outdated [4] and the quality of rolling stock is poor. Low quality of material assets in combination with inadequate operational efficiency caused that the quality of service and economic efficiency are low. Generally, railways are not competitive in terms of speed, **costs and convenience.**

The density of **roads** in most CEE countries is not much lower than in high-income countries (in Poland 109.1 km per 100 sq. km in comparison to 128.4 km per 100 sq. km in the EU). However, as in case of railways, the road system is of a low quality: (a) motorways and expressways constitute only a very small proportion of roads; most roads, including international roads, do not have access control and are used by mixed traffic; (b) the quality of many sections of main roads is low; this includes geometric design, the riding quality and bearing capacity of the pavement[5], etc.; (c) many sections of major intercity roads go through built-up areas, and some through city and town centres; (d) international traffic is suffering because of poor riding conditions on a significant portion of the road network and inadequate number and capacity of border crossing points; (e) situation in road traffic safety is dramatic; the rates and severity of road traffic accidents are much higher than in OECD countries.

In *centrally-planned economies*, **sea transport** played an important role and was in an advantageous position. The structure of production, i.e. a very high proportion of heavy industry, required ports and fleet for bulky cargo. Most port infrastructure, facilities and equipment were developed mainly for this kind of cargo. Capacities to serve general cargo and containers are very limited. The most important shortcoming is that, as with other modes of transport, maritime transport suffers because of poor transport logistics. From the beginning of economic reforms, sea transport is losing its position, because of the competition from railways and, first of all, road transport.

Inland water transport plays a marginal role. In 1990, it served only 0.3 per cent of all goods traffic (ton-km). Although the length of officially navigable waterways is equal to 4000 km, only 1700 km are regularly used.

As a result of the low level of income, **air transport** was and is used much less than in the EU. International travel prevails. In relation to the number of passengers, the number of airports both international and domestic is adequate. However, most airports and air traffic control systems are out-of-date and required upgrading. In the recent years almost the whole fleet was replaced with the modern Western planes.

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[4] Only 11 per cent of the network is equipped in a modern centralised traffic control system.

[5] Only a limited part of the network is prepared for 10 ton axle load. In 1994, 29% of national roads were in critical state, and only 18% did not need any intervention.

In Poland, as in all countries of the region, **urban transport** policy was public transport-oriented. Fares were kept low, and heavy subsidies were accepted. Capital investment, including purchasing vehicles, was financed from the central budget and considerable part of operating expenses were covered from the same source. Priority was given to serving commuter traffic, since production was considered the main objective. Generally, all cities were served by extensive, multi-modal mass transport systems. While the quality of service was not very high, the density of network and frequencies were generally good. Clearly, this policy, combined with low car ownership ratio, meant that, for a long time, a very high proportion of mechanised trips (85 - 95 per cent) were made by public transport. Taking into consideration that oil had to be imported, there was a policy of promoting electric means of transport. In theory, development of urban transport was planned in co-ordination with urban development plans. In major cities metro or LRT systems were planned. In practice, these plans were not implemented. Warsaw Metro and Poznan LRT are exceptions.

Transportation Decision-Making in Latvia

I. The EIA Process:

Latvia adopted a brand-new law on EIA in November 1998. Before this, it consisted more of a collection of many individual statutes than of one unified environmental legal system, and the challenge of rapidly making national law consistent with EU legislation and directives intensified this problem. Before the new law on EIA, the most encompassing and relevant environmental legal documents in Latvia were the 1991 Law on Environmental Protection (amended in 1997), the 1990 Law on State Ecological Expertise, and the 1995 Law on Natural Resource Taxes. Annex 1 of this document contains excerpts from an unofficial translation of the new law on EIA clarifying key elements of this new law.

EIAs (or expertises as they are called) are the responsibility of the Ministry of Environmental Protection and Regional Planning. EIAs for large scale projects are carried out by the State Ecological Expertise Board subordinate to the MEPRP, and additional expert commissions are required for the appraisal of large-scale projects. Regional Board have the power to appraise all other projects. The final EIA reports produced have to be submitted to the MEPRP for approval. The MEPRP's decision to accept this report is considered final, but it is possible for the national parliament to demand a second assessment.

If EIAs are deemed in violation with existing public health laws mitigating measure would be already included in the expertise report. There have been no examples of the Ministry of Health trying to stop a major transport investment project for health code reasons, although theoretically it could be argued that certain new construction of infrastructure cause to rise air pollution levels further above WHO and nationally permissible levels.

The Ministry of Environmental Protection and Regional Development (MEPRD) was created in 1993 by merging the Environmental Protection Committee and the Ministry of Architecture and Building. Its administrative structure is complex and responsibilities are at times unclear between different departments. Key institutions grouped under the Ministry include the State EIA Board and the State Environmental Inspectorate.

The Environmental Departments in both the Regional and the Transport Ministries are presently severely understaffed considering the additional workload facing those institutions due

to the necessary preparations for EU accession in the medium term. The regional Ministry has about 100 people, but only 20 people in the Environmental Protection Department. At the same time there thousands of EU directives that need to be addressed and translated into national legislation. In the past, development in general was based more on a sectoral perspective in Latvia, including transport of course.

There are 8 regional environmental Protection boards which all have state Inspectorate offices. Among other things, they control/monitor exhaust gas emissions.

A recent UNECE environmental performance review on Latvia found that:

> "one of the reasons why sustainable development does not play a more central role appears to be the lack of discussion between the MEPRD and other ministries which typically represent different interests, like agriculture, economy, traffic and transport. This lack might result from too little horizontal co-operation between MEPRD and other ministries. It seems that only the most important environmental policy measures are discussed with other ministries."

Our own interviews confirm this impression.

Latvia has legal provisions for EIA beyond specific projects, but until now, no comprehensive EIA for the entire transport network has been carried out and is not likely to be done in the near future. The basic objective the new law on EIA is of course harmonisation with EU directives and law, although interestingly, old Soviet regulations were often much stricter than even newest Western law, although rarely ever enforced. Enforceability thus emerges as a key issue of debate. The new law gives detailed listings for the content of the EIA, and for information requirements. Public participation is also improved in the new version, and public authorities have the right to request EIA for projects and activities beyond the ones explicitly listed in the law (the law's list is modelled on the most recent EU directive). On the other hand, authorities are also empowered to decide not to carry out an assessment an simply directly ask for certain mitigating measures of expected environmental impacts.

Cost-benefit analysis is performed for major new construction, such as the bypass for Jelgava city that was part of the EBRD general sector rehabilitation loan. The EA and special mitigation was done by Norwegian specialists. The Latvian Public Investment Program, which gives 75% of its guarantees for loans to the transport sector, requires that project application to include feasibility studies, cost assessments, as well as cost benefit analyses and EIAs.

Basic environmental externalities are quantified if cost-benefit analysis is performed, including accident costs. Congestion costs are not an issue in Latvia outside major urban centres. There are no economic impact assessments done for major infrastructure projects, which is a particular point of contention with the VASAB representatives inside the regional ministry. There is no valuation of historic preservation issues, or other sensitive urban structures, and there is no way to take into account the disastrous effect even a small increase in traffic volumes can have smaller cities along the Via Baltic corridor that count on the tourist value of their pristine urban centres as a major economic base for their existence.

There is no systematic utilisation of least cost planning techniques in Latvian transport planning today, and no formal rules are established, but cost considerations are of course the major factor influencing decisions regarding the selection of one of several routing alternatives.

The Ministry of the Environment reviews all applications for funding from the Public Investment Program, and they work closely with the Ministry of Finance which is responsible for allocating the final amounts for all projects. Budgeting review is very complicated in Latvia, because there are 15 special budgets that the government cannot touch, and there is specialised legislation governing each of these funds. While transport investments are checked according to all typical financial, social, economic and environmental criteria, including net present value and economic rate of return analysis, there is no specific analysis for fiscal impacts. However, it should be pointed out that Latvian transport investment are primarily focused on maintenance, and that the Latvian State Road fund represents a rather specialised financing mechanism with many best practice elements. Overall, however, foreign direct investment's share in the transport and communication sector was at 42% by 1996, with an increasing tendency (Republic of Latvia, Ministry of Transport and Communications, p.15).

There is a national transport development program that sets up the hierarchy of national, regional and local level infrastructures, but national level funding for transport infrastructure is not restricted to higher order connections alone. In fact, while the State Road Funds gives 56% of its funds to state roads, another 25% go to municipal roads, 10% to rural bus systems, and 9% to the railways.

Citizens at least have the right to initiate EIA processes. They also have to right to appeal decisions affecting the environment that ignore the civil and legal rights and interest of any citizen or organisation. Beyond this, under current legal provisions, being able to hold the government responsible for upholding environmental laws by taking court action seems an unlikely option.

Latvia has had a National Regional Development Concept since 1996, and a National Regional Development Program has been initiated in 1999. There is also a rural development program, a border zone development program and a program for the assistance to underdeveloped areas. These plans contain mostly medium term development guidelines. More important for the municipal level is the legal framework drafted by the urban and spatial planning division of the regional development department. The 1998 Regulations on Physical Plans determine the content of plans at all levels, national, regional and local. Infrastructure networks, objects, significant freight and passenger transport routes and engineering communication routes and territories all have to be part of these plans.

II. Integration of Transportation and Land Use Planning

There is presently no mechanism that formally encourages a concentration of new residential developments in areas with well-connected public transport options. It has so far not been common practice to use land use regulations to discourage new residential or commercial developments in order to avoid the additional generation of traffic. It should be noted that until recently, there was no national law articulating national territorial planning practices and development principles. This has changed with the passing of the National Law on Spatial Development Planning which calls for a sustainable development perspective.

The Regional development department forms part of the Environmental ministry in Latvia, which presents a good opportunity for environmental concerns to be strongly represented in land use plans. The department of health has no formal authority over land use planning in Latvia.

Presently there are really only severe traffic congestion problems in the vicinity of Riga, the capital, which is by far the largest agglomeration in the country. There are no laws requiring public transport access to new development sites. The new regulations on physical plans that are to be developed could theoretically restrict certain areas from being commercially or residentially developed, but existing transport access is not explicitly featured as a decision-making factor for future development direction. This does not mean that regions or municipalities could not decide to make access questions a priority.

Decisions about how much parking will be tolerated in an urban area are made not according to normative but rather according to public perception. It is generally agreed that the parking situation in Riga has become unacceptable, and the city has begun charging car drivers high fees for accessing the inner city. A new parking house in the city Riga is currently being built. Interestingly, there was already a park and ride study done for Riga as long as 10 years ago, when motorization rates were still much lower. Now people have referred back to the study because the solutions for the actual park and ride locations at major access crossroad points near the city centre are still largely considered valid today. Present proposals call for three central parking areas. The main problem with proposed solutions is that all central crosspoints for public transport are in the very city centre, not very conveniently located for carrying and distributing in-commuting passengers from the selected three points.

