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EUROPE AND CENTRAL ASIA REGION
INFRASTRUCTURE SECTOR STRATEGY
LIVING BY SERVING
NEW DIRECTIONS FOR THE TRANSITION ECONOMIES

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Infrastructure Sector Unit
Europe and Central Asia Region



FOREWORD

The countries of our region face a formidable challenge in the management of their transition from centralized planning to a market economy and this is particularly acute for infrastructure services. Under the previous regime the prices for infrastructure services were not related to the costs and were not relied upon to allocate resources. Investment decisions were conducted without regard to their economic justification. Works were largely carried out by force account. Goods and services were provided by the appointed suppliers without considering price or quality. Accounting systems were designed to meet the needs of the state. Against this background, the achievements of the past decade are remarkable and a testimony to the capacity of the people of the region to adapt to the workings of a mixed economy. In every one of the areas mentioned above there has been considerable progress. Despite these achievements the outstanding challenges are huge, in particular because investment needs in infrastructure are very high, the capacity of the states to fund such investments from their budgets is very limited and private funding is unlikely to be available in the amounts required.

However the issues are not constrained to this, admittedly very important, topic. As this strategy paper notes, almost every sector in every country still faces unresolved policy and institutional challenges. These are also the challenges then that we as a development institution must help them to resolve.

This strategy paper dwells very much on the unfinished agenda, and its central conclusion may perhaps be summarized as stating that the countries should place priority and the Bank should focus its assistance efforts even more than in the past on the policy and institutional front.

The paper does not examine at great length how Bank activities in the sector can contribute to the ultimate objective of poverty alleviation. This partly reflects the inadequacy of the sector work carried out until now, which provides a very limited analytical basis, and one of our objectives for the next few years should be to develop it significantly.

There is, however, a clear understanding that the course to poverty alleviation requires as a necessary, albeit not sufficient, condition to reestablish the basis for sustainable growth. The elimination of bottlenecks and improvements in the efficiency in the provision of infrastructure services can make a very important contribution to this objective.

At the same time the paper also looks at the distributional impact of our pricing recommendations, which is a matter that has evident social implications and outlines an approach for handling these matters in our future work.

This paper could not have been written five years ago and chances are that when it is reviewed five years from now issues that it does not address will be perceived to be important while some of its concerns may no longer be so relevant. A challenge to all of us is to constantly contest the conventional wisdom and draw on our implementation experience to adjust our views and our strategy.

Our intention is to hold an annual strategy review to focus on the experiences gained and explore such adjustments together. Thus this is a first step which seeks to ensure that our future activities are more closely aligned with a shared vision of strategic priorities.

While the paper is primarily intended for internal Bank use, to provide the broad framework that should guide our future operations, it is also expected to be a useful instrument to engage our clients and our partners in a dialogue on the issues confronting the infrastructure sector and on how they would be best addressed. Our first challenge is to promote this dialogue.

Ricardo A. Halperin

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This paper, and the underlying reviews of particular issues (listed below), were prepared by a group of staff of the ECA Infrastructure Department (ECSIN), comprising Philip Anderson, Hans Apitz, Sven Ake Blomberg, Prabhat Garg, Delphine Hamilton, Ellen Hamilton, Seema Manghee, Slobodan Mitric, Gerald Ollivier and Jacques Yenny, under the chairmanship of Christopher Willoughby, who organized and drafted the report. Consultants Marie-Agnes Bertaud and Bernd Spahn also made important contributions. The work was stimulated and guided by Ricardo Halperin, Director of ECSIN and the three Sector Leaders: Eva Molnar (Transport), Walter Stottmann (Water) and Margret Thalwitz (Urban). Many other members of the Department's staff made specific contributions to the work at its various stages.

As mentioned above, to provide a sound analytical base to this paper, a number of studies were initiated. Though most have not yet been finalized, their preliminary versions underpin the contents of the strategy. Their current status is as follows:

- Decentralization, Local Government Capacity and Creditworthiness (draft)
- Developing Urban Land and Real Estate Markets (draft)
- ECA Road Financing Policies and Experience (draft)
- Overview of Municipal Water/Sanitation Trends and Prospects (under preparation)
- Price and Subsidy Policies for Water and Urban Public Transport Utilities in Transition Economies (under revision)
- Private Sector Development in Infrastructure (to be revised)
- Road Safety Trends and Lessons (to be finalized)
- Study of Nine ECA Railways (draft)
- Towards a New Legal and Regulatory Framework for Trade Supporting Activities in ECA (in preparation)

All these papers will be finalized in FY99.

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EXECUTIVE SUMMARY

i. **Core Problem.** Inadequate transport services in Eastern Europe are one of the factors mentioned by manufacturing multinationals as a reason they opt for capacity expansion in the West. Deteriorating water services in Central Asia are leading to a rising tide of illness. Apartment-building policies place Russian city dwellers far from work, services and garden plots; but public transport deteriorates despite absorbing more than 1% of GDP in operating subsidies. Throughout the ECA region the providers of infrastructure services are struggling with two central challenges:

- improving the quality/cost ratio for services, with quality measured no longer by the preferences of central planners but by those of consumers, users and voters;
- finding new, stable ways of financing operations and investment, to replace less and less available appropriations out of government revenues.

The revolution in incentive structures implied by the shift from planned to market economy is nowhere more difficult than in the infrastructure services that cater to people's daily needs.

ii. **Solution Critical to Poverty Reduction.** The sector's response to these challenges is critical to achieving, in the ECA countries, the Bank's overarching objectives of reducing poverty and ensuring sustainable growth. Poor response means that the basic public services available to agriculture, manufacturing and commerce condemn them to slow demise. Strong response permits them to expand, and increase employment, in competition with producers in other regions. In poorer quarters and regions, the quality of the sector's response can make the difference between availability and non-availability of services critical to life and livelihood, such as water, waste treatment and transport to work. In richer regions, it directly affects the degree to which the less privileged are protected from negative side-effects of development, such as traffic accidents and vehicular air pollution. Infrastructure's transition from funding by governments to earning its own keep can itself have significantly adverse effects for the poor. The potential impact of price increases and labor-force reductions has to be carefully analyzed. Support mechanisms have sometimes to be created to help the poor adjust.

iii. **Progress to Date.** Significant progress has been made during the 1990s, but with sharp differences among countries and among services. The Central and East European countries have mostly succeeded in maintaining and beginning to improve infrastructure services, while greatly reducing the burdens they impose on the general government budget. But the southeastern quadrant of the region, from Bosnia to Central Asia and Eastern Russia, has seen widespread deterioration, though some countries have begun to find organizational solutions towards improvement. The majority of housing has been transferred to occupants in most ECA countries. Markets have begun to develop for apartments – and, much more slowly, for urban land. Trucking and cargo-handling, largely privatized, have become more competitive and are

gradually adapting to consumer needs. Private contracting companies and engineering firms have emerged in the large majority of countries. Many Roads Departments have reorganized and begun to adopt new procedures. Municipal governments are beginning to adjust to their increased responsibilities. Water and public transit agencies and Railways have tended to be the slowest to change. But the managements of some are now showing greater awareness of the need to do so.

iv. **What the Bank Has Done.** The Bank has made important contributions to the progress achieved. It has combined support for reform of government policies affecting the sector with strengthening of the institutions which develop, promote and apply the policies. The most widespread and important impacts of Bank infrastructure work have been:

- Introduction of competitive contracting with independent contract supervision (20 of the region's 27 members countries). This has often led on to issuance of new instructions for all public procurement in the country, rendering it less subject to corruption.
- Road management improvement (16 countries), emphasizing new planning, contracting and design procedures, economic prioritization of works, and recovery of costs from users. Expenditure has become more productive, with more of it paid out of taxes on fuel and vehicles.
- Demonstrating ways to resolve the key management problems of water supply and sewerage services (one or more cities/regions in 15 countries). Institutional efficiency and service orientation have been increased. Bill collections, leak control, tariff structures, and service to the poor have been improved.
- Selective support for key urban reforms: land market development (4 countries), public passenger transport services (4 countries), general municipal financial management (3 countries).
- Stimulating thoroughgoing railways reform (main financing to 4 countries in support of targeted reform plans and preparation of major reorganizations; more limited support, pending reorganization decisions, for 6 other countries).

Some 15% of the \$5,000 million total lending undertaken over the last seven years has been provided on an emergency basis, in response to natural and man-made disasters.

v. **The Next Phase.** The member countries are now even more widely dispersed over the scenario of economic reform than seven years ago. At the same time, budgetary stringencies are almost universally tighter and needs (including accumulated deferred maintenance) are greater. This has clear and direct implications. Earnings of infrastructure entities have to be increased by providing services people want and are ready to pay for. Costs have to be reduced by scrapping inessentials and using new approaches. The two have to be related by redefinition of management units. Competition and financial discipline have to be stimulated. There is now much wider recognition of the need for such changes and of the organizational arrangements that can foster them. In this situation the Bank's skills in supporting combined policy and institutional reform can be even more useful. They must continue to be deployed in an opportunistic way, responding to openings for real improvement. But they must be focussed

even more closely on resolving the budgetary constraints to adequate development of infrastructure services.

vi. **Preparing for Private Investment.** The long-term solution to these constraints is clearly greater reliance on the private sector for managing and financing heavy infrastructure, as is occurring in many other parts of the world. A few middle-income developing countries have already reached some 60-70% reliance on private sources for financing infrastructure investment, and current turbulence in financial markets is unlikely to cause more than a temporary set-back. To get there requires a macroeconomic and legal environment reassuring to private investors. It also requires completion of a substantial series of largely sequential, preparatory steps introducing ascending levels of competition and financial discipline in each of the various infrastructure sub-sectors:

- Contracting out, for supply of services and works
- Pricing reforms, to enable charges to cover costs
- Corporatizing, to empower pursuit of commercial objectives
- Unbundling, to create more competitive structures
- Regulation, to protect consumers, competitors and investors
- Risk-sharing, to assure efficient project execution/operation

Parallel action is required to strengthen financial management and creditworthiness of municipal governments for handling the services they alone can provide. A related vital need, especially in the CIS countries, is to develop an effective urban land market which enables reassignment of space to new, more productive uses.

vii. **Prospects for Private Investment.** Private-sector involvement in heavy infrastructure in the region is presently limited to a few individual cases. But the picture is moving. Barring significant backtracking as a result of recent financial market developments and associated political changes, it should grow substantially over the medium term. An optimistic educated guess would be that ten years from now there could be significant involvement of private investment (domestic or foreign) in urban passenger transport in 20 of the region's countries; in port operations and/or air transport in 15 countries; in railways in 9 countries; in one or more toll roads also in 9 countries (not necessarily the same); and in at least a few town water systems in 7 or 8 countries. Most of the more substantial investments would be in the form of Public Private Partnerships (PPPs) rather than 100% privately financed projects. The Bank will welcome opportunities to contribute to the shaping and financing of PPP projects.

viii. **The Earlier Stages and the Poorer Countries.** The large majority of the Bank's work will nonetheless be to help countries move steadily through the earlier of the above-described stages of preparation for private financing in the various heavy infrastructure subsectors. It needs to be working at the forefront of what is politically possible within the individual country context, insisting only that any financing provided should support forward movement. Thus there are countries where an initial Bank involvement in improving road management and introducing competitive contracting would still be the most useful step to take. In Central Asia the Bank is already involved in facilitating private investment in urban transport in several countries. But important opportunities are also beginning to open there for projects in rural roads

and water supply in poor areas. The main non-Governmental contribution would be in the form of community participation rather than private investment. Initiatives of this sort should be very strongly promoted because they contribute to the evolution of lasting solutions to the most severe poverty present in the region.