As a rule, public housing during the Soviet era was constructed with public transport access, since few people could afford cars. But there are no formal requirements in place now that directly relate the construction and location of publicly subsidised housing to the availability of public transport, although most residential areas in denser urban areas are still easily accessible by public transport.

Present transport demand models in Latvia are still working with national household survey data from the pre-transition period, so accuracy is highly diminished just for this main reason. Where new data has been collected for specific studies, the new traffic induced from new road construction in corridors is not as relevant as in other countries since the vast majority of transport infrastructure investments in Latvia has recently been addressing the backlog in maintenance rather than new construction, except for several important bypasses such as the one in Jegalva. It should also be noted that improving the ministry's capacity to collect and manage information about traffic flows was one of the important elements of the EBRD road loan in 1996/97.Previously, information about traffic flows was still collected manually, and major deficiencies in the data existed.

While Latvian municipalities have the right to make restrictions for different territorial activities, to date, no municipality has taken legal action against land developments simply on the grounds that they induced traffic within their boundaries. Meanwhile, increased harbour development has led to a rise in congestion levels in a number of port-adjacent towns. This experience also very much strengthened the consensus that increased regional co-operation is needed in order to plan transport developments rather than just plan at the municipal and national levels.

Riga is presently developing a new traffic master plan with PHARE assistance, which due to the involvement of this EU agency should be of high profile importance regardless of its legal standing. Latvia is certain to be highly attentive to EU recommendations and input. This being said, there is very little information about the contents of the plan to date, and it is unlikely that specific recommendations about the reduction of transport activity being achieved through the co-location of activities.

Both districts and municipalities are required to inform the public about their plans, and broad procedures for informing the public are contained in the new 1998 regulation for physical planning. However, besides the obvious requirement of announcing plans in the newspaper and via mail (for affected landowners) municipalities have considerable leverage over how the public participation process for a project is organised.

III. Internalising the Full Social Costs of Transport

Funding for the road transport sector in Latvia is organised through the Latvian State Road Fund. The revenues for this fund from excise taxes on fuel, annual vehicles registration fees (which are still based on the vehicles' weight, not on emissions or other measures), and the allocations from the Latvian Public Investment Program are supplemented through additional loans, including from IFIs, to cover expenditure on maintenance and upgrading. About one fourth of the budget from 1996 through 2000 will have to be supplemented by loans. It is therefore expected that by 2001, the Road Administration will have to pay 11% of the State Road Fund revenues on repaying loans.

The new Law on Taxes increases the excise duty by US$ 0.04 every year from July 1996 to 2001 to bring it up to EU standards by then. This will help maintenance funding in the medium term.

Since the summer of 1997, the Latvian Road Administration has been transformed into a non-profit "state joint stock company. For road maintenance, a further subdivision into 4 areas is envisioned, with the medium term goal of transferring all ongoing maintenance work to private contractors through open tenders.

Even without new construction or upgrading, the neglect in maintenance between 1991 and 1997 would make these additional funds necessary. About 95% of the rural area roads are extremely low traffic roads. Priority is on performance and on upgrading the quality of the asphalt. About 80% of the standard funds are for upgrading.

There are new construction regulations passed. Until the year 2005 there are mostly to be rehabilitation measures, not much new construction at all. The 2000-2005 investment program focuses on "capacities." The available financing only covers about half of the maintenance needs in the sector.

Both the rail and the public transit sector are in financial difficulties. They receive some support from the State Road fund (see III. 5). Latvia's new 1998 Law on Railways corresponds to EU legislation and sets the ground for competitive bidding and operating in the rail sector. However, Latvia decided not to fully privatise its rail system, and the state will remain responsible for infrastructure maintenance and development, which will continue to be dependent on state subsidies. Cost recovery in the public transit sector is particularly low in the rural areas.

The goal is to increase the share of the excise duty in the Road Fund from the current 60% to 70-80%, ensuring a sustainable financing basis for road maintenance at all levels once the backlog has been caught up with.

The Latvian State Road fund supports both rail and public transport. Ten percent of its budget go towards supporting bus transportation in rural areas, while nine percent are given to the railways as a compensation for the excise tax on fuel. These funds are not sufficient to help these modes with deficit reduction, however.

A major problem in Latvia from an environmental perspective is the emphasis the country puts on its function as a transit country. The vast majority of all cargo in Latvia is transit, both for land- and sea-based shipping. Latvian officials cite transport and communications as accounting for 20% of GNP, and in a small country such as Latvia, a Road Truckers Association employing 25,000 people represents a significant lobby. Latvia is very keen in keeping its transit function. To quote from their official brochure:

> "The government declared promotion of transit traffic as a continuos priority. Transport infrastructure is far too big for domestic needs only, and is mainly catering for the East-West transit traffic. The port business to a large extent determines the overall transport demand as well as transport and transit policy, as almost 80% of rail traffic and 70% of truck traffic is directly servicing the transit flows."

More recent statistics show the transit share of the truck traffic volume at about 40-50% with a downward trend due to the economic crisis in Russia. More importantly, nowhere in the official government statement or plans is there a valuation of the cost that these transit trucks are imposing on the national transit routes. In other words, the negative externalities imposed by these truck in the form of wear and tear on the roads is not qualified anywhere, while all economic benefits of transit traffic business are counted as national income. Meanwhile, the damaging effects of trucks are aggravated by the fact that historically, Latvian pavements have only been designed for 10 ton vehicles, while the standard axle load in most Western European countries of 11.5 tons. In the new projects Latvian pavements will be designed for 11.5 ton vehicles.

Road safety in Latvia is one of the worst in Europe and the transport ministry and the government in general are both keenly aware of this growing problem. The World Bank quotes the fatality rate at 19.9 per 10,000 in 1995. Funds into road safety improvements have thus been increasing, and have already proven successful in that the fatality rate for 1998 has been reduced to 15.7 per 10,000. In 1996/97, the year the EBRD road loan was approved, 2.7 million LVL of the total 44.7 LVL maintenance budget, or just over 5% were slated for traffic safety measures. Back in 1992, the Latvian government had established the Road Safety Directorate (LRSD) as a semi-autonomous entity that reports to the transport ministry. Since 1997 LRSD is a State Owned Share Company that reports to the Ministry of Transport. The 1997 World Bank Staff Appraisal report clarifies its funding structure as follows (page 7):

> "The LRSD defines the requirements for obtaining drivers licenses, and promoted the enactment of mandatory wearing of seat belt or new speed regulations (50km/h in cities and 90 on highways). … The LSRD is self-financing from penalties and fees from transport vehicle registration, drivers licenses, and vehicle inspection as a result of the vehicle registration and inspection system established in 1994. However, remedial measures that require civil works are financed from the LRA's [Latvian Road Administration] budget and not from LRSD's."

There is currently no example of congestion pricing in Latvia.

Parking fees in urban areas have risen sharply in Riga for privately owned parking places only. Especially in light of the growing congestion and parking problems in the inner city, this can be interpreted as a market reaction to an increasingly scarce good. It is unclear, however, if the owners of these spaces are now able to recover the value of their real estate. Moreover, since

fees remained stable at state owned parking areas, this could be said to constitute a comparatively increased subsidy to car owners taking advantage of this valuable inner city space.

IV. Prioritising Ecologically Sustainable Modes

Public transport prioritisation in relation to the others means of traffic is foreseen in the new Riga traffic development conception.

Latvia is currently working on a National Policy and Program for Bicycles. The Bicycles Development State Program was elaborated in December 1998, and will hopefully be approved by the Co-ordination council of the National Transport Development Program in March. There are also environmental groups in Riga working on the issue of bicycling in Riga. As of March 1999, the bicycle program had not been approved but is supposed to in the nearest possible time.

So far, traffic calming has been used in at least two towns in Latvia, namely in Bausaka and Iecava.

Riga's historical city centre is partly restricted for motor vehicle use, thus creating a more hospitable environment for other modes. Overall, there are no legal obstacles to the introduction to traffic calming and restrictions.

Riga's city centre has a licensing scheme for access, and peak hour driving is especially restricted. There are even physical guideposts that have to be passed to get into the historical quarters.

Traffic signals are presently not timed to correspond with the operating schedules of public transit vehicles.

V. Public Participation in the Decision-Making Process

Latvian citizens are granted the right to transparent and reliable information on planning issues. Citizens have the right to lodge a complaint against administrative decisions that are contrary to the rights and legal interests of citizens. For the transport sector, public review and comment is invited on major planning projects, but generally not at a time when significant alternative approaches are still being discussed. Information about the plans is disseminated through the regular media channels. The Via Baltica project is presently available for public review and comments to the general public.

Environmental impacts assessments are also relevant for transport plans, not only for isolated projects. The detailed environmental assessments are not made available to the public.

Latvia has a new Law on Concessions, the so called "Umbrella Law." Based on this law, the Cabinet of Ministers will elaborate Regulations on Highway Concession in the year 2000.

There is presently no transport demand model used for public decision-making that is available to the public free of charge. Activities are carried out in accordance with the Cabinet of Ministers' regulation on "Discussion of Building Rules on a Public Basis."

Sufficient data and information on the cost-benefit analyses methodology used on major transport projects is not typically made available to the public to independently corroborate the results. Guidelines for this are being developed.

I. The EIA Process

Currently, for national roads, the EIA is approved by a National Commission on Environmental Impact Assessment which is under the national Ministry of Environmental Protection, Natural Resources, and Forestry (MENRF). For regional roads, the EIA is reviewed by the *voivodship* (province) level Commissions on EIA, which is virtually all that the *voivodship* level environmental agencies consist of. There is legal ambiguity as to whether the *voivodship* level Commissions of EIA are under the supervision of the National Ministry of Environmental Protection or under the Governor of the *voivodship*, which is an appointed position. Smaller, local roads are not subjected to an EIA procedure.

There is currently an administrative reform law pending before parliament which will shift this responsibility to Commissions on Environmental Impact Assessment at the *voivodship* level, where the Commissions are weak or non-existent. Most environmentalists see this as an attempt to weaken the procedure.

EIA is performed by or under contract for the 'Investor.' If the 'Investor' is a private company, as in the case of the concession highways, in theory they are responsible for performing or contracting the EIA. Generally it is done by the Director General for Public Roads under the Ministry of Transport, although in the case of free sections of the motorway program (like the Poznan 'bypass') the EIA is performed by the Motorway Agency, though it has to be done by an accredited professional.

The EIA law requires that impacts on air quality must be monitored. However, the Ministry of Environmental Protection and Natural Resources has yet to define acceptable methodologies for projecting the likely emissions effects of new construction, primarily due to the highly uncertain effect of new construction on traffic. There is also no agreement as to what the 'hazard zone' should be; i.e. the distance between the projected emissions and residential neighbourhoods. The Ministry of Environmental Protection was supposed to issue some guidelines on this, but until now they have not.