ix. **Planning with Partners.** The Bank has major public-sector financial partners in the infrastructure field. Cooperation has been generally most active with EBRD and is being greatly strengthened with the EU. The Bank needs to work more closely with all the partners to identify those instances in which its particular combination of policy and institutional work is likely to have the most significant impact. Account has to be taken both of country readiness to move and of the ability of the partners to assist. The Bank's combination of work at both macroeconomic and sectoral levels is generally appreciated, but disagreements and inconsistencies sometimes arise on individual projects. The partners are likely to provide an increasing share of total official capital flows to infrastructure. It thus becomes more important to try to ensure that efforts are mutually supportive. In Central Europe EIB and expanded EU programs of assistance to the Accession countries are expected to provide rapidly increasing resource-flows. In Central Asia and Trans-Caucasus ADB, OECF, and some other bilateral aid programs are significantly involved, in addition to EBRD.

x. **Lessons for Project Design.** The performance of the infrastructure projects which the Bank has helped finance in the transition economies has been generally good. But the past experience suggests three lessons of particular relevance to the next phase of the Bank's work. First, where restructuring of entities is essential for effective project execution, it is important to have the key measures legislated or actually implemented before loan approval. However, effort should not be stinted on patient building of understanding and consensus towards that goal. Second, pricing adjustments on services to households are often a key aspect of the transition process but politically difficult to implement. Their phasing needs to be analyzed in the context of the adjustments also required in other sectors. Close attention has to be given to the mechanisms of transitional public assistance for the lowest-income households. Third, the Region should scale up the impact of its typical infrastructure projects by relying more on self-selection of final borrowers. Participation would thus be open to any of a wide range of regions/municipalities/companies once they have fulfilled tailor-made eligibility criteria. Those criteria should include some self-help performance improvements in addition to preliminary project-planning steps.

xi. **Using Knowledge Better.** To disseminate more effectively the experience accumulated by our borrowers and ourselves, and to contribute to the consensus-building needed for successful reform projects, increased attention is being given to Knowledge Management activities. An external Internet web page is under development. It will present papers addressing issues of wide interest and reports on borrower experiences with innovative solutions to common problems. It will also summarize comparative borrower performance statistics which can help motivate and stimulate others. Regional and national seminars have contributed usefully to countries' reform activity. It is hoped to carry them out more often in direct collaboration with our financial partners.

xii. **Relationship with Bankwide Strategy.** The actions and emphases incorporated in this strategy are consistent with general World Bank policies towards the various infrastructure sub-sectors. Use has been made of the Bankwide Transport Strategy paper¹ published in 1996 and of ongoing work towards completion of an up-to-date Urban Strategy. The composition of lending foreseen differs somewhat from that for other regions. ECA faces distinct problems of transition, and has a generally lower rate of population growth and already relatively high level of urbanization. Thus ECA lending is likely to include more than that of other regions for Railways and Ports, for Urban governance and land reform, and in all sub-sectors, for rehabilitation as opposed to capacity expansion.

xiii. **Motorization, Accidents and Air Pollution.** The Region will give increased emphasis to the subject of motorization and its environmental impacts. A critical issue facing ECA countries is whether and how they can use their inherited good public transport systems to avoid some of the urban transport problems familiar in the market economies. To help it provide more substantive advice on this topic, the Region, along with some ECA cities, will participate in the research about to be undertaken by the Bank and Sweden in the interests of all the Bank's member countries. Secondly, in line with Bank-wide policies, attention will be given to promoting and supporting country action programs for reducing the two most serious environmental side-effects of motorization in the ECA region: road accidents and vehicular lead emissions. These will be pursued not only in transport lending but also in the Region's other dialogue with countries.

xiv. **Trade Facilitation for Increasing Investment Impact.** Unpredictable delays due to inefficient customs and related procedures restrict income growth in many ECA countries. They reduce the benefits the countries can draw from integration into the world economy. More systematic attention will be given in the selection and design of transport projects to measures needed to advance trade facilitation, both within and between countries, and to enable improved logistics management. Those measures which are of policy nature will also be advanced through the Bank's macroeconomic dialogue and SALs. Special attention will be given to supporting serious joint efforts among neighboring countries under regional programs.

xv. **Selective Approach to Road Projects.** Roads and highways account for nearly 60% of all ECA infrastructure lending to date. They are likely to continue to be the largest absorber of investment among the infrastructure sub-sectors in the ECA countries. They also offer the least risky project prospects. The Region will focus primarily on those road projects in which its combined policy/institution-building work can be expected to result in reductions of the road sector's burden on general tax revenues (whether by lowering public-sector costs or by increasing contributions from users).

xvi. **Rising Reform Opportunities in Other Modes.** Among other transport modes, Bank lending in the ECA region to date has been largely for railways and urban transport, with a small amount for ports. No loans have been made for air transport or inland water transport. In most of the countries these subsectors are imposing substantial fiscal burdens. They may be explicit (as in the case of railways and urban transport) or deferred (depletion of capital stock still required, as in inland water transport and much air transport). These subsectors also all offer

¹ World Bank, Sustainable Transport: Priorities for Policy Reform (1996).

potential for further unburdening the public sector by gradual privatization of most of the services. Projects to meet these needs face more implementation risks than those in highways. Labor-force reductions are often involved, charges to households need to be raised, and traffic prospects are more uncertain. Nonetheless, the seriousness of the fiscal burden, the urgency of management modernization, and the increasing readiness in the countries to embark on reform all point to the need for an increasing Bank role. To keep the risks to an acceptable level, the Bank must satisfy itself of the depth of commitment to commercialization – and consistency of traffic forecasts with that objective. Projects are likely to require longer preparation than those in roads. In many cases APLs may be appropriate.

xvii. **Urgency of the Water Problem.** In Water Supply and Sanitation the Bank will direct its future effort mainly to the southeastern quadrant of the region. Throughout that area there is an urgent need for restructuring and strengthening of the responsible entities, to avoid serious health risks. The emphasis will be on institutional development, financial strengthening, and efficiency improvements to limit the need for rate increases. For some of the larger urban areas it may be possible to secure management services from multinational water companies which might later evolve into concession contracts. Attention must also be given to small towns and rural areas. The implementation risks inherent in water supply projects in these conditions will be alleviated by using the beneficiary self-selection process mentioned earlier, providing limited financing in the first round, and applying the lessons from the developing countries in regard to organizational and management aspects of rural water services. The Bank will also seek to increase the involvement of other IFIs and bilateral agencies in meeting this challenge.

xviii. **Strengthening Municipal Management for Decentralization.** The central theme of Urban work in the region will be to help municipal managements adjust to effective operation in the context of a market economy. This will be pursued through a variety of specific approaches: (a) assisting with the implementation of decentralization policies and corresponding strengthening of local governments' financial management in the EU Accession countries; (b) financing a variety of urban services in the southern countries of the region, normally through mechanisms using municipality self-selection and strict eligibility criteria; (c) building the legal and regulatory foundations, especially but not only in the CIS countries, for functioning real estate and financing markets; and (d) funding selected cultural heritage projects to reinvigorate unique sites that have been decaying under recent economic and budgetary pressures. Effort will continue to help pass urban services over to private management and financing as soon as that is feasible.

xix. **Measuring Development Effectiveness.** Data bases for the ECA countries are unfortunately too weak to permit establishment of target values of Development Indicators against which the overall effectiveness of the Region in implementing this strategy could be measured. Some of the more important objectives sketched are also difficult to conceptualize in one or two indicators. Therefore, it is envisaged to move toward monitoring development effectiveness by assessing periodically:

- a) what progress the countries are making in moving through the preparation stages for private investment in the various subsectors of infrastructure, and what contributions the Bank has made;

- b) progress of the region's municipalities in regard to creditworthiness, drawing on international and local private rating agency assessments, and financial management audits under Bank-assisted projects;
- c) country progress on three specific environmental indicators prioritized by the Bank for all regions: road fatalities, use of leaded gasoline and access to safe water (data are presently reasonably adequate on the first two, but very weak on the last).

These indicators will of course be supplemented by the information more traditionally available regarding evaluations of completed projects, performance indicators for the portfolio of active loans, and trends in the lending program.

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1. This paper outlines a strategy to guide the Bank's work over the coming years in support of the transport, urban and water sectors (together referred to here as the infrastructure sector) of the countries of Eastern Europe and Central Asia (ECA). It does not deal with the energy and communications sectors, which are the responsibility of another department. The paper first discusses the major macroeconomic challenges to which the infrastructure sector must respond. It then considers the various government actions required to create an effective market economy in infrastructure, drawing the lessons from Bank assistance to date: on infrastructure services, on the management of heavy infrastructures, and on the broader urban context which a large proportion of infrastructure is designed to serve. The last two sections of the paper focus specifically on the role of the Bank, and provide summary conclusions regarding future work in the sector.

I. MACROECONOMIC CHALLENGES

2. The substantial infrastructure with which the ECA countries emerged from the long period of Communist rule directly reflected the principal macroeconomic weakness which brought the system down: inefficient transformation of investment into services and growth such that, despite high and rising investment levels, little or no growth resulted. Infrastructure was large, and in some cases massive. It was costly to build and to operate, due to inefficient management structures. And, having been built to the order of central planners, it yielded consumers and users little choice and generally low quality of service – and correspondingly low willingness to pay.

3. Low quality and high costs of infrastructure services remain the principal problems and threaten to become more serious constraints to development and equitable income growth as the directly productive sectors respond to the new macroeconomic policies. Poor standards of original design and construction, high energy requirements of equipment used, major changes in demand patterns and institutional weaknesses in the organizations responsible for infrastructure have combined to further increase costs and lower service quality. These problems are presently compounded by a decade of inadequate maintenance (already weak before the transition) as a result of insufficient funding caused by Governments' difficult struggle to contain public expenditures. The implications become increasingly ominous with the passage of time, creating mounting funding needs for rehabilitation.

4. The effect on the emerging private sector is reflected in the Bank's worldwide survey of domestic business opinion in December 1996. With the exception of the Balkans, the ECA countries compared well with the developing countries of Asia, Africa and Latin America on sheer availability of infrastructure. But they scored significantly worse than the developing countries on quality of transport-related public services, rated as poor or very poor by 60% or more of respondents from the majority of ECA countries. Central Europe and the Baltic States were above the ECA average, but even there 30% of respondents rated the condition of roads used as poor or very poor. The likely shifts in geographic location of some productive activities

to better respond to economic considerations will further add to the investment needs of the sector.

5. The burden on general tax revenues imposed by expenditures on infrastructure has fallen in most ECA countries, but at the cost of deferring maintenance and introducing inefficient cross-subsidization among users in many. Consolidated budgetary expenditures on housing and community amenities have fallen to around 2% of GDP in most of the Central European countries, comparable to the level in many Western European countries, Canada and Australia. But they remain above 3% in Czech Republic and above 4% in the Russian Federation and most other CIS countries. The overall fiscal burden of expenditures on transport has been brought to about 1.0 - 1.5% of GDP in Poland and some other Central European countries, about the same as in U.K. and France in recent years and about half the level in the largest countries like Australia, Canada and USA. But it remains much higher in many - more than 4% of GDP in Russia and more than 3% in Croatia and Hungary. And, as in the case of housing and community amenities, large proportions of these high expenditures are going to operating subsidies, especially for railways and urban public transport, in some cases simultaneous with neglect of essential road maintenance, especially on the secondary network. The intergenerational subsidy involved in unrecorded depletion of the countries' infrastructure capital stock is most serious in the region's southeastern quadrant, especially Central Asia and Trans-Caucasus.