The MENRF's Commission on Environmental Impact Assessment can delay a major infrastructure investment, and could get an alternative route, but probably could not stop a major road unless the EIA results are clearly negative. If the methodology is flawed, it can require that the EIA be performed again. The Warsaw ring road was delayed because the EIA law requires the review of alternative routes. The original EIA offered only one alternative route, and the Commission required it to develop a third alternative route.

The time and budget of the Environmental Department staff at the MENRF who are responsible for reviewing and verifying EIA results and compare them to environmental laws are not sufficient.

No guidelines have been developed by the MOE to determine "conformity" between major transportation plans and projects and ambient air quality standards, (i.e. there is no equivalent to the conformity guidelines at US EPA); moreover, it lacks the staff and capacity to undertake this sort of evaluation. It is required by the EIA procedure, but again there is no agreed upon methodology by the Committee for EIA.

Even if such an evaluation were performed, and it showed that the construction of a major new road would drive a particular local government (*gmina*) out of compliance with the ambient air quality norms, the road could still be built if the local government approves the master plan which includes the road.

SEA was not required for the entire Polish motorway system nor for the national expressway system. Nonetheless, the MOT agreed to perform one, and the firm GABB did the study. It did not, however, look at alternatives to the motorway program, and focussed on future planning.

In 1997, General Directorate of Public Roads contracted the Institute of Roads and Bridges of the Warsaw University of Technology to carry out a comprehensive "Motorway and Expressway Study." The aim was to review the adopted system and, in particular to analyse 33 proposals to expand the program. These proposals came from regional authorities and members of parliament wanting to see their regions served better. Figure 2 contains a brief note on the scope and findings of the study.

FIGURE II

STUDY OF THE SYSTEM OF POLISH MOTORWAYS AND EXPRESSWAYS 1996-1997

Authors: Warsaw University of Technology (Dr. Suchorzewski), with Andrzej Waltz Konsulting, National Foundation for Environmental Protection and "Ekodroga" - Kraków.

Objectives:
- Review of plans for the system
- Analysis of proposals to expand the system
- Formulation of recommendations

Inputs:
- Trends and predictions on economic and spatial development in Poland and the region
- Motorization and traffic forecasts (national and international)
- National transport policy
- Plans for the development of TEN (Cretan Corridors)

Scope:
- time horizon: 2025
- inventory and analysis of studies (e.g. BCEOM, TecnEcon, GIBB)
- inventory of transport network and building a model
- supplementary O-D traffic survey (91 points)
- traffic forecasts and analysis of alternatives
- identification of collisions with the natural environment
- alternatives of the network
- emissions and noise analysis
- costs and economic analysis.
- network-traffic computer model:
  - 405 internal zones
  - 37 external zones
  - 1830 nodes
  - 3300 links

Strategic analysis of impact on the environment:
- Collisions with areas of high value
- ECONET-PL
- Length of the network in 2025 (km)
- National system of protected areas
- Reserves and main nodes, incl. CORINE

Three alternatives:
- O "do nothing"
- A adopted by the government
- P proposed

Results:
- Use of agriculture land – 510 sq. km – 122 thousand ton p.a.- 4.5-11 thousand jobs
- CO, NOx, C2H6, CO2eq – in options "A" and "P" emissions reduced by 6.3-8.7% in comparison with option "O"; emissions in built-up areas will be reduced by 39%
- Noise: length of road sections in build-up areas with noise above limits – length reduced by 700 km and the area affected from 991 sq. km (option "O") to 830-853 sq. km (options "A" and "P").
- reduction of the number of vehicles with dangerous goods passing through build-up areas.
- Accidents and victims (p.a.):
- Injured: 22 thousand less
- killed: 360-380 less.

Attention: tolls reduce traffic on motorways; it leads to increased volumes on second class roads and growth of emissions and noise on sections in build-up areas.

Final conclusions:
1. Planned network effective: IRR=20%
2. Priorities for motorways: Cretan corridors, except some sections.
3. Modification of expressway network may increase IRR to 23%..
4. Impact on the environment – similar or smaller than in option "O."

It is up to the financing parties to use cost-benefit analysis as a tool to better determine the best spatial, technological and functional alternative to the project. Cost-benefit analysis is used in Poland to prioritise rehabilitation and road maintenance projects, as well as for new construction. While the World Bank insists that cost-benefit analysis be done, the EIB does not really require it. Projects with IRR above a certain level were determined to be 'pre-qualified' for World Bank funding.

Cost-benefit analysis does not necessarily require the quantification of environmental externalities (including accidents, noise externalities, congestion), costs and benefits to non-motorised road users, generated traffic or economic impacts on parallel modes that might be adversely affected by the project. In fact, there is no law stipulating the content of EIAs, although most of the above are factors to be considered for very large scale projects.

An analysis of different routes is required by the EIA, but not for alternative methods for achieving the same mobility needs through other modes or traffic demand management measures. There is no utilisation of 'least cost planning' techniques.

All major infrastructure investment plans, whether those of the Motorway Agency, or of the DG of Public Roads , must be sent to the 'Economic Committee' of the Parliament, and the Ministry of Finance sits on the Economic Committee. The MOF can require any type of analysis that it wants. From there the proposal goes to the Council of Ministers, and from there to the Parliament. However, there is no indication that the MOF ever required any careful financial analysis of the concession highways, i.e. assessment of financial risks. (There may be an opportunity to request this now, as the Polish Motorway law is currently being revised.) As the concession process didn't really work thus far, the importance of such an assessment was not so important. But now that the law is being revised, and the government's contribution will rise substantially, it could become more so. Private concession companies did their own financial analysis of concession highway projects, and as a result all but one company decided the investments didn't make financial sense. The one company that did bid on the project later determined that the road didn't make financial sense, and never complied with the contract, making it null and void, but in fact the concession is being renegotiated.

The Polish Motorway Law, which was passed in 1994, identified some 2600 kilometres of motorways to be built by the private sector as Built-Operate-Transfer Concession highways. These 2600 kilometres are the responsibility of the Polish Motorway Agency, a parastatal organisation whose funding comes, in theory, from concession fees, and which reports to the Ministry of Transport.

Poland's Transportation Policy prepared by the Ministry of Transport was adopted by the parliament. In 1998, the Ministry of Transport and Maritime Economy also prepared a new national transportation investment plan until 2015 which identified some 16,000 kilometres of roads as 'national roads' and another several thousand kilometres of planned national roads, as being the financial responsibility of the national government. These roads are the primary recipient of the 30% of the annual fuel excise tax revenues given to the MOT's DG for Public Roads. Out of these funds, the National government also provides a 10% match to local road projects.

Poland's new system of road financing appears to be favourable for the national roads and reduces finances allocated to roads of lower categories. For example, in 1999,"county"

roads in Warsaw received only 25% of the amount spent for road maintenance in 1998. This system is questioned by cities.

Since 1998, as a new law forbids the rights of local governments to collect vehicle registration fees for the first time, the local government revenues will be replaced by another 6.66% of the fuel excise tax revenues. The net effect on the revenues available to *voivodship* and local governments is supposed to be revenue neutral. However, as the money was previously collected by the Municipalities, they could use the money for roads or public transit as they saw fit. Now, it is likely that the funds will be restricted to roads, which could result in a diminution of the funds available for public transit and increase in funding for roads.

The government funds can only be used for what has been defined as the national transportation network. There is no national bicycle master plan or policy, and no non-motorised infrastructures form part of the national transportation system. But some public transit and commuter railroad projects are now included into the national transportation network, such as the Warsaw Metro and the main railway station in Krakow. The government does not give funds towards non-national networks. By contrast, it is sometimes the case that local government funds are invested into infrastructures that are part of the national transport system.

Since 1990, the Ministry of Transport and Maritime Economy has no responsibility for urban public transport, and the only money that ever went from the national government to the local government for public transport directly was for the Warsaw Metro and the Poznan fast tram. There are discussions underway now between the two groups which represent city officials to the national government where a national role in public transit is being discussed. The World Bank strongly recommended that the central government should play a role in the urban transport sector providing policy guidelines, legislative initiative, financing R&D work and the like.

There will also be a process of defining the critical rail routes, but this will be done as part of an overall rail restructuring effort. PKP (Polish national railroad) is scheduled to separate the control of the track infrastructure from the operation of the railroad services, following EU norms, but this law has not yet passed. Everyone has agreed, but the Unions and PKP management want to wait one year to smooth the transition.

There are discussions of restructuring PKP where some local lines would be spun off to local government control, but this has not yet happened. Currently PKP does not have line-specific data about profitability, so defining a national railway network is difficult. There is also a national plan for the railways, which identifies funding priorities for rehabilitation, maintenance, etc. but it is not divided into national and local administrative responsibility as it is in the road sector because there is no administrative competence or funding at the local level for railroads.

As of January of 1998, citizens groups have had the legal right to sue for now compliance with environmental laws. If an EIA is not done in a credible manner, or the mitigation measures are not implemented, citizens groups have the right to sue. They can also sue for violation of air quality standards. If citizens groups can demonstrate that a new shopping centre will generate traffic that drives an area out of compliance with ambient air quality norms, they can sue to have the project stopped. A suit does not have to come from a directly affected party.

The only legally-binding land use and transport plans are the *gmina* level plans. In most cities, this does not present any major problem as the *gmina* boundaries roughly correspond to

the urbanised metropolitan area, and sometimes include not so urbanised areas as well. This means that national-level transport infrastructure master plans are not legally binding until they are translated into the local plans at the *gmina* levels in all of the corridors.

Warsaw is a special case as it is composed of several *gminas*. In Warsaw, there is a Warsaw Metropolitan Government that co-ordinates the activities of the several *gminas*. The Warsaw Metropolitan Government developed what was called a "Pre-Master Plan" entitled the "Condition and Direction of Future Development," about 80% of which was focused on transport, but also covers many policy issues. This Pre-Master Plan was approved by the City Council in 1998, but it is not actually binding until the plan is translated into *gmina*-level plans.

If a local *gmina* refused to include a national or metropolitan road route in their local plan, there would be a negotiation between the *gmina* and the national government, and some deal would no doubt be struck. There is no clear legal mechanism for forcing a *gmina* to follow a national or a metropolitan plan, and sometimes they don't.

In the case of Warsaw, according to the new administrative reform law, if a local *gmina* does not pass a local master plan, then each development decision has to be approved by the City Office (the cabinet of the mayor) on an ad hoc basis. There are great reservations about this.