6. By default as well as by explicit decision, local governments have accrued greatly increased responsibilities. In most of the countries they have also become potentially more responsive to the citizens, as a result of democratic election processes. But traditions of transparency and accountability to the public are weak, and very few cities have either the staff capacities or the revenues to respond effectively to their enlarged responsibilities. Municipal financial management has to be greatly strengthened, by a joint effort between local and central governments. A major challenge throughout the region in the coming years is therefore to build up municipal capacities, the principal interface between the citizen and government, of particular importance in an era when households are coping with wrenching economic and social change and governments have to develop new styles of cooperation with previously distrusted private businessmen.

7. A problem largely unique to the ECA region, which must be solved mainly at the local government level – and which, once on the way to solution, could contribute much to cities' economic and financial viability – is an urban pattern frozen in the inefficient mould inherited from Communism, with no effective mechanism for reallocation of space to new uses. While residential blocks continue to be built mainly at the city's periphery, extensive building and land stand almost vacant, or in low-productivity use, even in central locations. In the short run, this rigidity inhibits the formation of new enterprises, cost-reductions in those already existing, and the growth of important potential sources of tax revenue (in market economies, commercial real estate often has aggregate value greater than all industrial plant and equipment). For the longer run, it slows the emergence of urban patterns that can reduce the need for extended infrastructure network services. Large amounts of retail and office space and vacant land remain in the hands of local governments even in the Central European countries. In the CIS countries, most land under privatized enterprises is also still owned by government. Local governments tenaciously

hold on to their monopoly power to allocate scarce space (often at below-market rents) and to develop new space, to some extent because of the irregular income that can be derived. Such progress as has been made in resolving the problem has been principally by progressive individual authorities that emerged in particular towns or even in districts of some of the major cities.

8. Citizens of ECA countries face severe environmental threats connected with the development of infrastructure. The most widespread, and especially serious in the region's northwest quadrant where motorization is proceeding apace, is the low standard of highway safety, resulting from poor quality of road infrastructure and of many vehicles, and inadequate coordination among the numerous parties who need to combine efforts to promote safer driving. Accidents per thousand road vehicles are multiples of those in OECD countries: nearly twice the EU average in the ten Accession countries, and more than five times the EU level in the CIS countries. Air pollution from motor vehicle exhausts is a rising problem in many cities as a result of rapidly increasing motorization, exacerbated in some of the Eastern European and all CIS countries by poor quality of fuel, notably high lead and sulfur content. Inadequate on-site treatment of industrial wastes before discharge is a major threat, currently reduced only by the relatively low level of operation of most industrial plants. The EU Accession countries face very large investments to bring the quality of wastewater treatment up to the standards required in the Union.

9. In the region's southeast quadrant, the most serious environmental problem is deteriorating water supply quality, with real risk of the epidemics which have occurred in recent years in particular localities of southern Russia and Ukraine becoming much more widespread and frequent. Most of the water enterprises lack the funds to maintain and operate their aging systems adequately, even to carry out the most urgent repairs. Industrial pollution of water, long service interruptions, low pressures and high leakage from distribution networks are increasing. The poor suffer the most. The problems are worst in Central Asia, where water resources are scarce and administrative capacities weak.

10. The other principal challenge of the coming years to the infrastructure sectors, and especially to transport, is to raise the quality/price ratio of service to levels that will enable ECA countries' industrial and agricultural products to compete effectively in world markets. Trade patterns have already changed fundamentally. Trading among the CIS countries has fallen from some 75% of the different republics' exports in 1990 to only 33% in 1996. In that year, exports to the rest of the world reached \$77 billion, of which \$30 billion to the EU. A recent IMF analysis estimates that exports to the EU would have been nearly double this amount had the countries already advanced further on the market reform process and thus become full members of the world economy. For the three Baltic countries, exports outside the countries of the former Soviet Union have risen from less than 10% in 1990 to about 50% in 1996, four-fifths of it to the EU; but again the IMF analysis estimates that exports to the EU could have been some 40% higher with a more complete reform process. To attain these higher trade levels, in competition with countries with sophisticated modern approaches to industrial/commercial logistics, it will be essential to bring transport and customs standards and procedures into line with international practice and to increase competition among service-providers. Foreign investors in manufacturing have often been the first to introduce new expectations of service from

transporters, and where the latter have not responded effectively the transport assignments have generally been given to foreign firms. These threats and opportunities are already fully recognized in the Baltic countries, and work is underway. Similar steps will be essential in the CIS countries to reduce existing high mark-ups on imports and to enable expansion of exports beyond bulk raw materials.

11. Creating a Market Economy in Infrastructure. The challenges described above have to be met by an Infrastructure Sector still in full transition from the vertical monopolies of the past to reliance on the competitive mechanisms of the market economy. Millions of people have become house and/or car owners. Hundreds of thousands have become truck or bus owners. Trucking services, inter-urban buses, road contractors, solid-waste collectors, airlines and cargo-handling companies have been partially privatized in many countries and fully privatized in a few. But some of the companies retain closer links with the Ministries that previously managed them, dampening the interest of others to participate in the market. And most of the larger authorities -- responsible for railways, urban transport and municipal water supply -- remain basically intact, albeit reorganized and, in some cases, significantly downsized.

12. One alternative is always to seek an experienced foreign investor or concessionaire to inject new capital and modern management into major infrastructure enterprises. It was precisely some of the considerations noted above -- especially fiscal burden and the urgency of increasing trade competitiveness -- which caused major Latin American countries to reverse long-standing policies and seek foreign concessionaires for large infrastructure enterprises in the last few years (almost all railways in Latin America are expected to be under private management by 2000). In Central and Eastern Europe a few municipal water supply companies have been put out on management contract, and a few countries are seriously considering concessioning their freight railway services. Privately financed toll-road projects are being prepared in Croatia, Poland and Romania, but the only ones actually implemented to date, both in Hungary, proved unpopular and gave rise to serious financial and political difficulties. Recourse to foreign investors has gone much less far in these sectors than in telecommunications and electric power, because forecasting demand is more difficult and greater doubts arise about the possibility of insulating contracts against political risks. In most of the CIS countries, concerns about unpredictability of the general business environment, limited trust in the legal system and still open questions on the direction of broader economic policies remain major deterrents to the substantial long-term investment required for provision of infrastructure services. In most countries foreign involvement in the provision of public services is viewed still with suspicion, and there is significant scope to promote better understanding of the benefit such involvement could provide. In addition, much more needs to be done to promote domestic private investment in less capital intensive sub-sectors, such as urban transport and water supply in smaller cities.

13. As economic growth resumes in the CIS countries and gathers pace in Central and Eastern Europe, the general environment for private-sector activity will improve and the pressure to attract private funding into infrastructure will rise. For instance, consensus is emerging that the EU Accession countries need to increase investment in transport infrastructure to about 1.5-2.0% of GDP, mainly to improve highway networks and to adapt the infrastructure in all modes to the new trade flows. While some, such as Slovenia, appear ready to finance this out of

taxation (mainly on fuel), most give higher priority to other objects of public expenditure, notably on social programs, which are harder to finance from other than fiscal sources. Russia is already spending on its roads public resources equivalent to nearly 2% of GDP and is actively considering supplementary private financing. Even countries which currently expect to cover infrastructure investment largely out of public revenues are well advised to prepare the way for possible recourse to private investment. In this regard, the experience of some Asian countries that had to accept harsh contracts to meet infrastructure emergencies becomes a relevant lesson to keep in mind. Thus even though many of the region's economies are at least some years away from attracting private finance into major infrastructure, it is important to keep this potential in view and to design policies and institutional arrangements that can bring it to fruition.

14. Almost all governments in the region are trying to shift more responsibilities to local governments while cutting back on traditionally large fiscal transfers from the center. They are also notably cautious about providing sovereign guarantees on loans to these bodies. Hence cities too are being pushed into the market for private finance, on the basis of their own creditworthiness. However, development of cities' borrowing capacities is likely to take time, as institutional capacity is weak, accounting systems are poor and they often lack the capacity to conduct sound financial planning. On the other side, the lack of a reliable legal system and the limited development of domestic capital markets will constrain the supply of funds. Finally, there is a need to develop a supervisory capacity at the national level to monitor sub-national borrowings, to prevent destabilizing excesses and failures.

II. INFRASTRUCTURE SERVICES

15. Regulation of Services. A market economy devolves to consumers the final decision-making authority on which services ought to be provided. Direct controls through central suppliers, that were often not fully enforced, have to be replaced with regulations and practices that effectively enforce realistic standards, particularly to protect third parties. These standards relate to the quality, safety, environmental and social impact of the services to be provided and require a major change in the thinking and practices of the agencies entrusted with the responsibility for setting and enforcing them. In addition, for services provided in a monopoly setting, the state also needs to regulate prices in a transparent and fair manner. These new responsibilities need to be managed in a setting that is facing major changes, as we discuss below.

16. Illustrative of the changes in demand patterns, and consequently in investment requirements, that can occur is development in the municipal water sector in the eastern lander of Germany following reunification. Water sales fell over five years from around 300 lpcd to less than 150 lpcd, the typical Western European level. The effects of higher standards of wastewater treatment required under German law were thus swamped by the reduction in consumption. Older treatment facilities, and even some sewage plants built early in the transition years, now provide capacity far in excess of foreseeable needs.

17. Privatization of housing gives rise to needs that are only gradually being met for the sharing of responsibility for maintenance of common services. The share of urban apartments owned privately or by cooperatives has already reached above 90% in some Eastern European countries (e.g. Bulgaria and Lithuania) and around 80% in others (e.g. Poland and Romania).

But the most dramatic changes have occurred in CIS countries, with the private/cooperative share rising in Russia, for example, from 20% to 60% and in Ukraine from 30% to 70%. Companies for provision of house maintenance services are gradually emerging. In many of the CIS countries, condominium laws are being developed for the first time, in several instances with Bank/IFC assistance.

18. The rise of the private car gives rise to more controversial questions, especially because extensive low-price public passenger transport systems were a major and popular feature of the socialist city and remain of great importance, especially to women, students and the poor. The attractions of independent personal transport are nonetheless such that, almost irrespective of trends in per capita incomes, car ownership has been growing as fast as in the UK in the 1950s and 1960s and in a few cases (e.g. Estonia) even faster than in France and Germany in that period. Russia, Belarus and Romania have already reached the motorization level of the main Western European countries around 1960 (about 100 cars/thousand population), Poland and Bulgaria the West European level of 1970 (200-250 cars per thousand population). Only in Central Asia and the Trans-Caucasus have motor vehicle parks so far remained relatively constant (40-80 cars/thousand population). In most countries the trend towards increased motorization is partly fed by deterioration in the quality of public transport services. Especially in some of the Central European countries, public interest groups are urging consideration of stronger containment policies, fully charging users for the externalities of congestion, accidents and pollution, or extending to physical restrictions and the disincentive registration fees applied by countries such as Singapore and, in the 1970s, Korea. The Bank needs to be in a position to advise member government more substantively than in the past on the broad policy issues relating to the use of cars and the measures that may be appropriate to avoid at least some of the urban transport problems experienced in most of the more advanced market economies.

19. The wave of motorization, and expansion of road freight transport, have underlined the need for measures to promote road safety. In view of the severity of the problem, the Region should take particular advantage of the enhanced Bankwide effort in this field to help solve it. Bank-assisted road projects in the region have normally incorporated safety-related engineering measures, such as accident 'black spot' correction programs, improvements of road markings, installation of dividers and guard rails, but monitoring of the specific effects of these interventions should have been stronger. Moreover, a much broader effort is needed. Since the countries are at very different stages in coming to grips with the problem, standard requirements run the risk of becoming simply another bureaucratic dead letter. Rather, the Bank should seek systematically to encourage short, well-founded national assessments and improvements of country programs to promote road safety (including fatality reduction targets), and effective implementation and effectiveness monitoring of the resultant action plans. Such work should be supported, if needed, by loans not only for transport but also for other related purposes such as health and public administration or even structural adjustment. Several recent highway projects - notably in Albania, Armenia, Poland, Romania and Turkey -- are helping to introduce and support comprehensive programs, with participation of all key agencies concerned, to systematically reduce the accident scourge.

20. Vehicle emissions of lead were identified already in the early 1990s as the most serious air pollution problem for the region as a whole, with particularly serious effects on children and

especially poorer children, in densely trafficked areas. Significant reductions in lead emissions are underway in Central Europe led by Slovakia where leaded fuel has not been sold since 1994. But the problem remains very serious in most of the southern countries and almost throughout the CIS. Provision for preparation of a national action plan to reduce the lead content of fuel in phases was included in a recent highway loan to Romania, one of the countries where the problem is most acute. At the June 1998 Aarhus Environment Conference, with small timing reservations by only a few, the countries committed themselves to reduction of lead content of fuel to a maximum of 0.15 grams/liter by 2000, reduction of leaded gasoline sales to 20% of total by 2002 and to 0 by 2005. Meeting these targets requires a substantial effort by many countries. The main task now will be for the countries to secure the largely private-sector investments required for remaining refinery modification and upgrading. But strong public efforts are also required to introduce effective quality control throughout the distribution chain (especially in the CIS countries), and to increase public understanding of the damage lead does to health, and of the ability of most vehicles to run equally well on unleaded fuel. Small tax-incentives may also be justified to help the transition by offsetting the US cent 1-3/liter estimated additional cost of unleaded fuel (mainly refinery capital costs). The Region should promote preparation and monitoring of phase-out action plans in connection with transport loans as well as in broader dialogues with member countries, and be prepared to provide support for implementation. Urban transport projects, especially those connected with buses, should also give particular attention to reduction of emissions of particulates.

21. Although abandonment of route and rate control remains a top-priority need in a few countries, trucking has been largely deregulated in most, much of the capacity has been privatized, and many new companies have emerged, large and small. Privatization needs to be completed, and remaining privileges eliminated for former state-owned companies. Much work remains on the "new regulation," i.e. to improve, and effectively achieve, higher technical and business standards -- such as vehicle safety, emissions control, driver hours, insurance and liability arrangements, and company financial capacity. These issues are vital for the EU Accession countries since the *Acquis Communautaire* to which the countries are adapting define specific standards on most of them. They are also, however, of importance to the other countries of the region, both to improve the quality and reliability of their domestic trucking services and to enable their carriers to be accepted in Western Europe. The Bank has included relevant assistance in a few loans -- e.g. to upgrade emission inspection stations. But it should give more systematic attention to assessing the competitiveness of trucking services and measures that may be needed to improve regulation of technical/financial standards and to help prepare the sector to compete more effectively with the increasingly concentrated West European hauliers.

22. Trade Facilitation. The interface between transport and trade is provided by an array of trade-supporting services which have assumed increased importance in the world economy in recent years as a result of trends toward globalization of production and developments in electronic communications. Logistics, dealing with the whole complex of movements and storage of goods between producers of inputs and delivery of finished product to final consumer, have become a recognized science. Various studies have shown that, in OECD countries, logistics account for some 10-40% of value added in different industries, averaging around 25%. Illustrative of the problem confronting the ECA countries is a recent study of the final main stage of the supply chain (from manufacturer to retail outlet) for leading suppliers of pharmaceuticals,

food and electronics in nine northern countries. For producers in the Baltic States logistics costs (inventory holding and distribution) averaged, in absolute terms, about two-three times those in northern EU countries, while for the Russian manufacturers (St. Petersburg area) they were seven times as great. The modernization which is essential to enable the ECA countries to obtain full potential benefits from their participation in the world economy must depend mainly on initiatives by the private sector involved in production and commerce, but strong support is needed from government services, providing a conducive environment for competition and innovation, and collaborating to help overcome bottlenecks.

23. The key areas for attention are: customs simplification, reduction of border-crossing delays, accession to international conventions relating to transport and trade, adoption of internationally accepted trade documentation, development of electronic data interchange (EDI) capacity, introduction of UN-EDIFACT (EDI for Administration, Commerce and Transport) messaging, installation of ASYCUDA (Automated System for Customs Data, developed by UNCTAD) or equivalent, effective competition in freight forwarding, development of bodies promoting trade facilitation and logistics and providing high-quality training, growth of multimodal transport and use of international containers, ready availability of information on freight rates and services, applications of telematics (electronic tracking/positioning), and enforcement of laws affecting security of freight movements and fulfillment of tax obligations (poor discipline in these respects threatens progress of the TIR system in the region). The significance of the changes that can be brought about, even quite quickly, is well illustrated by the case of Mexico in respect of customs services at the end of the 1980s. Recognizing the critical importance of trade in manufactures for the country's future, the central government introduced a thorough-going reform, substantially redistributing responsibilities. A World Bank survey of the results achieved put the first-year cost savings at US\$2 billion, 5% of annual merchandise trade at the time and close to 1% of GDP. They resulted from an average three-day reduction in transit time, lower customs broker fees and elimination of the "undocumented expenses" that had accounted for 70% of brokers' fees.

24. In ECA region, the Bank has included components connected with these issues in a variety of loans, to Albania, Hungary, Macedonia, Poland, Romania and Turkey. Projects are

Box 2.1 Trade Facilitation under Macedonia Transport Project

A Single Administrative Document has been adopted and seven ASYCUDA offices have been opened so far. Border crossing time has been reduced 20% on average, and is expected to fall much more as the system is completed and brought into full use. A new law, fundamentally reorganizing the customs service and bringing it under the Ministry of Finance, was recently approved by Parliament and will take effect January 1, 1999.

being prepared for other countries. More systematic attention needs to be paid to trade facilitation issues in deciding whether or not to prioritize transport projects for Bank assistance and in determining their scope. This is especially important in the case of land-locked countries, and the neighbors which provide them access to ports. The Bank should keep abreast of the degree to which countries have acceded to the international conventions affecting transport and

trade and, for the relevant countries, also the EU Community legislation. It should seek to help overcome obstacles to accession and full implementation. All this calls for strengthening our partnerships with the various international bodies that are active in this area, and for a focussed effort to provide policy guidance through economic and sector work. The Bank should also be ready to finance promising public investments related to trade facilitation, but only if the borrowing country is moving on the policy and management changes essential to make the investment efficient and assure its proper operation.

III. HEAVY INFRASTRUCTURE

25. Contracting. The efficiency of operations and quality of works carried out under the Soviet force account system was very low, leading to excessive costs. Responsibility for direct management of infrastructure needs to be separate from that for policy governing the broad development and the use of infrastructure. And the managers need to develop procedures and practice for contracting out on a competitive basis the works and services they require. In response to this challenge, ministries' construction departments have become commercial companies, design institutes consultants, and some new private firms have been created. Competition, however, is often limited and transparent tendering processes are often still not in place. And contract management and contractor performance can be brought to higher levels of effectiveness.

26. IFI-financed infrastructure (especially highway) projects have often led the way in introducing competitive bidding for civil works contracts and helped lay the foundation for laws now adopted in many countries for competitive public procurement more generally. Evidence from a number of countries suggests that competitive contracting has quite often yielded unit prices 20-30% lower than before, even though closer adherence to quality standards was enforced through simultaneous introduction of independent construction supervision. Related contributions of Bank-supported road projects include: prioritization of maintenance/construction works by cost-benefit analysis, use of modern design and construction standards and improved planning of work, introduction of new methods and technologies (especially by foreign contractors participating in international tenders and joint ventures with local firms) and incorporation of improved safety standards in designs. An important aspect of contract planning, especially for international competitive bidding, is well judged 'slicing and packaging', to attract larger, foreign firms and still offer opportunities for smaller, newer contractors. The combined effect of such changes can be substantial as illustrated by the case of Armenia's road network.

Box 3.1 Highway Maintenance in Armenia

Having fallen from some \$60 million equivalent in 1989 to virtually zero by 1992, annual road maintenance expenditure has been gradually built up again, to reach currently \$7 million (half financed from an IDA credit). It is now believed that \$30 million p.a. will suffice for the whole network.

27. Pricing. Upward adjustment of the charges for several major infrastructure services, sometimes steadily over several years, is still a major need in many of the transition economies.

By delinking the pricing of infrastructure services from the cost of providing them, the governments of the previous socialist economies had removed the most powerful incentive to economic use. Over-capacity and waste ensued. Price adjustments are also important in the short term as main means to reduce the budgetary burden of service provision, and in the longer term as the key to increase possibilities of attracting private providers into the sector. For without a projected revenue stream that adequately covers costs of supply and promises a reasonable return, no private investor can be expected to commit funds.

28. The most urgent need, especially in the water supply sector, is often to increase collections under existing billing. Collections by the Russian utilities in 1995 averaged only 40% of billings; those of the Zagreb company in 1997 only 60%. The problem is compounded because water billed is often a small fraction of water produced. Unaccounted for water is often the result of many years of little maintenance, resulting in high levels of leakage throughout the system. Of the water produced by the Tbilisi company 84% was unaccounted for in 1997, and the figures are similar for Odessa and most of the Central Asian capitals. The table below compares recent performance on these two aspects with the pre-loan situation and agreed targets under all the water loans made more than five years ago still in the ECA active portfolio.

	% Water Unaccounted For			Collections as % of Billings		
	Pre-Project	Latest Year		Pre-Project	Latest Year	
		Target	Actual		Target	Actual
Istanbul, Turkey	(60)	38	30	61	81	84
Ankara, Turkey	42	25	34	n.a.	None	81
Bursa, Turkey	59	45	54	n.a.	None	94
Rizana, Slovenia	40	26	30	80	98	96
Istria, Croatia	40	21	20	90	98	102

The results indicate that, although not all targets were met, the ECA borrowers have significantly improved performance on these often weak aspects of water operations.

29. As regards adjustment of prices to cost-recovery levels, services to household consumers present the greatest difficulties because of the high degree to which they were subsidized in the past, and the severe deterioration in incomes that many families have suffered in the interim. With budgetary subsidies generally falling, infrastructure agencies have had to resort to cross-subsidies, particularly from industrial and commercial consumers, and to cutbacks in maintenance and rehabilitation of facilities. Cross-subsidies have so far had limited negative consequences in the water sector (most notably, exorbitant connection charges for new private undertakings) but they have seriously weakened the capacity of railways to compete with other modes in the very era when the transport market was being liberalized, and they have raised the costs of trade. In some countries, including Russia, government has recently required rollback of rail freight rates that were very high.

30. Bank-assisted projects in the region have helped borrowers move toward cost-recovery tariffs, but there remains a long way to go. Pre-loan social assessments carried out in the last few years in some of the Central Asian countries facilitated urgently needed tariff increases by demonstrating the high costs consumers were actually incurring due to deterioration of the public services (water and urban transport). The urban bus projects so far initiated in the CIS countries

aimed only at bringing fares up to the level of operating costs (excluding depreciation), as a first stage. Under a project funded by the Bank in Russia fare-box receipts have already risen from an average of 10% to more than 60% of operating costs in the 14 participating cities, in line with the phased target and far above the current nationwide average of 25%. In a few of the cities cost recovery has now reached much higher levels. Although the subject was frequently discussed by supervision missions, railway projects have been less successful in dealing with the problem of lagging passenger fares. Inadequate tariff adjustment is giving rise to maintenance problems under some of the outstanding loans for water and urban transport in Central Europe and the Baltic States.