There is also an exemption in the Polish Motorway Law of 1994 exempting the 2600KM of motorways from this provision in the planning law. This was challenged in the courts by some environmentalists but it failed. The exemption is somewhat mitigated by the following provisions in the act:

> *"Art. 19. The Minister of the Central Planning Office shall issue recommendations on the location of the motorways in co-ordination with the Minister of Land Development and Construction as well as with Ministers of: Environmental Protection, ...Transport...*
>
> *Art. 20.1 A proposal for a giving recommendations .... shall contain:*
>
> *3) an evaluation of the impact of the motorway on the environment conducted by the experts chosen by the Ministry of the Environment ...*
>
> *4)) an evaluation of the impact of the motorway on the agriculture and forest lands....*
>
> *5)) an evaluation conducted by the expert from the list of experts of the Minister of Culture of the impact of the motorway on the cultural treasures ....*
>
> *2. The President of the Agency (of Motorways) shall submit the application mentioned in para. 1 after obtaining an opinion from relevant local Voivods and interested gmina councils and autonomous regional councils.*
>
> *Art. 21.1. A decision on the location of a motorway shall be made by a Voivod"*

Whether or not there is co-ordination between land use regulation and transportation plans depends on the local master plan that is passed by the city council, and in the case of Warsaw on both the local master plans and the pre-master plan done at the metropolitan level.

In the case of both the Krakow master plan and the Warsaw Pre-Master Plan, they were both done by a fairly progressive team of planners from the Krakow Technical University, (Prof. Rudnicki and Prof. Ziobrowski and former Deputy Mayor of Krakow, Jan Friedberg). The plans are both somewhat compromises but both have looser development controls at areas served by public transit corridors.

In other cities, however, where the master plan may have been designed by less progressive planners, there may be less relationship between transport and land use plans. There are no 'guidelines' from the national MENRF or Ministry of Transport similar to PPG #13 in England.

In rural or urban counties where there is no master plan in place at the *gmina* level, the community, through the local government, can block the sale of land for a new highway on an ad hoc basis. This has successfully delayed the Poznan Bypass.

It should also be noted that, non-local transportation projects are often resisted by local groups or even governments, so that they have to be implemented through legal action rather than negotiation.

II. Integrating Transport and Land Use Planning

The national Land Use and Construction Bill lays out the responsibilities of the local and regional administrations. There is no legal relation between land use and transport system investment decisions. There is also no mechanism or law in place that would concentrate new residential and commercial development in areas already well served by public transport.

The MENRF can propose legislation protecting certain areas as nature protection areas where you can't build roads or develop property without going through some rigorous procedure. The ministry can also control development decisions within and near forested areas.

In some cases, the MOE passed legislation protecting certain areas as landscape parks even though old transportation master plans still in force since the 1980s had already reserved rights of way for motorways.

The *voivodship* level of government, which is not really accountable and is appointed rather than elected, can decide unilaterally to allow development in a nature protection area.

The local *gmina* can also decide to allow development in nature protected areas. This arises frequently in lands designated 'landscape parks.' Many people who own land that was designated 'landscape park' on the suburban areas of Warsaw would like to develop this land. There is a special exemption in the Polish Motorway Law which allows for the development of the roadway in a landscape park if they have approval from the governor of the *voivodship*. This has led to some sharp controversies, such as at the Santa Anna Landscape park, where protestors camped in trees were dragged away by private security forces hired by the motorway companies.

Cities require major developers to do a 'transport accessibility study' before they are granted a building permit. If a developer proposes to build a major supermarket in a suburban area with very few roads and poorly served by public transport, the City can reject the building

permit until the plans are modified. If the development is on land owned by the *voivodship* they can also refuse to sell the land. In the case of the 'Carful' shopping centre in Krakow, the city held up the construction permit on the grounds that the only access route, a four lane road, could not handle the additional traffic that its 2000 unit parking facility would generate. However, there is strong political pressure to approve such developments. The Deputy Mayor who held up the approval process was replaced, and the new deputy mayor approved the development. Now the road is heavily congested and the *voivodship*, which sold the land, is pressuring Krakow to widen the road. Krakow City is refusing, however, saying that the *voivodship* profited from the sale of the land, they if anyone should improve the road.

Cities can control development by including parking controls in the master plan. Both the Warsaw and Krakow Master Plans have parking control zones. Krakow has three zones, and the two central zones place limits on the number of parking spaces that can be built by any given developer. In the third, suburban zone, the city council refused to approve maximum parking limits, and approved only minimum limits, after a political struggle. (The city council thought Prof. Rudnicki was crazy for suggesting maximum limits in less developed suburban areas.) In the Pre-master plan for Warsaw four parking zones were proposed, and all of the zones, even the outer ones, have maximum parking limits, though the outer ones also have minimum limits. To date, this is still a recommendation which will have to be incorporated into local plan.

These parking limits, included in the master plans or pre-master plans can be used to restrict the development of auto-dependent development. But again, there is no national role in this, and whether this is done in a sustainable way or not depends on the local or municipal government, and fortuitously there were sophisticated planners involved in both the Warsaw and the Krakow cases in Poland.

In terms of charging for parking, parking on city streets in Warsaw is primarily controlled by the City Office (the cabinet of the Mayor). The law changed a few years ago allowing parking charges on city streets and they will be introducing the first parking charges on Warsaw streets soon. This decision will be made by the City Office. At the *gmina* level, which controls very local streets in Warsaw, it is unclear whether the *gmina* could impose parking charges unilaterally without the authorisation of the City Office, but most streets in Warsaw are controlled by the City Office. In other cities the administrative structure is more straight forward, as the *gmina* is also the municipal government.

Decisions about where to locate publicly-subsidised housing are influenced by public transit availability, but only on a common sense base. There is no legal mechanism that could prevent public housing from being located in a transit poor area. Most housing in Poland is co-operative housing now, and in this case the location decisions are driven primarily based on the availability of land, and the location must be approved by the local land use plan at the *gmina* level.

Polish transport planners have been using standard demand forecasting models since early 1960-ies. In 1962-63, Polish urban and transport planners developed the so-called "Warsaw Optimisation Model", which was one of the first attempts in the world to find out land-use patterns that minimise the need to travel. The first foreign application was in Skopje (Yugoslavia, 1964-65, UNDP project), a project after which international demand for Polish urban planners greatly increased.

As for the present situation, there are several consulting offices in Poland which have programs such as Emme/2 or better. O&D studies were carried out in many cities (in Warsaw,

the most recent was in 1993 and 1998/9) and urban traffic forecasts routinely take into account development envisaged along corridors. Currently, the biggest challenge for Polish (as for any other) professionals is the prediction of motorway induced traffic at the national/international level.

The local master plans that local governments prepare are legally binding for that area as the one form of local law. Local governments have the legal obligation to prepare general analyses and studies regarding economic activity location, but they may not always take into account demand reduction measures. Urban sprawl is Poland's main transport planning problem at the moment. Mushrooming shopping centres and hypermarkets are located at city peripheries and are inducing car-travelling and sparse development. So far, only one city, Szczecin, has opposed this process

It is actually possible for public action to stop master plans, sometimes by engaging the city in legal suits regarding certain elements of the plan. There is no difference in the hearing and public input requirements between municipality-wide and district-wide master plans.

III. Internalising the Full Social Costs of Transport

The newest regulations in Poland stipulate that at least 30% of government revenues from gasoline taxation go to road maintenance. According to recent computer simulations, a 20% annual increase of national road maintenance expenditures could bring the road system into a state of good repair by 2005, while lower increases around 10% annual will have no such positive effect.

Road user revenues in Poland are of four types. The vast majority of revenues comes from the Value Added Tax on Fuel and the surtax on fuel which together constitute roughly 75% of total road user revenues. It is not entirely clear that VAT on fuels should be considered a road user fee, as they are imposed on all products at roughly similar rates, and most economists therefore do not feel that they should constitute a user fee. No one would argue that money raised from the consumption of cigarettes and alcohol, which also have high VAT and consumption taxes in some countries, constitute a 'user fee' and thus should be re-invested into the production of cigarettes and alcohol. Another 10% of revenues collected from vehicle operators comes from vehicle registration fees which until recently were collected by the local government, and spent on municipal roads. Another 15% of total road user revenues comes from various other charges imposed on motorists.

Determining the percentage of road user revenues to road expenditures depends on the definition of a road user fee, which is a hotly contested political issue, it is difficult to come to a useful benchmark. That being said, the percentages in Poland are based on the treatment of VAT as a user fee.

Until 1998, of all revenues from road users including VAT, around 36.66% were returned to road maintenance and investments, excluding the costs of snow clearance in winter, with roughly 30% being returned to national roads and 6.66% to local roads.

After 1998, the vehicle registration fee was abolished, and the loss of revenue was made up by an additional share of the gasoline tax being allocated to local roads. Overall tax revenues remained similar, however, they are all going to the state budget and are subsequently allocated. These rules are criticised as they give preference to national roads.

Maintenance expenditures on Non-Urban roads in 1995 were roughly 1/4 of what then need to be to bring the road infrastructure to a state of good repair by 2005. An increase of 20% of road maintenance spending over current levels would bring the system into a state of good repair by 2005. As for urban conditions, Warsaw has a very good inventory of pavement conditions (with the use of the most advanced methods of diagnosing). With the present resources, pavements and bridges are deteriorating.

There is no reliable data for the Polish Railway on cost recovery ratios. According to Suchorzewski (Rudnicki, 1996, p.310), the majority of Polish urban public transport companies have cost recovery ratios in the 70% range. This is much more than in other CEE countries, and, generally, EU countries.

Local road user revenues are slightly lower (Zl 640) than municipal expenditures on roads (Zl 802) but the data is poor. According to the estimates provided from Polish Helcom representatives, local road user revenues only cover about 10-15% of the costs of maintenance and new construction in the best case of suburban areas, while the rate for urban areas can be as low as 1%.

Road user revenues are not earmarked, but the percentage of road user revenues dedicated to roads each year has been fairly stable at around 36% and is an issue of parliamentary debate.

There are no eco-taxes specifically imposed on motorists. The ecological costs (noise and emissions) of transport were estimated by Rudnicky and Kopta at Zl 300 million, which would account for another 5% of road user revenues raised.

Road user safety costs were estimated at Zl 247 million, or accounting for another 4% of total road user revenues raised. Costs of safety mitigation measures are incorporated into infrastructure costs to the extent that they are mitigated. Overall, there is no relation between taxes and road safety expenditures.

There are no congestion pricing experiments going on in Poland, though it is now legal for municipalities to raise their local parking charges, and several cities including Warsaw are likely to introduce downtown parking fees in the next year or two. Also note that there are presently no toll roads in Poland.

No estimates have been made of the subsidy to motorists resulting from the free use of downtown real estate for parking of motor vehicles. Overall, parking fees are so low in Poland that their role in covering the value of the real estate can be considered minimal.

No data is available to make estimates on the comparison of public sector investments or subsidies in the rail, road and public transit sectors on a per passenger or per kilometre travelled basis.

IV. Prioritising Ecologically Sustainable Modes

There are trams operating with a significant part of their network on exclusive tram rights of way in most Polish cities. Exclusive bus lanes exists in some cities (Krakow, Warsaw, Wroclaw), however, enforcement is low and there is much opposition from a newly motorised public. A plan for grade-separated exclusive bus lanes in Warsaw has been developed but was implemented only to a very small extent. The new ‘fast-tram’ in Krakow, estimated to be com-

pleted by 2001, will have traffic signal prioritisation and more than half of its speed improvement over standard trams comes from this traffic signal prioritisation. Plans for upgrading and development of a tram system in Warsaw were also approved with the new Warsaw pre-master plan this year, but it is questioned by promoters of accelerated metro development. In the Katowice agglomeration, a project of upgrading the important tramway line has been started. Similar plans for Lodz exist. Projects of central traffic management in Krakow, Warsaw and Szczecin envisage priorities for trams and buses in traffic control.

Some 150km of bike networks have been developed in Krakow, and some 300km in all are planned. Warsaw now has a bicycle master plan as part of its new master plan but little of it has yet been constructed.

There are no major legal obstacles to traffic calming and pedestrian areas. The City Office has the power to implement such proposals more or less on its own initiative if they are on streets controlled by the City Office.

There are extensive pedestrian areas in Krakow and some in Warsaw, most of them in the Old Town, but one also off of the Nowy Swiat (the King's Way). Other cities with pedestrian areas include Gdansk, Wroclaw, Radom, Lodz, Katowice, and Kielce.

There are tight parking controls in the old town of Krakow, and the master plan in Krakow regulate new construction in central areas to upper limits of parking units. The same regulation is contained in the Warsaw pre-master plan.

V. Public Participation in the Decision-Making Process

The national transportation plan developed in 1998 is to go to the Economic and Financial Committee and from their to the Council of Ministers, and from there to the Parliament. It will not be subjected to public hearings. The Polish National Motorway System is exempt from this process and requires no public hearings upon the authorisation of the head of the *voivodship*. It is not even clear that the EIAs from the motorways have to be made public but the law is currently under revision.

The Warsaw metropolitan region's new transportation master plan was developed in consultation with over 40 public hearings. Public hearings are only mandatory at the local *gmina* level, but broader public hearings were held in fact. The master plan for Krakow, which itself is a single *gmina*, had to be held according to law.

Public participation in the planning process is thus strongest at the *gmina* level, quite good in practice but not necessary from a legal point of view in Warsaw (regional), there are no regional plans otherwise, but public review for national plans is only through representatives in the govt, and the motorway program is largely exempt.

EIAs are required on all major projects, but are only done on very large projects in practice.

Concession contracts in theory should be open to the public by law, but in practice it is probably very difficult to get them. The Ministry of Finance reviews the Concession agreement and they can call for any studies they want before approving the contract.

For Warsaw, a very good traffic model exists It was calibrated using 1993 O&S data and will be updated soon. Access to this original data is not easy, but outputs of various studies using this model are available.

Economic and financial analysis is a normal part of project preparation. The projects for upgrading tramways in Katowice and Lodz had both economic and financial analysis. All major cities and regions have traffic models, and the same concerns national level traffic model(s): for the rail transport, road transport, etc. Some forecasts reach as far as 2030 (for greenhouse gases).

Excursus: Tailpipe and Fuel Emission Standards and Enforcement in Poland

Tailpipe emissions are monitored on new, newly imported, and in-use vehicles to varying degrees of effectiveness. New vehicles imported or domestically manufactured in numbers greater than three are subject to 'type approval' and 'verification of production conformity.' All other vehicles are subject to emissions test before registration.

Tailpipe emission standards for new vehicles follow ECE Regulations, which are leni3nt on vehicles fuelled with leaded gasoline and more stringent on other vehicles. There are as yet no Polish requirements that specific classes of vehicles operate on unleaded fuel only, constituting a large loophole in the tailpipe emissions regulation.

In Use monitoring for vehicles subject to type classification is required after the first three years, then after two years, and then every year thereafter, while all other vehicles are legally to be subjected to annual emissions inspection. Laws have been in place since 1993.

Poland now has 2500 type-approved inspection stations with proper smoke-meters and exhaust gas analysers. In-Use emissions regulations are the same as 92/55/EEC, except that HC limits are also set, which encourages the installation of catalytic converters onto non-type vehicles.

In fact, however, these measures are not fully working. As of 1995, 40% of the vehicle fleet did not conform to the CO tailpipe emission standards, and 20% do not conform to smoke regulations. It is estimated that improving the efficiency of the I/M system would reduce CO, HC, smoke and particulate emissions by 10%- 20%.

60% of NOx emissions in Poland comes from diesel-fuel vehicles.

Poland also has CAFE standards set by the Ministry of Industry and Commerce on both cars and trucks.

Poland also has fuel standards on both gasoline and diesel. Fuel taxes are adjusted to encourage the use of cleaner fuel, in the form of discounts for cleaner fuel, rather than additional taxes on dirtier fuels.

-----Ambient Air and Noise Standards and Enforcement

Poland has Ambient Air Quality and Noise Standards as tight or tighter than EU standards (i.e. on NOx, ground level ozone, particulate, and noise).

Currently, of the 98 ambient air quality emissions stations, only 3 are in urban areas and are focused on transport problems: one is in downtown Warsaw, one in downtown Krakow, and I don't know where the other one is. In practice, then, there is minimal collection of real time ambient air emissions from the transport sector. There are some studies estimating ambient air quality based on models estimated from the total motor vehicle traffic and the vehicle mix in the vehicle fleet.

The one monitoring station in Warsaw does not indicate any violations of ambient air norms, because it is in a wide boulevard and one which is subject to a high level of wind from the Wistula. The monitoring station on Al. Krasinskiego in Krakow indicates that CO emission standards are continuously exceeded, and NOx emissions standards are frequently exceeded.

In theory, if there is a violation, it must be made public, and a plan for addressing the violation must be made by the local government. In practice, if there is a violation, the local government will claim that the only mitigating measure would be to build a bypass or a subway, and that they do not have the money for this.

Conclusions of Task II

Both Latvia and Polish environmental legislation are rapidly approaching EU standards, at least in print. Public participation requirements should nominally be up to Western standards as well. However, the enforceability of certain procedures and regulations is heavily dependent on administrative abilities and capabilities, which are frequently lacking. Both understaffing in environmental expert departments and lack of inter- and intra-agency co-ordination are important factors here. Sometimes the intricacies of environmental law making such as the shifting of responsibility for EIAs from the Polish *voivodship* to the lowest qualified administrative level have particular political economy and power ramifications, but these experiences cannot be generalised.

As in most other countries, currently used environmental and cost benefit assessment procedures are not sophisticated enough to include a full internalisation of social and environmental costs of the transport sector. Latvia in particular looks heavily towards transit traffic as a source of international income without any accounting of the environmental effects of especially truck traffic. It is important to note that unless traffic modelling and air pollution monitoring capabilities in both countries are significantly expanded, few of the more ambitious environmental goals contained in recent environmental legislation can become a reality due to lack of enforceability.

There is presently no sufficient co-ordination between land use and transportation planning. Important opportunities for setting the state for a more sustainable land use and transportation systems are being missed here, especially by not requiring that new residential and commercial developments be accessible by environmentally sustainable modes. In these cases, the key question is not so much direct infrastructure investment decision-making as investing into a solid spatial planning decision-making structure.

It also seems that not enough efforts are being made to keep the public transport infrastructures in both rural and urban areas sufficiently competitive to keep the countries from becoming increasingly auto-dependent. Public investment programs rarely have clear priorities for funding for more sustainable modes of transport. Latvia's use of state road funds for investments in the rural bus fleets is an especially laudable effort in this context. Although underrepresented as an issue in the distributed questionnaire, rail restructuring emerges as a key area of debate in both countries, as does the potential for water-based transport.

While there is a general recognition that a better development of the public transport, rail, shipping and particularly combined transport sectors is crucial for sustainable transport development in the future, it continues to be significantly harder to attract funding for these more sustainable modes than for the road sector. Insufficient prioritisation of these more ecologically sustainable modes in national, regional and local transport legislation and planning are only partly responsible for this, however. Public transport signal prioritisation, express lanes, traffic calming, pedestrian zones, bicycle paths, and sophisticated parking licensing schemes are all still significantly under-utilised methods and tools of transportation policy and planning in both countries.

Just like their EU counterparts and Baltic neighbours, Latvian and Polish officials struggle to make their transport systems more economically viable, more environmentally friendly and more socially equitable at the same time. Given the severe financial and administrative difficulties that these two transition countries face in the re-orientation and the upgrading of their transport infrastructures, it is obvious that the availability of international funding and the

conditions under which these funds are provided will have a major impact on the future sustainability of their transport systems. On the other hand, major decisions to support more sustainable modes are taken at the national and sub-national levels. Several technical assistance and/or regional co-operation programs have helped decision-making at the local level, but as always, more could be done.

TASK III: Suggested Guidelines for Environmentally Sustainable Transportation Investment Decision-Making in the Baltic Sea Region

Introduction

As a key outcome of this project, the following guidelines for better integrating environmental sustainability goals into the transportation infrastructure investment decision-making process are suggested. These guidelines were presented in draft form at a workshop held in Stockholm on 3-4 March 1999, where they where extensively reviewed and discussed by HELCOM member states, the European Commission, and the international financial institutions. The suggested guidelines were then fully revised to reflect the views expressed at the workshop.

Preamble

At the 7th Ministerial Session of the Council of the Baltic Sea States in Nyborg on 22-23 June 1998, the Agenda 21 for the Baltic Sea Region - Baltic 21 was adopted: "The essential objective of Baltic Sea Region co-operation is the constant improvement of the living and working conditions of their peoples within the framework of sustainable development, sustainable management of natural resources, and protection of the environment. Sustainable development includes three mutually interdependent dimensions - economic, social and environmental." For transport, a particular goal was adopted:

> "The goal with regard to sustainable transportation in the Baltic Sea region consists of two components:
>
> - To minimise the negative environmental effects, the consumption of non-renewable resources and the use of land for transportation purposes to protect human health and the environment, in particular the sensitive ecosystems of the region;
>
> - To retain transport's ability to serve the economic and social development of the Baltic Sea region."

One principal outcome of Baltic 21 was the Action Programme, with the first transport sector action asking to "carry out a project on developing guidelines, criteria and recommendations for infrastructure investments in a sustainable transport system."

At its 17th session on 13 March 1996, the Helsinki Commission (Baltic Marine Environment Protection Commission) adopted HELCOM RECOMMENDATION 17/1 "Reduction of Emissions from Transport Sector Affecting the Baltic Sea." This recommendation asks governments and contracting parties of the convention that,

- environmental protection should be made an integral part of all activities in the transport sector

- the "Polluter-Pays Principle" as mentioned in the 1992 Helsinki Convention should be implemented in the transport sector

- the introduction of best available technology (BAT) for vehicles and fuels in all transport modes should be facilitated

Furthermore, this "recommends also that international financial institutions, donors and other external sources of funding should include measures to support sustainable transport when considering financial packages for infra structural investments."