31. The problem is largely political, but it can benefit from deeper analysis in each country's particular setting. The burden of subsidies and cross-subsidies for urban and suburban public transport remains extremely large -- around 2% of GDP in Russia and not much less in Hungary, for example. Reference is often made to Western European practices of providing substantial support for such services under general Public Service Obligations (PSOs). PSOs are of course a significant improvement over open-ended subsidies to cover deficits incurred. But, in the case of public transport, the main benefit supposed to result -- lesser congestion, due to reduced use of private cars -- could arise in few of the region's cities due to the much lower level of motorization. Overall budgetary constraints are also far more pressing. A more appropriate alternative may be concentration of subsidies on identified needy families, who would be entitled to purchase passes at rates subsidized out of the general budget. Such a system, successfully applied in a few Latin American countries, would need to be drawn up in the framework of a phased plan providing for adjustment also of the many other household service tariffs (including house rentals) presently underpriced. The time when a more targeted system can be appropriate depends on the quality of the civil service, and also on factors in the broader environment, including general wage policies, social service reforms (facilities planned under Communism were distributed on the assumption of low-cost transport), and shifts in urban form (bringing residences closer to commercial services and jobs, and vice versa). A multi-sectoral framework of analysis should yield better indications of the politically feasible pace of adjustment. This is a subject that merits future sector work.

32. The Bank has helped considerably to propagate the notion that costs of construction and maintenance of the road network (including debt-service on any loans taken for the purpose) should be covered by road users. After reaching very low and inadequate levels in the early 1990s, public expenditures on roads in most of the Central and Eastern European countries assisted have risen to 1-2% of GDP, covered mainly by fuel taxes, whether placed in an earmarked Road Fund or included in general revenues. The drop in spending has been much more prolonged in Ukraine, Trans-Caucasus and Central Asia. Russia is now leading the way among the CIS countries towards user-based funding, in lieu of the general tax on enterprise turnover which has provided the largest part of revenues to its Road Fund in recent years. The EU Accession countries have to harmonize their road-related taxation more fully with that prevailing in the EU. The most urgent need, both in Central Europe and further east, is to increase taxation of heavy axle-load vehicles, to cover the capital and recurrent costs they impose on the network. However, in some countries diesel fuel is priced much lower than gasoline, which runs contrary to this objective. In 1997 Romania introduced a sizeable vehicle registration tax to improve cost recovery following Bank advice, and studies of the issue are

being financed under Bank loans to several other countries. Such step can help to equalize conditions of competition with the railway.

33. Restructuring. Infrastructure sectors should be organized in such a way as to respond most efficiently, in a given cultural setting, to the needs of the market. In the ECA countries, sector organization structures that were designed for efficient implementation of centralized system planning have now to be adjusted to a world of competition - or replaced. Many sub-sectors can in fact be 'unbundled' and organized on a directly competitive basis, like cargo-handling services in most ports. Others, like water distribution networks, retain most of the characteristics of natural monopolies. Even there, some degree of competition can be introduced by periodic reconcessioning, as in most French towns (competition "for the market"), or by published performance comparisons among regional entities (as in the UK).

34. All across the region a remarkable amount of basic restructuring has already taken place over the last decade. Sector agencies are gradually adapting to the new relationships, becoming more truly independent and autonomous, and developing new cooperative links. Central road administrations are now quite small and efficient (e.g. less than 100 people in Romania, about 40 in Macedonia). Most port administrations have been relieved of direct responsibility for cargo-handling and regionalized. Cargo-handling has been largely privatized and there is growing competition within ports. Airport operations have been widely privatized. Railways and water supply agencies are among the bodies that have so far changed least.

35. The record of the Bank's completed projects in the region makes it clear that insufficient insistence on up-front organizational restructuring -- and perhaps insufficient awareness of the debilitating effects of weak structures -- have been the predominant cause of disappointing project results. For at least three of the five projects completed since 1990 that showed unsatisfactory final outcome (see Table 1 below), the main shortcoming was organizational, with incentives operating contrary to efficient customer service. In one case (Izmir Water) the weaknesses were so great that the over-ambitious project simply proved unimplementable in anything like the time envisaged; when loan disbursements ended most of the large investments undertaken were still not yielding benefits, for lack of essential complementary facilities. In the other cases (Turkey Railway and Ports), the equipment provided was being quite heavily used and, especially in the railways, yielding good technical results, but agency general performance was poor -- to the extent that there was even doubt whether the traffics moving on the railways would not have been handled more economically by other modes of transport. The port services developed (container handling) were of the type that the Bank would no longer normally accept to provide to a public-sector agency.

36. In water supply and sewerage, the greatest private-sector interest is in BOT schemes for bulk supply or water treatment. But worldwide experience to date suggests that the most significant benefits of private-sector involvement result from injecting new approaches in management of the distribution network; enormous improvements in labor productivity, service quality and financial performance have been brought about in short periods. A few management or lease contracts have been let to foreign companies in recent years by cities in the ECA region, notably Antalya in Turkey, Brno, Ostrava and Karlovy Vary in Czech Republic, Gdansk in Poland and Lviv in Ukraine. Others are under active consideration. To prepare the way for

Table 1: ECA Transportation, Water, and Urban Projects Closed Since 1990

Loan #	Project Name	Country	ARPP exit FY	Disbursements		Econ. IRR @		OED Ratings			ICR Ratings			ARPP DO at Exit		
				Committed	Actual	appraisal	Impl. compl.	Outcome	Sust.	ID Impact	Outcome	Sust.	ID			
Railways																
L2336	Railways 6	Yugoslavia	1991	110	106	19	2.5	U	UNL	NEG				S		
L2739	Railways 2	Turkey	1994	197	172	22	17	U	UNC	MOD				U		
L3193	Transport	Poland	1997	153	150	25	20	S	LIK	SUB	S	Likely	Subs	S		
Roads																
L2557	Transport (Road/Rail)	Hungary	1991	75	75	20	20	S	LIK	SUB				S		
L2840	Third highway project	Portugal	1992	50	50	25	38	S	LIK	SUB				S		
L2439	Second highway project	Turkey	1992	186.4	186.4	27	19	S	LIK	SUB				S		
L2715	Highway Sector 1	Yugoslavia	1992	121.5	121.5	20	11	S	UNC	SUB						
L2878	Highway Sector 2	Yugoslavia	1993	68	55	23	20	S	UNC	SUB				S		
L2684	Highway 4	Cyprus	1994	20	19	44	58	S	LIK	MOD			Subs	S		
L3032	Transport 2	Hungary	1995	95	95	20	21	S	LIK	SUB	S	Likely	Mod	U		
L2906	Transport Sector Deve.	Cyprus	1996	35	29	41	41	S	LIK	MOD	S	Likely	Mod			
L3731	Highway Maintenance	Estonia	1997	12	12	26	38	S	LIK	SUB	S	Likely	Subs	S		
L3324	State and Provincial Roads	Turkey	1998	240	240	30	14	<i>not rated yet</i>			S	Likely	Mod	S		
Ports																
L2521	Coal Handling Port	Portugal	1990	66	62	none	none	S	LIK	MOD				U		
L2535	Third ports project	Turkey	1993	134.5	57	18	5	U	UNL	NEG				U		
Urban																
L2819	Cukurova Urban Development	Turkey	1995	120	29	30	12	U	UNC	NEG	U	Unc	Neg	S		
C2562	Earthquake Reconstruction	Armenia	1997	20	20	none	none	<i>not rated yet</i>			S	Unc	Mod	S		
Water																
L3222	Limassol-Amathus Sewerage and Drainage	Cyprus	1998	25	25	16	12	S	LIK	SUB	S	Likely	Subs	S		
L2818	Izmir Water Supply & Sewerage	Turkey	1996	184	99	none	none	U	UNL	NEG	U	Unc	Neg	U		
Total				1,912.40	1,602.90											
Weighted Average						24.5	17.3									
								LIK=Likely			SUB=Substantial			S= Satisfactory		
								UNC=Uncertain			MOD=Modest			U=Unsatisfactory		
								UNL=Unlikely			NEG=Negligible					

much wider involvement of the private sector - whether concessions or eventually direct privatization (divestiture) -- the Bank should strongly encourage effective corporatization of municipal and regional water agencies, and the start of self-help efforts to improve performance. The experience in Turkey suggests that, to achieve the needed commercialization, it may be necessary to go much beyond formal agreement on corporatization and independent accounting, to ensure that there is genuine mutual understanding on practical operation so that the Board will indeed be independent and stable, accountable against a clear mandate, empowered to choose management, and free within broad guidelines (and hard budget constraints) to determine prices, salaries and expansion plans, and to control corporate financial resources. Each would constitute a significant change from the past in most countries of the region.

37. As regards railways, the European approach of separating infrastructure (track, stations and signaling) from operations, separating freight operations from passenger operations, and allowing access of competing operators to the infrastructure, is taking hold in several countries, especially those pursuing EU Accession, as the preferred future structure. It reflects the facts that passenger and freight traffics remain much more evenly balanced than on most railways in the Western Hemisphere and that the relatively small size of most of the countries means that more and more traffic crosses several of them. Slovenia, Poland and Romania are among the more advanced in moving towards reform and have already introduced the basic accounting separations. Progress in setting up fully independent freight companies, and allowing widespread access of independent operators, will probably be influenced heavily by the pace of comparable developments in Western Europe. The threat of competition from stronger operating companies in an enlarged EU adds to the urgency of accelerating commercialization and line-of-business organization in the countries preparing for EU Accession. Countries further to the east have a wider choice of organizational alternatives – including the North American solution of competing integrated rail carriers – but also need to move decisively toward efficiency-inducing competitive structures. Most of the railways outside the CIS have been moving ahead on rationalization of their network structures and rolling stock fleets, and reduction of staff, in response to the large reductions in demand for railway services over the last decade. Much nonetheless remains to be done in almost all the countries of the region. While current railway borrowers (Romania and Bulgaria) have performed better than most of their predecessors (except in the important area of passenger fares), the Bank's accumulated experience in the region underlines the need for very careful preparation of railways loans. Besides witnessing actual rationalization actions, the Bank has to convince itself that key leaders in the railways and the government, and their likely successors, are fully committed to actual realization of a commercially viable railway aggressively competing with other modes of transport -- and have a convincing plan for getting there. If the fiscal burden is truly to be reduced, financial forecasts must be based on detailed freight and passenger business plans for the traffics ready to pay at least enough to cover variable costs of service, with other traffics left to other modes.

38. Infrastructure Regulation. To attract significant private investment into provision of infrastructure, a country must offer a credible regulatory environment. In part this depends on the general legal and judicial systems affecting business: laws governing property, contracts, security interests etc., and the reliability of judicial procedures for their enforcement. But it also depends on specific regulatory arrangements for sectors that have elements of natural monopoly. Because development of regulatory skills and procedures takes time, and because track-record is

the most convincing way of demonstrating credibility, it is wise to initiate the effort early, when infrastructure agencies are first delinked from direct government administration, rather than to wait until bids are to be solicited from potential investors/concessionaires.

39. The regulatory function must be protected from changing political winds and generate confidence that issues will be handled strictly and objectively on their merits. How this is best done depends on a country's traditions and political/administrative structure. Most of the developing countries are following the Anglo-Saxon example of establishing regulatory commissions outside line ministries of government, with debate now tending to favor multi-sectoral bodies, at least initially. Some of the transition economies, with their young democratic institutions and traditions, have considered it safer to place the responsibility with the relevant sectoral ministry, but experience indicates real dangers of favoritism and disregard of rules/contracts as a result so that it is likely to be appropriate at best as an interim arrangement. In the CIS countries there are some indications that the Anti-Monopoly or Economy Ministries may prove the best incubators of an independent regulatory function – which may then, after a few years of experience, be formally separated.