"The Ministers of Transport and Environment of UNECE met on 12-14 November 1997 in Vienna. At this Regional Conference on Transport and Environment, the Vienna Declaration was adopted. This declaration, generally asking for "promoting measures to reach volumes and patterns of transport that are compatible with sustainable development," *inter alia* considered supporting measures and solutions aimed at "Reducing and limiting the environmental impact of transport infrastructure and developing criteria and guidelines on intermodal and integrated infrastructure planning which take proper account of environmental, spatial, economic and social aspects;" (para III 5. of the declaration).

Recalling these different international political resolutions, the following guidelines are suggested to both IFIs and HELCOM member state decision-makers regarding transport infrastructure investment.

Changes in Project Appraisal: General

1. **Environmental, health, and safety goals should be directly included in the transportation planning and infrastructure investment decision-making process, following HELCOM Rec. 17.1 which states that "Environmental protection should be made an integral part of all activities in the transport sector."**

   Currently, transportation plans and investments are made primarily based on economic and political criteria, and are subsequently assessed with regard to their effects on human health and safety and their impact on the environment. At this point in the decision-making process, however, significant changes in approach to meeting the same access and mobility goals are impossible. Rather, environmental, safety and health goals should be built in to the initial planning and investment decision-making process.

2. **Because of the specific environmental concerns related to the protection of the Baltic Sea, all major transportation plans and investments at the regional, national, and municipal level should be subjected to a Strategic Environmental Assessment (SEA) by governments. When making loans in the sector, international financial institutions (IFIs) should encourage the completion of an SEA and take account of the results in their decision-making. This SEA must include, but is not limited to, assessing short, medium, and long-term impacts on the Baltic Sea. Plans and investments should be modified if necessary to ensure their conformity with HELCOM emissions reduction and other environmental goals (in particular, noise), as well as safety and health regulations.**

   The current project-specific environmental impact assessment (EIA) process used in most countries, while critical, is insufficient to assess the environmental implications of long-term

modal shifts resulting from major transport infrastructure investment. Investing in many roads across the country, while ignoring even maintenance needs on existing rail lines may lead to a deterioration of rail traffic and rapid increase in truck and passenger car traffic, with considerable environmental consequences that are not picked up in the project specific EIA. Furthermore, the cumulative effects of many individual projects on human health, animal habitats, bio-diversity, air quality, and noise may be greater than the sum of the individual projects. In order to capture these more systemic environmental affects, major transportation plans at the Regional, National, and Metropolitan level need to be evaluated for their likely impact on compliance national environmental laws and targets, and international environmental agreements.

3. **Governments and IFIs should require that major transportation infrastructure plans and investments should be subjected to an alternatives analysis where the costs and benefits, or cost effectiveness, of two or three alternatives for reaching the same access, safety, health, and environmental protection goal are compared. These alternatives must include investments into alternative modes, and traffic demand management measures. "Least Cost Planning" should be explored as a possible method.**

   Currently, expansion of transportation infrastructure capacity is assumed to be the best way to reach transport-related goals, which are focused on facilitating the movement of vehicles. In fact, however, "making more efficient use of existing transport capacity," (Helcom 17.1, Attachment I, point #1) through upgrading existing facilities, giving priority to trams, and buses, parking restrictions in congested areas, and a host of other traffic demand management (TDM) measures may achieve the same economic objectives at a fraction of the cost. Furthermore, such alternatives will better achieve environmental, safety, and health goals. Serious consideration and evaluation of such alternatives tend to be ignored in traditional transport planning. For example, the Singapore Area Licensing Scheme had an economic rate of return (ERR) of over 1200%, compared to new road construction projects in Singapore which had ERRs in the more standard 20% range. Modern urban traffic management systems have ERRs exceeding 100%. Maintenance and rehabilitation projects in the Baltics regularly have Economic Rates of Return three times higher than new construction projects. Regionally, lack of such an analysis has led to a tendency to over-invest in new infrastructure at the expense of basic maintenance and rehabilitation, and TDM measures. Investments can hardly be said to "increase transportation efficiency" (Helcom 17.1. Attachment I) if the project compromises the realisation of other projects which could achieve the same objective at a fraction of the cost.

   Least cost planning is an evolving method for incorporating the comparison of the cost of achieving various transport-related goals through different means into the transportation planning and investment decision-making process. Least cost planning normally quantifies all the social and environmental costs of making a trip, (including the passenger's travel time), by different means. Least cost planning then encourages the selection of solutions that minimise these costs.

4. **Governments and IFIs should adopt the 'precautionary principle', avoiding plans and projects which constitute serious potential risks to the environment, public health, and safety, or adopting necessary mitigation measures, even if such actions cannot be justified on the basis of cost-benefit analysis alone.**

   Because of the difficulties of quantifying the economic costs of environmental, health, and safety externalities, cost-benefit analysis, even where such external costs is included, is in-

sufficiently reliable as a guide to public policy when potential serious long term risks to public health, safety, and the environment are at stake.

5. **IFIs should develop sustainable transportation policies that govern their transport sector lending. IFIs should furthermore strive to co-ordinate their policies and actions in the transport sector amongst each other.**

   Transportation policies at the IFIs provide guidance to staff and borrowers about its lending and policy priorities, providing some measure of accountability for its activity in the sector. IFIs frequently use their lending to leverage policy changes in the borrowing country. The lack of a coherent policy does not preclude IFIs using loans to leverage policy changes; it only means that the way in which this leveraging is being used is not transparent, and hence, not accountable.

6. **Countries, with the assistance of IFIs, should develop the capacity necessary to perform high quality, state-of-the-art SEAs.**

   These SEAs should include but not be restricted to state-of-the-art traffic demand modelling, emissions modelling, and geographical information systems (GIS) mapping of ecologically sensitive areas. Lack of such capacity should not, however, constitute a valid justification for the non-performance of an SEA. The accuracy of estimates of the likely environmental, public health, and safety effects of major transportation plans and investments will depend on the quality of the underlying traffic and emissions modelling. Traditional traffic and emissions modelling, particularly at the international level, remains hampered by a lack of data, lack of standardisation of data collection methods, and uneven levels of technical sophistication. Traffic models have certain well-known problems which, unless corrected using state of the art techniques, are likely to bias long-term emissions projections. SEAs and least cost planning do not require, but will be greatly strengthened by improving the technical capacity of governments to accurately estimate future traffic and its likely externalities.

7. **All international institutions should avoid funding multiple roads, airports, and ports where a single facility could serve the same need, by basing the investment decision as much as possible on objective economic and ecological criteria, and by encouraging regional co-operation.**

   In some cases, airports, ports, and roads compete for some of the same international traffic, and upgrading all of them may not be necessary. Unless investment prioritisation is grounded in reasonably objective traffic data, economic analysis, and ecological concerns, the possibility for oversupplying transport infrastructure capacity exists, with potentially negative ecological consequences for the Baltic Sea. However, other factors that may come into play are national strategic or service level considerations (e.g. speed, reliability, security).

8. **IFI loans should be given in compliance with IFI policies and, where appropriate, the *access communautaire*. The latter applies particularly to lending outside the European Union (EU) where no alternative enforcement mechanism exists.**

   There are occasions where national government actions related to IFI-sponsored projects are inconsistent with the directives of the European Union or the policies of the IFIs. In such instances, the IFIs should use their leverage to ensure compliance with these policies and the *acquis communautaire*.

9. IFI use of loan conditionality should be balanced between modes, and should never encourage a relative increase in government subsidies for less environmentally sustainable modes. IFIs and governments should harmonise their methodologies for performing economic and financial appraisal to ensure that the methodologies are consistent and comparable between modes.

IFI loans are used to leverage policy changes. Because loan conditionality is negotiated on a project-by-project basis, the overall effects on the transport system as a whole are often ignored. Typically, loan conditionality on public transit and rail systems requires increasing the cost recovery ratio of those systems, leading to a reduction of government subsidies to the sector. Taken in isolation, this leveraging may be important to encouraging efficiency and needed restructuring in the sector, and may shield railroads and transit authorities from financially damaging government controls on fare price increases. Such leveraging, however, needs to be accompanied by similar pressure in the road sector aimed at internalising the full social cost of road use if it is not to shift government subsidies towards less ecologically sustainable modes, and encouraging an unsustainable mode shift towards increased motor vehicle and truck use. Transport sector loan conditionality should never encourage a shift in government subsidies towards less ecologically sustainable modes.

10. National governments and IFIs should not fund for any transportation infrastructure project with an ERR of less than the cost of capital unless a clear short or long term environmental benefit or poverty reduction benefit can be quantified. Further, the project should be demonstrated as an effective method of reaching this environmental or poverty alleviation goal. The criteria for such decision should be included in the SEA and developed and agreed upon in consultation with governments, experts and NGOs.

There are cases where governments and IFIs finance new roads, rail, or metro projects even though economic analysis indicates that the rate of return is below the cost of capital. One example from the region would be new highway developments in remote regions which are justified as a means of bringing economic development to the region. Another example would be the funding of metro projects that are justified on environmental grounds. In fact, however, the economic development, poverty alleviation, and environmental benefits in each of these cases were assumed and never subjected to a rigorous analysis. In both cases, the intended benefits were highly suspect. Projects where ERR is below the cost of capital should only go forward if the intended environmental or poverty reduction benefits can be quantified using accepted methodologies, and the project is judged to be the most cost effective method of achieving this poverty reduction or environmental goal.

11. Cost-benefit analysis used by governments and IFIs should take into consideration not only the infrastructure changes, but also the costs and benefits of any policy changes that are an integral part of the project.

IFI transport loan requirements frequently include conditions which can only be met through significant changes in service levels for rail or public transit, and these changes will significantly affect the project's subsequent costs and benefits. It is likely that in many instances the additional time costs imposed on passengers from such resultant service cuts is worth more than the extra revenue generated by the changes.

12. **When cost-benefit analysis is used, it should include the quantification of full social costs, consistent with Helcom 17.1 Recommendation #2, which requires the "internalisation of external costs (environment, accidents, etc.) into the costs of transport.**

    Currently, cost-benefit analysis used by governments and IFIs does not usually include in the calculation of project costs a) the costs of additional environmental damage resulting from the project, b) the cost of additional accidents resulting from the project, c) the cost of the project on alternative modes in the same corridor, such as impacts on rail, public transit, or bicyclists of road projects. Cost-benefit analysis also generally assumes that travel time savings will result from new construction based on the assumption that no new traffic will be generated. Generated traffic should be included in the calculations.