40. Initially, when the main need is to build regulatory skills and credibility, it will usually be desirable to tie down the key parameters for the first several years for an infrastructure provider with monopolistic powers as clearly as possible in a standard contract: prices and price adjustment provisions, service obligations and arrangements for giving/obtaining access to scarce bottleneck facilities (e.g. railway track in congested sections). It is normally wise also to identify in the contract the specific areas in which exogenous change of conditions would necessitate contract adjustment. Specification of administrative procedures (e.g. prior notice of reviews expected to lead to policy decisions, opportunities for interested parties to comment) and provision for appeal to the courts (in cases of substantial foreign investment, even to international arbitration) are other features that can enhance the confidence of private investors in countries where private activity in infrastructure has long been absent. Once capacity and confidence have grown, the regulatory body can use greater discretion and introduce more refined regulatory mechanisms. Very important for that stage will be the interim accumulation, by the regulator and the provider, of reliable information about costs, prices and performance quality in accordance with the accounting system (and auditing arrangements) specified by the regulator.

41. The Bank is only starting to be involved in infrastructure regulatory issues in the region, reflecting the possibilities now beginning to emerge for private-sector provision. It has been advising on the development of urban public transport commissions in some of the Central Asian republics and on possible future arrangements for railways in a number of countries. It has also developed a valuable experience on lease arrangements ("affermage") for the provision of water supply through its involvement in the Antalya Water Supply project, in Turkey.

42. One area that may warrant particular attention is air transport, which has suffered even greater shocks than other modes, including most recently the side effects of enhanced competition within EU, and where the potential for both costly mistakes and for successful competitive development are great. With the exception of a very few carriers which have undergone radical reform and produced excellent results, the industry remains weak and

uncompetitive in the region. Governments now need: to commercialize and privatize carriers (separated in the CIS from the airports with which they have been integrated in the reorganization to date); to tighten regulation of safety and entry to the industry; and to manage negotiation of air traffic rights with a view to users' interests. Air traffic control needs radical modernization, to meet international civil standards, and provide a satisfactory relationship with any military requirements.

43. Sharing of Risks. The key issue in ultimately consummating plans for private investment in public infrastructure is division and management of risks: who will be responsible for what risk, and what measures will he take to reduce it? Clarity on these questions is essential to smooth implementation, and to securing support from the commercial lenders who will normally provide most of the financing. Risks are allocated efficiently when they are assigned to the party best able to control, manage or hedge against them, and provide appropriate incentives to do so. Remaining risks should be borne by the party for whom they are least costly. The broad structure is therefore for the private sector to take on the commercial risks (construction, operation and market), and for the government to take responsibility for inputs and services which it is better able to deliver (e.g. permits, licenses, often land and sometimes utilities). But each category of risk (design, construction, environmental, currency, etc.) has to be examined separately to clarify specifics of how the risk should be shared and managed.

44. Motorways and other types of toll roads are of rising interest in the region and illustrate some of the more difficult problems in soundly allocating risks. The difficulties stem mainly from the underlying economics of private toll road schemes. Users of a new toll road receive the main direct benefits (time savings, reduced vehicle operating costs) and pay a part of them in the form of the toll. But they also continue to pay the taxes (registration, fuel tax, etc.) which constitute the full price for use of an equivalent number of kilometers of untolled roads. And benefits from the investment also accrue to users and inhabitants of competing roads in the area, in the form of reduced congestion, noise and air pollution. As a result, upgrading of a road is often economically justified some years before it becomes financially viable on the basis of tolls earned by a private operator. Public authorities normally contribute part of the capital cost (at least the right of way, and even whole sections partially or fully completed) but the value of this contribution is determined more by what is necessary to secure the private investment than by division of the economic benefits. Further public investments in improvement of access or parallel roads often have large effects on traffic development over the years. But for the first year too, traffic on new toll roads has proved notoriously difficult to forecast accurately, even in OECD countries. Yet a high toll to generate a high risk return to the investor would be economically inefficient, reducing the share of vehicles diverting from other routes to take advantage of the savings in time and vehicle operating costs offered by the new facility. The fact that general traffic levels are growing fast in ECA countries and are expected to continue to do so provides fair assurance that toll revenues will grow rapidly, but this does not resolve the financial problem of covering debt service in the early years after construction. Debt servicing problems are exacerbated by the limited development of domestic capital markets, which constrains the capacity to roll over obligations to spread them more evenly over time. In addition, this same constraint often leads developers to seek long-term funding in external markets, which results in a foreign exchange risk that makes such investments less attractive.

45. Experience of the toll roads built in developing countries in the first half of the 1990s suggests some tentative answers on appropriate sharing of risks in public-private partnerships for construction of new toll-roads in the ECA countries. At least 15% of total financing should normally be provided in the form of private equity to ensure adequate incentive to complete the scheme and operate it effectively. A government grant or equity contribution of 15-30% (right of way, completed sections, cash) may well be required in addition, to render the scheme financially attractive to private investors (and specific agreement should be reached on significant future road investments by government in the area). In addition, or in lieu of part of this up-front contribution, an efficient response to the typically high short-term traffic risks is for government to offer further equity (or subordinated loan) subscriptions in the form of a minimum traffic/revenue guarantee for the first five years of operation, to ensure adequate coverage of debt-service in that period, complemented by an agreement for sharing of revenues on traffic in excess of agreed maxima. Where geological/hydrological risks of construction are more than normal, government may also need to share the costs of resultant design changes or increased work volumes, and it is therefore necessary to delimit precisely the areas and aspects eligible for such treatment (e.g. 50% sharing of all costs more than 20% above estimate for the section). This of course implies that toll roads are far from becoming the "magic bullet" through which the transition economies will be able to expand their network without imposing a financial burden on the fisc. Potentially more attractive to private investors is to concession existing routes, placing the burden of maintenance (and in some cases upgrading) on the concessionaire. This is the "Argentine" model which seems to be working well in many Latin American countries; it has the advantage that it results in sound maintenance and leaves new construction subject to prioritization of Government budget allocations.

46. Given the inherently high traffic risks of new toll roads, the budget stringencies throughout the region, and the need both to build urban by-passes and to protect towns and their inherited high-quality public transit systems from excessive congestion, more consideration should be given to levying downtown access fees on motor vehicles (as already introduced in Trondheim and Oslo, and under consideration for Amsterdam) and dedicating the resultant revenue stream to servicing private debt for construction of the by-pass. To provide appropriate incentives, payment out of these revenues to the by-pass operator could take the form of a shadow toll for the traffic carried on the by-pass.

47. Whatever the project envisaged, private partners should be procured through open competitive bidding against tenders clearly defining the rights and obligations of both owner/seller and concessionaire/purchaser, and specifying the criteria by which bids will be compared. This will help to secure the best deal, minimize risks, and increase support from the general public. Concession obligations should be specified as much as possible in terms of ultimate performance of the facilities sought, rather than inputs required. Depending on the nature of the works envisaged, the tender documents may include a broad design or alternatively limit themselves to the concept of a service, leaving bidders greater scope to come up with imaginative ways of providing it but making bid comparison somewhat more difficult.

48. Once they have determined to seek private investment for achievement of a public infrastructure project, and before launching any tender, governments need to secure (advisably also through competition) the services of legal and financial advisers with specifically relevant

experience, which the Bank should be willing to finance. The Bank may also be able to provide some useful comparative perspective in disentangling the risks involved in the particular scheme and considering alternative ways in which they may be shared among all participating parties. Bank review of the tender documents can help assure transparency of the bidding process and secure a wider response. Bank guarantees can also facilitate access to debt financing.

49. Accelerating Private Participation. The preceding pages have reviewed the key measures involved in the development of market economy in heavy infrastructure. Many of them are directly related to the creation of conditions for attracting private capital (whether domestic or foreign) into the sector:

- ◆ Contracting out, for supply of services and works.
- ◆ Pricing reforms, to enable charges to cover costs.
- ◆ Corporatizing, to empower pursuit of commercial objectives.
- ◆ Unbundling, to create more competitive structures.
- ◆ Regulation, to protect consumers, competitors and investors.
- ◆ Risk-sharing, to assure efficient project execution/operation.

Development of an effective urban land market (see below) will also substantially facilitate efficient infrastructure investment. None are simple measures which can be accomplished overnight. Most rather represent improved processes which may require years to reach full fruition. Although several can be done simultaneous with one another, and some can be skipped in some subsectors, there is a certain broad historical sequence involved. It is often wise, for example, to start by building experience with competitive contracting. Establishment of independent regulation becomes appropriate after basic pricing reforms have been carried out. Negotiations on risk-sharing with private investors should not precede decisions about unbundling to secure a more efficient basic structure of the subsector.

50. Real possibilities of mobilizing private investment also depend on broader factors in the local economic environment, notably general legal protections for private property and security interests, predictability of overall economic policies and reliability of the banking system. However, neither this consideration nor the generally sequential character of the infrastructure measures mentioned mean that the potential for securing private involvement can only develop in all sectors together. On the contrary, countries at early stages of the economic transition are probably best advised to focus effort on fulfilling the prerequisites, and opening possibilities, in one or two subsectors of particular local priority – such as the services relatively neglected by previous regimes (e.g., solid-waste management), limited concessions/franchises for services showing earliest signs of collapse (e.g., urban transport, municipal water supply, in major towns), or niche projects in those as yet relatively rare instances where traditional services do need to be expanded. What is most promising among them or other possibilities will often depend on where the government believes that reform is politically most feasible. Experience in the developing countries indicates that initial successes in one or two limited projects can stimulate and assist extension of private involvement to other fields.

51. Annex I gives a perspective of the main steps toward private participation on which countries should concentrate effort over the next two-three years in the various infrastructure

subsectors. Measures printed in bold type are those for which the Bank is already providing assistance. The table brings out two overall points: first, that the foreseeable early opportunities for private investment in heavy infrastructure in the region are exceedingly limited; but second, that there are many opportunities to help lay the foundation for future flows of private investment into ECA infrastructure. These results are as might be expected. The private-sector share of current investment in infrastructure, broadly defined, for the developing countries as a whole has been estimated at about 15% and is almost certainly falling as a result of the Asian financial crisis of 1997 and subsequent events. Moreover the majority of it was in electric power and telecommunications. The future potential, on the other hand, is perhaps better illustrated by the fact that in a few countries, mainly in Latin America, which have created appropriate conditions, the share of current investment in infrastructure which comes from private sources is now in the neighborhood of 60-70%. It is also striking that private investment to date has been much more evenly spread among the sub-sectors (energy, transport, other utilities) in Latin America than it has been in ECA.

52. How rapidly private financing of infrastructure develops in the ECA region will depend on factors within each country – such as the evolution of macroeconomic policies and domestic capital markets, broader political stability, legal frameworks for business, and the business environment within the infrastructure sector – and factors largely outside the region’s control, including notably the continued success of private investment in infrastructure already made in other regions and its further development, and trends in world capital markets. Adequate bases simply do not exist for making any sensible estimates or forecasts of the share of infrastructure investment across the ECA region which might be privately financed. What can instead be attempted – even though the results cannot be considered more than educated guesses – is to estimate the number of the region’s 27 countries in which significant private investment might occur over the coming ten years in some of the main sub-sectors of infrastructure.