13. **National governments should limit the earmarking of road user fees to levels necessary to ensure sufficient funds for ongoing maintenance and necessary rehabilitation. Earmarking of funds beyond such levels will compromise a goal-oriented investment decision-making process.**

    Some governments have earmarked fuel excise taxes to the road sector, undermining the flexibility of ministries and lower levels of government from attaining transport goals through multi-modal alternatives. While fully supportive of the principle of fully internalising the social costs of transport, the earmarking of any congestion pricing revenues to the road sector will inhibit the ability of governments to address the congestion problem through means other than road capacity expansion.

14. **For Build-Operate-Transfer (BOT) highway projects, the ministry of finance or controller, supported by any IFIs involved in financing the project, should fully quantify the financial risk to which the government is exposed by signing the concession agreement, including the implicit moral hazard created by the 'too big to fail' problem. A BOT project should not go forward unless it can be demonstrated that the financial cost of the project, including the quantified financial risk to the state, is lower than any alternative method of financing the project. Moreover, a government's overall borrowing capacity given self-imposed or IMF-imposed constraints should be considered.**

    BOT highway projects have proven to be financially risky, and have often greatly increased governments' financial commitment towards the highway sector. In particular, the unquantified financial risks assumed by the governments are a form of hidden subsidy to the road sector. Legal financial obligations created by BOT highways can significantly drain public funds from other possible uses of the funds.

Changes in Current Environmental Assessment Practice

15. **The categorisation of transport infrastructure projects for environmental appraisal by IFIs should require appropriate environmental impact assessment for any project that increases the capacity of the existing infrastructure and/or requires taking additional right of way.**

    Currently, the thoroughness of the EIA process required by an IFI depends on their categorisation of the likely severity of the environmental impacts. Any road projects that increase capacity or require the expansion of the existing right of way are likely to have significant traffic generation and construction impacts, and should be categorised accordingly.

16. **National governments should make no exemption of EIA requirements for infrastructure deemed to be of critical or strategic importance.**

Some governments exempt the normal EIA procedures for projects deemed of strategic national importance, yet there are no clear criteria for determining whether a project is of national importance. Such legislation creates an enormous loophole in the EIA legislation, implying that national and international environmental concerns are not of critical national importance, and easily subjected to abuse.

17. **IFI boards should not approve loans until all the design specifications likely to have significant health and environmental impacts have been identified, and this design has been subjected to the appropriate level of EIA. In cases where significant environmental damage risk comes to light after the loan has already received board approval, once the final engineering specifications are known, further tranches of IFI funds should not be released until a supplementary, or if necessary a new EIA is performed and appropriate mitigation measures accepted.**

There have been cases where IFI boards have approved transport loans before design features with potentially serious environmental ramifications have been clearly defined by the project promoter, or where project designs have been changed after receiving Board approval. Such cases undermine environmental due diligence and the legitimacy of the entire EIA process.

18. **Responsibility for review of transport sector EIAs at both the IFIs and governments must be in the hands of competent professionals independent of the project promoter, with access to all relevant project information and sufficient capacity and resources to perform a competent evaluation of the methodological validity of the EIA. The agency responsible for oversight of EIA should establish accepted norms for determining the validity of transport sector EIAs.**

Some governments have put the primary responsibility for the evaluation of EIAs with the same agency promoting the project, undermining the independence of the review. Some have provided insufficient funds to the agencies responsible for reviewing EIAs to develop sufficient technical capacity to evaluate whether an EIA clearly demonstrates compliance with all relevant local, national, and international legislation, agreements, and directives. Some have shifted responsibility for EIA oversight to levels of government without the capacity to test for sufficient environmental due diligence. Some agencies responsible for monitoring the EIAs are given insufficient data from the project promoter to test the validity of the conclusions of the EIA. A typical problem in the transport sector is that the environmental effects of a new road project are predetermined based on the assumptions made in the traffic modelling. The capacity for traffic modelling and all relevant data tends to rest entirely with the project promoter, generally ministries of transport. Some IFIs also lack sufficient staff with expertise in assessing the validity of EIA methodology to perform the necessary environmental due diligence.

19. **In order to ensure the continued effectiveness and adequacy of EIAs, governments should set up independent monitoring procedures that check whether assessments were carried out in accordance with existing legal requirements.**

Given the considerable political and economic pressures often associated with the construction of large-scale transport infrastructures, independent requirements for the monitoring of EIA procedures are important for ensuring the lawful compliance with existing requirements.

Financing More Sustainable Transport Projects

20. As the environmental consequences of unsustainable urban transportation systems are international in scope, as demonstrated by the current threat to the Baltic Sea, national governments, and regional and international institutions like the EU and the IFIs have a responsibility to ensure that environmentally sustainable urban transportation modes are adequately funded. IFIs should develop mechanisms to lend directly to municipalities without government guarantees.

Currently, there is a backlog of unmet basic maintenance and rehabilitation needs in many of the transport systems in the region. The problem is particularly acute for urban commuter rail, public transit, national and local rail corridors, and secondary roads in the Baltic Countries currently outside the EU. Ageing bus fleets are often a significant source of air pollution. Unfortunately, national governments in some countries have not provided municipalities with sufficient resources and technical support to maintain their public transportation and commuter rail systems. National funding guidelines sometimes discourage municipal investments into infrastructure supporting pedestrians and bicyclists, public transit and commuter rail systems, or traffic demand management measures. The earmarking of national transportation funds for use on the road systems would be one example.

IFIs and the EU institutions have also established lending guidelines which have effectively precluded the use of international funding for urban public transit, commuter rail, and maintenance and rehabilitation needs on roads and rail systems not in international corridors.

21. IFI Transport sector loans should be used to leverage traffic demand management and traffic calming measures, and investment into more sustainable modes. Such measures are particularly important for ring roads in major metropolitan areas, and for toll roads where extensive traffic is likely to be diverted to local streets.

The IFIs have also use conditionality in positive ways which should be more utilised. Some public transit loans have included conditions for increasing parking charges in downtowns, and infrastructure to prevent parking on the sidewalk, thus leveraging traffic demand management measures. European Bank for Reconstruction and Development (EBRD) loans for public transit have also been used to get bike lanes built on major arterials. This sort of leverage could be utilised more.

Loans for ring roads in major metropolitan areas have been under-utilised in this regard. While many IFI loans in the Baltic Sea region are for bypass roads around small towns, sometimes the IFIs fund ring roads around major cities. Such roads carry a majority of local traffic, and this local traffic competes not only with international traffic for scarce road space, it also competes with urban public transit trips. If such loans do not require traffic demand management in the city, or land development controls along the new ring road, the purpose of the ring road, diverting through-traffic out of city centres, is likely to be ineffective, and is likely to encourage a process of urban sprawl. Toll roads, particularly BOTs, also tend to divert traffic on to local streets, with adverse local environmental and noise impacts on residents. Such problems could be avoided by traffic calming parallel roads.

Public Participation in Policy Making and Planning

22. Following the recommendations of the Arhus Convention and the UNECE, all national, provincial, regional, municipal and local transport and land use plans should be sub-

ject to a public hearing for review and comment at a time when significant alternative modal approaches can still be discussed. IFI involvement in a major transportation project should be used to leverage governments into ensuring that transportation plans and projects are developed in a process of early and full public participation.

Often, major plans are only presented for public review at very local levels of government where fundamentally different approaches to meeting the same access needs cannot be explored. Public information about planned projects must not only summarise the results, but the data used and methodology should be available to the public. Often biases in the modelling or data collection predetermine project selection, and citizens groups need to be able to challenge these biases. IFI funding on some projects has gone ahead even when neither the project nor its EIA has been subject to public review.

23. **IFI decision-making criteria, internal policies, loan appraisal reports, and project specific information should be a matter of public record at least 120 days for public sector loans and 30 days for private sector loans before the board meeting where the loan is approved to ensure a full and adequate public review process.**

The disclosure of information to the public varies greatly among the IFIs, and the reasons for the differences are not clear or not convincing. These differences have led to cases where projects with the most serious environmental problems are handled by the IFI with the weakest disclosure policy and the weakest environmental review process, undermining environmental due diligence.

24. **Concession contracts signed with private agencies for Build-Operate-Transfer Highway projects should be made available to the public by the government.**

In some cases, BOT concession agreements have not been made available to the public. This is necessary to ensure transparency in the selection of contractors, to facilitate the public's ability to assess the degree to which their tax revenues are being put at risk, and to make sure that the concession company has not been given veto power over important areas of public policy.

BOT highway schemes have often ended up costing taxpayers far more money than they were led to believe, based on explicit or implicit government guarantees in the concession contracts. Some concession contracts also give the concessionaire veto power over rail line improvements in the same corridor. Such a transfer of public authority to a private operator should at least be a matter of public debate.

Annex I: Questionnaire for Member States of HELCOM

The Transportation Infrastructure Investment Decision-Making Process

The Decision-Making Process for Major Transport Investments

1. Are decisions about whether to accept an EIA made by the ministry or department of transport, or the ministry or department of environment?

2. Does the Department/Ministry of Environment and/or the Department/Ministry of Health have the right to stop major investment projects or veto major investment plans if the EIA is deemed to be in violation of environmental and public health laws or codes?

3. Does the Department/Ministry of Environment and/or the Department/Ministry of Health have personnel and staff with time, budget and skill sufficient to determine whether major transport projects violate national environmental laws and public health laws?

4. Is cost-benefit analysis required on all major new transportation capital projects? If not, what are the criteria determining when it is required?

5. Does cost-benefit analysis require the quantification of: a) environmental externalities, b) accidents and noise externalities, c) congestion externalities, d) costs and benefits to non-motorised road users, e) generated traffic, f) economic impacts on parallel modes that might be adversely affected by the project?

6. Is an 'alternatives analysis' require on all major investment projects? Does each alternative require a full cost-benefit analysis, and are there rules encouraging the adoption of the alternative with the least cost? (i.e. is there any utilisation of 'least-cost planning' techniques?)

7. Does any government body (comptroller, Ministry/Department of Finance, etc.) perform a financial analysis of the likely fiscal impacts of major transport projects? Does any government body perform a full financial risk assessment of concession highway contracts, and are the results of this analysis open to the public?

8. Is national infrastructure funding restricted to use on a 'national transportation system'? What are the ratios of local and provincial government matching grants by mode, and how do they differ for 'national' projects, 'provincial' projects, and local projects? Are there any public transit or commuter rail projects which are defined as part of the 'national transportation system'? Are there any intercity bike routes considered part of a 'national transportation system'?

   Do citizens groups have the right of court action to uphold compliance of environmental laws?

9. Are there any mechanisms or institutions for co-ordinating transportation planning decisions at the regional and municipal level for projects and/or programs of region- or municipality-wide significance? Are the plans developed by the regional planning bodies enforceable or merely normative?

Integrating Transport and Land Use Planning

10. Which level of government is responsible for regulating land use development, and are decisions about land development related to decisions about transport system investments? Is there a decision-making mechanism for using land use regulations to concentrate new residential and commercial development in areas well-served by existing public transit services?