53. Sub-sectors in which private investment may spread relatively quickly are urban transport (bus services), port services, and though to a lesser extent, air transport. The favorable factors are the comparatively small size of individual investments required, the mobility of much of the equipment and (in the case of port services and some air transport investments) the link with international trade. Private bus services, largely financed by local capital, have already developed strongly in a few of the region’s cities as well as in those of some other formerly centrally planned economies (e.g. Guangzhou in China). There has also been a strong wave of bus privatisations in many market economies, developing and developed, such that the large majority of urban systems there are now run by the private sector. As regards port and airport services, separation and privatization of previously state-owned services combined with new investments by international companies (e.g. container terminals) and local interests (e.g. warehouses, baggage handling) probably make these the aspect of infrastructure in which private investment is already most widespread. Private investment in airlines has taken the form of newly formed companies, generally small, in many countries and foreign purchase of shareholdings in some of the larger, mainly state-owned companies. A feasible but optimistic forecast would be that, by about 2008, 20 of the region’s countries would have significant private investment in urban transport (mainly domestic capital) and about 15 in port operations and/or air transport (more mixed between domestic and foreign capital).

54. In the main heavy infrastructure sub-sectors – railways, roads and water supply – many opportunities exist for privatizing and selling ancillary services similar to those discussed above in connection with ports, in addition (especially in the case of railways) to the manufacturing subsidiaries not treated in this report; this process has already been underway in the roads sub-sector in many countries and is now spreading in railways. The core facilities focussed here distinguish themselves by typically involving much larger volumes of capital. There are five principal ways of mobilizing private capital into them: outright sale of existing facilities, in whole or in part, to private ownership; award of build-operate-transfer (BOT) concessions for greenfield construction; award of concessions for upgrading, maintaining and operating existing facilities, or parts thereof; procurement of equipment (e.g. locomotives, wagons) on a lease basis; and issuance of municipal bonds specifically for infrastructure-related purposes. All have potential relevance for particular aspects or parts of heavy infrastructure services in the region, but concessions probably offer the widest possibilities. The few concessions so far concluded have been essentially for greenfield construction. The larger future potential is for upgrading-maintenance-operating concessions, as so widely applied now in the road and railway sectors of Latin America, financed very largely out of domestic capital – not insignificant parts of which had earlier fled the host countries for greater security elsewhere. In terms of country coverage in the ECA region, it would seem reasonable to expect that by 2008 about one-third of the countries might have significant private investments in railways and (not necessarily the same countries) in toll roads. Expectations for the water sector must be a little more conservative – perhaps 7 or 8 countries – particularly in view of the extreme political sensitivity of the reforms in tariff structure that are needed to put the services on a financially viable basis. In the majority of countries, substantial private investment in heavy investment thus seems unlikely for the next ten years. But in those countries too, there is great scope for introducing badly needed management skills from the private sector, through arrangements such as management contracts and various types of leases.

IV. THE URBAN CONTEXT

55. Economic growth in coming years in the ECA region will be concentrated in urban areas, with rapid development of the long neglected service industries and of manufacturing readapted to respond to market demands. Cities and towns already account for some two-thirds of the population across the region as a whole, ranging from 40% in most of the Central Asian republics to nearly 75% in Russia, not much different from the average for the OECD countries (77%) and Latin America (74%). Migration to urban areas, with the ensuing environmental and poverty problems, is an important problem in Turkey, particularly in the southeast, but could become an issue of increasing importance in other countries, as unemployment causes people to seek other opportunities, and earlier constraints on internal resettlement cease to brake migratory flows.

56. Urban Land Market. Reducing the existing rigidity in urban land use, and the complexity involved in making changes, is a central issue at the current stage of building the market economy. Under the Communist system, land use was governed by site-specific plans drawn up in accordance with planners' ideas of social optimum. The idea that the value of land should reflect what people are prepared to pay for it had therefore to be born afresh. And the institutional, legal and economic structures needed to support transfers from one owner to

another -- i.e. land market -- had to be recreated virtually from scratch. This complex process is proceeding quite fast (though complicated by restitution problems) in the countries that came under Communist rule only after the second World War, but it is still at the earliest stages in CIS cities, in many of which the wisdom of putting land under private ownership still raises deep popular doubts.

57. Partly because of the political sensitivity of the issue, many central governments have left considerable leeway to local governments in privatizing land, and wide differences have arisen among cities. This is especially the case in Russia. The number of Oblasts that permit private land ownership has been expanding fast and now reaches about two-thirds of the total. But few of them have yet been able to achieve a significant pace of privatization even in urban areas. In St. Petersburg and Samara the share of land in private hands appears to have reached about 20% (including many commercial/industrial sites), in Chelyabinsk and Novgorod some 10% (mainly residential), in Nizhny Novgorod about 5%, and less still in other cities that have already started the process. The federal government issues facilitating decrees, but the weight of local bureaucratic resistance and popular hesitancy severely slows their implementation. At the same time the remarkably high turnover of commercial/industrial real estate that tends to occur once enterprises are given ownership and hence allowed to sell it is suggestive of the urgent economic need to unfreeze the situation.

58. There are three central dimensions to the first round of reforms required, and all need to be addressed:

- (a) Clarification and recording of property rights. The various existing types of title, with restricted rights, need to be replaced with a full ownership title, which is recorded in a single, open registry containing full information about liens, mortgages, easements, etc. Widespread current use of different registers for land and buildings, separate ownership of the two, and uncertainty as to the rights that a title gives, discourage transfers even where permitted, greatly increase transaction costs, and almost preclude mortgage financing.
- (b) Converting existing land use controls to a transparent system sensitive to demand signals. Detailed site and building controls need to be replaced by broader zoning regulations that provide for extensive public consultation in their application and recognize market possibilities. Inherited specific controls, and the slow and costly multiple approval procedures they involve, obstruct sales and redevelopment of land even after it has been fully titled. Some of the new zoning plans produced so far still reflect traditional patterns more than market demands. Local authorities leave central sites to die and still approve new residential development only at the urban fringe.
- (c) Adoption of open, competitive procedures for sale or lease of municipally owned land. Normal procedure remains presently for municipal authorities to carry on negotiations behind closed doors, imposing -- or not -- special requirements such as for the purchaser to build units to help reduce the city's housing waiting list, and generally ending up with prices substantially below what the market would indicate.

As these procedures come into full operation, there is a rapidly expanding need for new professional private-sector specialists, especially real estate agents, notaries, surveyors and appraisers. Much has to be done to reduce transaction costs. Perfecting the procedures, especially of the first two types, is obviously a long-range undertaking, but the experience of Central European and leading-edge Russian cities like St. Petersburg and Novgorod shows that enormous progress on all three dimensions can be brought about in only a few years.

Box 4.1 Urban Land Reform in Russia

The Bank made an initial attempt to support reform on all three of the dimensions noted, through a large Housing Loan to Russia approved in early 1995. The funds were to be channeled mainly to selected cities for development of small new sub-divisions. To be eligible for participation, however, the cities had to prepare, and implement, Regulatory Action Plans specifying reform steps to be undertaken on each of the dimensions described above and housing policies. A substantial amount of reform has taken place in all five initially participating cities, greatly aided by technical assistance provided under the project and separately by US AID. The practical work of organizing the development of land parcels stimulated and facilitated cooperation to find practical ways forward in the reform areas. Several subsequent federal actions, notably a law on title registration approved by the Duma and a recent Presidential Decree on use of auction procedures in disposal of municipally owned land, are based significantly on project experience. Systems and procedures developed in the project cities are now ready for replication in others. The government is proposing use of loan funds for setting up titling and registration systems in a much larger number of cities, and comprehensive Regulatory Action Plans are now under preparation for a few.

59. Beyond Russia, the Bank has sought to address the recording of land property rights in a range of countries, and a number of loans have been made. In most cases the issue has been approached largely to deal with land for agriculture. But a project in Kazakhstan (under ECSRE) and one just approved in Moldova deal with registration of both urban and rural land. The Moldova project seeks to set up a unified nationwide cadastre on a financially self-supporting basis (as in Netherlands) from fees paid for provision of information and recording of transactions.

60. Another approach to land market development, potentially applicable to the rapidly urbanizing regions of the southern CIS, has been adopted in the Albania Land Development Project for which an IDA credit was recently approved. Informal settlers on agricultural land close to the main towns are offered the opportunity of contributing to the plans and the costs of infrastructure installation in proportion to the size of the land they claim. When the infrastructure is completed and paid, they can obtain transferable title to the land by paying only the difference between full value and what they have already invested in infrastructure.

61. Once the basic elements of a sound title registration system have been established and applied to a reasonable proportion of properties, major improvements can be made in property taxation, generating substantial revenue increases. Land and building taxes account for only about 5-10% of local revenues in ECA countries. Tax rates under the Communist system were higher for enterprises than for households but still low. Low rates now serve to encourage the

hoarding of unused facilities and even discourage privatization since at least some municipal revenues can be generated by renting. The Moldova project provides for preparation in two years' time of a strategy and specific action plan for introduction of a fiscal cadastre, incorporating property valuation in the cadastral information system.

62. As market forces are enabled to play a larger part in guiding local economies, the urban form of CIS cities can be expected to change considerably. Much more commercial and retail space, and more housing, will be built close to spider-web centers and the city center itself. Industrial establishments will tend to move to cheaper suburban locations more accessible from arterial roads. It is important to get started on the inevitably slow evolution towards such more efficient urban patterns. The likely gradual changes in urban form need to be taken into account in designing urban infrastructure projects, especially any major expansions of fixed facilities.

63. Municipal Management. Attracting private investment (domestic and foreign) to fuel economic growth is a very different job for municipal authorities from pleading with central planners on grounds of regional balance and social welfare. Success will depend heavily on the quality of the infrastructure services, in the broadest sense, that they have to offer (as implied by the survey-results mentioned at the outset of this paper). Most countries have now passed legislation to decentralize responsibilities for local services and begun to make important adjustments in intergovernmental fiscal relations. Almost all have held competitive local elections. But few, if any, have completed the building of incentive structures that will ultimately be required to secure the best results from decentralization. Local authorities retain excessively strong powers for direct control of many prices but central government still establishes the rates for locally collected taxes and fees, and often for staff salaries. Local responsibility is diminished by continued use of intercepts on fiscal transfers for servicing debt and by provision of direct central government guarantees. Transparent and reliable procedures for handling bankruptcy of municipal government, and credit workouts to resolve overindebtedness, have yet to be developed in most countries.

64. A few cases have nonetheless demonstrated the potential that exists for ECA cities eventually to raise funds even in international markets on the basis of their own creditworthiness. The IMF has suggested that a sound principle for controlling indebtedness of sub-sovereign governments in ECA countries might be to limit it to about 60% of annual revenues. The average debt stock to revenue ratio (including transfers) has already risen to 62% for municipal governments in the eastern larder of Germany (66% in the west). The Russian government is considering tighter limits, of 30% debt stock relative to revenues and 15% debt service. Presently outstanding indebtedness in most of the region's cities has in fact been much lower (e.g. less than 10% in Riga, Moscow, Nizhny Novgorod and Sverdlovsk (Yekaterinburg) as of the end of 1996). More than half of the twenty or so developing/transition economy cities which have obtained international credit ratings in the last few years are from the ECA region. Several Czech cities, Krakow and Lodz in Poland, and Riga have received investment-grade ratings (BBB- or better). Half a dozen Russian cities and regions obtained ratings of BB-, just below investment grade and the same as Buenos Aires and Rio de Janeiro. In 1997 Moscow, St. Petersburg and Nizhny Novgorod raised a total of \$900 million on the Eurobond market at 9½%. These are clearly exceptional cases and, following the financial crisis of August 1998 and the downgrading of Russia's sovereign rating, all regional and city administrations were also

downgraded to CCC-. Nonetheless those sadly short-lived successes do give an indication of what can be aimed at early in the coming century with appropriate preparation. Obviously, sub-national borrowings in international markets pose a risk that requires the development of a suitable oversight capacity at the national level. Perhaps even more important, however, will be the progress that can be achieved in developing capital markets and internal demand for long-term debt and stock investments. This argues for close collaboration between ECSIN and ECSPF in this area.