11. Does the Department/Ministry of Environment or Department/Ministry of Health have any authority to regulate land development decisions? How?

12. Is there a decision-making mechanism for controlling new residential and commercial development in areas without public transit access or in locations where road infrastructure is already heavily congested?

13. How are decisions made about the amount of parking that will be tolerated in an urban area and its cost? Is there any regulation on the total number of parking spaces available and is this related to the availability of sufficient road capacity? How is parking regulated, if at all?

14. Do building codes require maximum or minimum levels of parking, and are these codes related to any city-wide plan?

15. Are the location decisions about publicly-subsidised housing related to public transit availability?

16. Do transportation demand models include estimates of the impact of induced traffic resulting from development along new road corridors in their projection of long term road infrastructure needs?

17. Are there any regional planning bodies or mechanisms where land development decisions taken outside municipal boundaries but affecting traffic conditions inside the municipality can be affected by the municipality?

18. Do municipalities develop master plans? Are they binding? To what extent are they used to reduce transportation demand through improved access and greater co-location of economic activity?

19. To what extent are these master plans subjected to public hearings? Are municipality-wide plans subjected to public hearings or only district-level plans?

Applying the Principle of Internalising the Full Social Costs of Transport

20. What is the ratio of national road user revenues (gasoline taxation, vehicle registration and licensing fees, tolls) to national road expenditures for ongoing maintenance? How much would current levels of maintenance spending need to be increased to bring the existing infrastructure into a state of good repair?

21. What is the ratio of national road user revenues to road expenditures including maintenance, depreciation and new capital expenditures?

22. How does this compare to the operating cost-recovery ratio and the total cost-recovery ration in the rail and public transit sectors?

23. To what extent do provincial, municipal and local road user revenues cover the provincial and local costs of road maintenance and new construction? Use the largest city as an example.

24. Are road user revenues earmarked to roads or can they be used for deficit reduction or other public needs?

25. To what extent are eco-taxes imposed on road users, and how do they compare to estimated ecological costs of transport by mode?

26. To what extent are taxes used to cover road safety costs and mitigate against road safety?

27. To what extent are road user fees adjusted to reduce congestion (i.e. congestion pricing)?

28. To what extent do parking fees in urban areas cover the value of the real estate on which it is located?

29. How do national, provincial, municipal and local public capital investments to the rail sector, the public transit sector and the road sector compare on a 1) per passenger basis, and 2) a per kilometre travelled basis?

30. How do total subsidies to the rail sector, the transit sector and the road sector compare on a 1) per passenger basis, and 2) a per kilometre travelled basis?

Prioritising Ecologically Sustainable Modes (mostly municipal-level questions)

31. To what extent are public transit vehicles given priority access to the road network? Are there exclusive bus lanes or high-occupancy vehicle lanes? How extensive are they, and how is exclusive use enforced?

32. To what extent is bicycle and pedestrian use encouraged through the development of bike networks?

33. To what extent do laws allow traffic calming of streets to create a street environment more hospitable to non-motorised modes? How extensively is traffic calming used?

34. To what extent do traffic laws allow the creation of traffic-restricted and pedestrian areas? How extensive are they?

35. To what extent are special licensing schemes used for restricting parking and driving in certain congested districts?

36. To what extent are traffic signals timed to correspond with the operating schedules of public transit vehicles?

37. At the national level, how is the particular problem of border crossings addressed? Bottlenecks resulting from systemic, institutional and logistical hold-ups at national frontiers affect rail transport, in particular. Are concrete steps in place to solve these problems?

Public Participation in the Decision-Making Process

38. Are national, provincial, regional, municipal and local transportation plans and major infrastructure projects subject to public review and comment? Is public review conducted at a time when significant alternative modal approaches to reaching the same access and mobility objectives can still be seriously entertained? At what time(s) during the project cycle is public review conducted? How is public review conducted? How is information about these plans disseminated?

39. Are environmental impact assessments required on transportation plans or only on major projects? Are they open to the public? At what stage in the planning process are they available to the public? How is this information disseminated?

40. Are concession contracts, once signed with a private highway or other transportation concession, available to the public? If not, what mechanisms are available for public scrutiny to avoid financial or environmental malfeasance?

41. Is data and information about the transportation system funded by government money available to the public free of charge? For example, is the data required to run a transportation demand model available to the public free of charge?

42. Is sufficient data and information on the cost-benefit analysis methodology used on large scale investment decisions available to the public to independently corroborate the results?

Annex II: List of Participants of HELCOM PITF Workshop on Transport

Sustainable Transport Planning and Investment Strategies in the Baltic Region Workshop, Stockholm, 3-4 March 1999

Stefan Andersson
Swedish Environmental Protection Agency
S-106 48 Stockholm, Sweden
Telephone: +46-8-698 11 94
Fax:+46-8-698 10 70
E-mail: stefan.andersson@environ.se

Siiri Baciauskiené
Ministry of Transport and Communications
Water Transport Department, Transport Development Division
Gedimino Ave. 17
Vilnius LT-2679, Lithuania
Telephone: +370-2-393 983
Fax: +370-2-393 880
E-mail: siirib@transp.it

Magdalena Blidberg
Swedish Environmental Protection Agency
S-106 48 Stockholm, Sweden
Telephone: +46-8-698 10 37
Fax: +46-8-698 14 85
E-mail: magdalena.blidberg@environ.se

Detlev Boeing
European Commission
Rue de la loi, 200
1040 Brussels, Belgium
Telephone: +32-2-296 83 66
Fax: +32-2-296 96 32
E-mail: detlev.boeing@dg7.cec.be

Joanna Dickinson
Swedish Environmental Protection Agency
S-106 48 Stockholm, Sweden
Telephone: +46-8-698 14 73
Fax: +46-8-698 14 75
E-mail: joanna.dickinson@environ.se

Ann Dom
European Environment Agency
Kongens Nytorv. 6
DK-1050 Copenhagen, Denmark
Telphone: +45-33-36-71-31
Fax: +45-33-36-71-28
E-mail: ann.dom@EEA.eu.int

Norbert Gorißen
Federal Environmental Agency
Bismarckplatz 1
D-14193 Berlin, Germany
Telephone: +49-30-8903-2758
Fax: +49-30-8903-2106
E-mail: norbert.gorissen@uba.de

Marianna Heislere
Ministry of Transport of the Republic of Latvia
3, Gogola str
Riga, LV 1743, Latvia
Telephone: : +371- 702 83 12
Fax: +371- 721 71 80
E-mail: mariannah@sam.gov.lv

Walter Hook, Deike Peters
Institute for Transportation & Development Policy
115 W. 30th Street, Suite 1205
New York, NY 10001, USA
Telephone: +1-212-629-8001
Fax: +1-212-629-8033
E-mail: mobility@igc.apc.org

Christiane Jasper
Federal Environment Agency
Bismarckplatz 1
D-14193 Berlin, Germany
Telephone: +49-30-8903-2301
Fax: +49-30-8903-2106
E-mail: christiane.jasper@uba.de

William V. Kennedy
European Bank for Reconstruction and Development (EBRD)
One Exchange Square
London EC 2A 2 EH , United Kingdom
Telephone: +44-171-338-6567
Fax: +44-171-338-6848
E-mail: KennedyW@ebrd.org

Toomas Leetje
Ministry of Transport and Communications of the Republic of Estonia
9 Viru Street
15081 Tallinn, Republic of Estonia
Telephone: +372-6-397 634
Fax: +372-6-397-606
E-mail: toomas@tsm.ee

Ulrich Kremser
Helsinki Commission
Katajanokanlaituri 6 B
00160 Helsinki, Finland
Telephone: +358-9-6220 2223
Fax: +358-9-6220 2239
E-mail: ulrich@helcom.fi

Marek Maciejowski
Ministry of Environment, Baltic 21
S-103 33 Stockholm, Sweden
Telephone: +46-8-405 24 20
Fax: +46-8-411 72 84
E-mail: marek.maciejowski@baltinfo.org

Alda Nikodemusa
Ministry of Environmental Protection and Regional Development
Peldu iela 25
Riga, LV 1494 Latvia
Telephone: +371-7-026 485
Fax: +371-7-820 442
E-mail: sams@varam.gov.lv

Lars Nilsson
Swedish National Road Administration
Environmental Department
Telephone: +46-243-756 40
Fax: +46-243-759 65
E-mail:lars-e.nilsson@vv.se

Susanne Ortmanns
Naturskyddsföreningen i Stockholms län
Högbergsgatan 30A
116 20 Stockholm, Sweden
Telephone: +46-8-644 52 70
Fax: +46-8-644 63 40
E-mail: susanne.ortmanns@snf.se

Reinhold Pape
Swedish NGO Secretariat on Acid Rain
Box 7005
S-402 31 Göteborg, Sweden
Telephone: +45-31-10 55 90
Fax:+46-31-711 46 20
E-mail: reinhold.pape@snf.se

Serguei Rybakov
Federal Centre for Geoecological Systems
State Committee on the Russian Federation on Environmental Protection
RUS-101000 Moscow
Telephone: +7-095-176-75-20/-60
Fax: +7-095-176-2675
E-mail: pstmaster@ipofcgs.msk.ru

Wojciech Suchorzewski
Warsaw University of Technology
Al Armii Ludowej 16
00-637 Warszawa, Poland
Telephone: +48-22-825 37 27
E-mail: ws@zik.il.pw.edu.pl

Linas Vainius
Lithuanian Green Movement
P.O. Box 156,
LT-3000 Kaunas, Lithuania
Telephone: +370-7-207250
Fax: +370-7-209274
E-mail: atgaja@kaunas.omnitel.net

Marts Valdmanis
Ministry of Environmental Protection and Regional Development
Peldu iela 25
Riga, LV 1494, Latvia
Telephone: +371-7-026 486
Fax: +371-7-820 442
E-mail: home@novell.varam.gov.lv
home@varam.gov.lv

Mona Mejsen Westergaard
Danish Environmental Protection Agency
Strandgade 29
1401 Copenhagen K, Denmark
Telephone: +45-32-66 04 68
Fax: +45-32- 66 04 62
Email: mmw@mst.dk

Lars Westermark
Swedish Environmental ProtectionAgency
S-106 46 Stockholm, Sweden
Telephone: +46-8-698 11 97
Fax: +46-8-698 10 70
E-mail: lars.westermark@environ.se

Peter Wiederkehr
OECD Environment Directorate
2, Rue Andre-Pascal
75775 Paris 16, France
Telephone: +33-1-45 24 78 92
Fax: +33-1-45 24 78 76
E-mail: peter.wiederkehr@OECD.org

Tadeusz Wójcicki
Road and Bridge Research Institute
Ul. Jagiellónska 80
03-301 Warszawa Poland
Telephone: +48-811-32-31 ext. 298
Fax: +48-811-17-92

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BALTIC SEA ENVIRONMENT PROCEEDINGS

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