65. While the Bank has been very aware of the importance of strengthening broad municipal management capacities in member countries, the vast majority of its assistance to urban areas has been for expansion of particular services -- partly for reasons of manageability and partly because establishing major capital-using services as financially self-standing entities was seen as an important structural improvement in itself. One large and long-prepared departure from this approach was the Cukurova Urban Development project in Turkey, brought to a close in 1995 (see Table 1 above). Focussing on five major towns on the southern coast, it sought to develop a model of strong municipal responsibility for local services which could then become a main instrument of decentralization across the country as a whole. Based on comprehensive institutional and financial analysis of the five municipalities, it included support for a wide variety of infrastructural services and related management reforms, both within the services and at the level of the municipal authorities. Having been developed with the country's central planners rather than the agencies directly involved, however, the project never really took off following loan signature; after four years of struggle at implementation, the higher-level objectives were dropped and funding was cut by three-quarters to focus on completion of the works which had actually been started (mainly water/sanitation and land development, some roads, a bridge and solid waste facilities, all limited to only three of the towns). The needed changes in incentives to the participating agencies -- greater freedom to hire municipal financial managers, accounting system changes, elimination of alternative subsidized funding, and reform of procurement rules -- had been largely identified in preparation of the project and were expected to occur early in its life, but did not. In retrospect, it appears that the project could have succeeded only had it been possible to agree on these changes as preconditions to the Bank's large financial commitment.

66. More recently the ECA Region has experimented with establishment of Municipal Development Funds to help meet urgent municipal investment needs in the context of domestic capital markets currently unable to provide medium-term finance. First results are promising. Efforts have been made to design the Funds in such a way as to avoid the problems of poor financial discipline and political interference that have spoiled performance of such institutions in many developing countries. The Funds examine projects within the context of the overall budgets of municipalities applying for support and stress adoption of market approaches. A small Fund established as a sub-part of a 1995 loan to Latvia has moved well. A loan to Georgia approved in 1997 focuses entirely on the creation of such a Fund (see Box 4.2).

67. Even where the Bank is providing financing under a project for only one or two specific services (e.g. water and sanitation, or urban transport), the Region's experience to date suggests that close attention has to be paid to overall municipal finances. Recently the region decided not

Box 4.2 Georgia Municipal Development Fund

To establish eligibility for support, any municipality has to fulfill a series of carefully designed steps: first, an outside Municipal Audit, to assess existing performance and identify investment needs and how they might be financed; second, presentation of a Financial and Administrative Rehabilitation Plan (FARP), outlining administrative, financial and technical improvements the municipality will undertake; third, a Priority Investment Plan (PIP), identifying proposed investments and putting them in the context of the municipality's financial capacity; fourth, a Municipal Development Agreement between the municipal authorities and the government, listing specific commitments including those needed to fulfil the FARP and PIP. One city has already completed this preparation process, two others are not far behind, and five more are in the middle of it.

to proceed with an urban transport project for Bursa (Turkey) when, after appraisal, the municipality decided to borrow abroad to finance a light rail system that is expected to severely strain its debt servicing capability. As pointed out earlier, the increase in tariffs and fares required to reach full cost-recovery levels is so great that it often has to be phased, with the gap being made up in the meantime with a Public Service Obligation payment out of the municipal budget. The difficulties which the authorities have had in several cases in actually paying the amounts required now threaten maintenance of the large volumes of equipment financed by the Bank. Signature of a legal undertaking to provide such support needs therefore to be supplemented by a thorough analysis of how feasible it will actually be and what supplementary revenue-raising measures may be resorted to in the event of difficulties.

68. More generally, however, the Bank needs to give greater attention to helping municipal authorities fulfil their unaccustomed role of attracting private investors, forming Public-Private Partnerships, and establishing their own creditworthiness. Corporatizing and commercializing major utility services, as discussed in other sections, is an important dimension of improving municipal management and creditworthiness, but only one. The broader issues are reflected in the agenda that the commercial credit rating companies have developed over the years for municipal assessments: Robustness of Economic Base, Stability of Intergovernmental Fiscal Relations, Administrative Systems and Political Prospects, Budgetary Performance and Fiscal Flexibility, and Financial Position and Policies. Applications of this methodology in ECA cities suggest that the following issues are particularly important in their case:

- documentation of city growth and prospects, diversity and resilience, competitiveness of existing industries, participatory diagnosis of comparative advantage;
- reliability and supportiveness of intergovernmental fiscal relations, clarity of revenue and responsibility assignments, possibilities of higher-level government mandating additional responsibilities without corresponding revenues or taxing authority;
- contingent liabilities: companies owned (manufacturing, utility, housing) and degree of control, joint ventures established, guarantees provided, quality of any

loans made, pensions of former employees, possible liabilities under new environmental legislation;

- collections and arrears: procedures and record in collecting taxes and fees, dependence on non-cash payments and budgetary offsets, measures to increase collectibility;
- transparency and disclosure: accounting standards and audit procedures (while recognizing that no ECA city yet has regular western-style independent audit), public reporting mechanisms, openness of council meetings, investment selection criteria, transparency of planning, engineering, procurement;
- track record in budget management and discharge of debt service obligations, use of sequestering of expenditures, respect of minimum maintenance requirements, 'tax room' for generating additional revenues.

69. By aiming at steady improvement of their creditworthiness, the Bank can help prepare cities and towns for participating effectively in whatever financing mechanisms local capital markets are able to develop -- and, in the absence of that, for raising funds in other markets. This needs to be accompanied by actions at the level of central government steadily to clarify and reinforce municipal authorities' freedom and responsibility for managing the development of their area. Government-owned Municipal Development Funds, run with strict financial discipline and aiming at gradual incorporation into the private capital market, should be developed in more countries, but we must make sure that these do not self-perpetuate. Larger towns should be graduated from such Funds in a matter of only a few years, with market-based mechanisms (such as rediscounting of commercial bank loans to them, securitization of diversified packages of municipal obligations) emerging to meet their financing needs. Municipal and utility bonds can be an attractive investment vehicle for part of the portfolio of pension funds, insurance companies and long-run savers. Their availability is therefore an important contribution to the deepening of a country's capital market.

V. FUTURE BANK ROLE

70. The central task of the Bank, as a development finance institution, in the infrastructure sector of the ECA countries is to help them develop adequate mechanisms for channeling resources efficiently to provide the quality of service the community is ready to pay for. It is a matter, above all, of correct structuring of incentives to guide the provision of services and of developing self-financing and private flows to substitute for the central budget allocations no longer available. Effective achievement of this dimension of the transition to market economy is crucial to the Bank's overarching institutional goal of alleviating poverty -- both the widespread poverty resulting from continued lack of national economic growth in some countries and the longer-term poverty concentrated in disadvantaged areas of many countries.

71. Infrastructure providers face a more difficult transformation than most farms and manufacturing plants. This is reflected in the numerous issues of public policy discussed in the previous pages. Many of these issues are largely transitional. Over a period of years, land

markets can be developed, administrations can learn to be customer-oriented corporations, service companies can become truly competitive, household tariffs can be brought to cost-recovery levels, and charges for freight vehicles can be aligned with the costs they impose on infrastructure networks. Government has only to set the framework for competition, enforce financial discipline and collect relevant taxes at appropriate levels. On the other hand, the state - in the form of central and local government - has also to develop new capabilities for the many responsibilities that it alone can perform: planning of land use and infrastructure layout; establishment of broad policies affecting motorization and public passenger transport; adjusting and improving environmental standards, international trade procedures and regulation of natural monopolies and public transport services; ensuring support to the poor for adequate access to basic public services; and direct financing of most roads, streets and related public infrastructure such as parks and public lighting. Private capital has therefore to be attracted not only by corporatizing and privatizing companies, as in manufacturing, but also by raising the creditworthiness of public projects and government.

72. The central thrust of the Bank's infrastructure work should remain successful achievement of this complex transformation. Bank-assisted projects have clearly demonstrated their potential at the microeconomic and sectoral level to help reverse earlier trends of declining productivity of infrastructure investment, to improve service quality and to lower costs. Their contribution to the transformation can be further increased with more systematic focus to preparing the way for eventual private financing in the infrastructure sector itself and to the broader issues of public policy just mentioned which guide private activity. The region's infrastructure bottlenecks remain more institutional than physical, and most projects will continue to be aimed at rehabilitation and restructuring rather than major capacity addition.

73. Much the largest contribution of the Bank's infrastructure work to alleviation of poverty in the region will remain indirect, through facilitating competitiveness and expansion of the directly productive sectors. While poverty is now estimated to directly affect some 40% of the region's 500 million population, it is also predominantly shallow compared with that in most developing countries and many families move in and out of poverty within short periods. The main need is therefore to rekindle growth of productivity and employment in industry and commerce, for which improved performance of the infrastructure sector is a necessary input. The fact that so many people are on the margin of poverty does, however, underline the importance of careful management of the distributive side-effects of restructuring - e.g. support for persons retrenched, phased increase of public service tariffs, development of better targeted assistance, maintenance of effective urban public transport and water supply systems, and improvement of road safety, as stressed in previous sections. Women and children, especially those in large families and single-parent households, are in many ways those who have suffered most severely from stop-go economic reform - from job losses, tight household budgets, excessive alcohol consumption and family stresses. These services are particularly important for them.

74. In the southern parts of the region, and especially in Central Asia, poverty is an even more serious problem and much more difficult to overcome. While attention has to be given there too to the distributive aspects of general service reforms, programs specifically focussed on poor regions and neighborhoods need also to be generated. The Bank has so far financed a few,

mainly in small-town water supply, but absorptive capacity is rising and should be used to full advantage. For instance, the agricultural and land tenure reforms underway in Kyrgyz Republic mean that it should now be possible to develop a viable program for improvement of rural roads to enhance access to markets. As noted before, the urban areas of the Central Asian countries and Turkey are likely to receive increasing numbers of poor migrants and will continue to need special attention. The experience gained by the Bank in other regions on labor-intensive techniques for construction and maintenance of roads and on promoting community participation techniques for the provision of some infrastructure services, such as water supply, should be particularly relevant to the development of future projects in these countries with a focus on poverty alleviation.

75. Portfolio. Over the seven years since the countries of the FSU became members, the Bank has initiated cooperation with all in the field of infrastructure, and expanded relations with most of the countries of Eastern Europe. It has committed loans for some \$5 billion for 57 projects in 20 countries. The largest commitments have been to Russia (\$1.4 billion for 5 projects), Poland (\$0.9 billion for 6 projects) and the five Balkan countries plus Croatia (\$1.2 billion for 21 projects), the latter reflecting partly the high infrastructure needs noted in para. 4 and partly the reconstruction requirements of the ex-Yugoslav republics. Further projects are under preparation in most of the countries, including three of the four CIS countries to which infrastructure loans have not yet been made (Moldova, Kyrgyz Republic and Ukraine), but lending is still not planned to Belarus, Czech Republic, Slovakia or Slovenia.

76. The portfolio of projects under supervision is shown in Table 2. It indicates currently unsatisfactory ratings for two projects, one in Bulgaria (Water), and the other in Latvia (Urban), both seriously suffering from inadequate agency commitment to the reform objectives originally agreed (in the case of Bulgaria exacerbated by hyperinflation and political change). Overall performance of the current portfolio appears to be much superior to that of the cohort of projects closed since 1990 (Table 1). Those results suffered from the disappointing performance of several large projects in Turkey, as discussed in previous sections, as well as from the effects of the breakup of Yugoslavia, and hostilities, on the railway project there. We expect the projects currently under supervision to show much better results at loan closure. This would be consistent with all four Implementation Completion Reports prepared to date of projects undertaken during the transition away from Communism (in Armenia, Estonia, Hungary and Poland) as listed in Table 1.

77. In terms of the issues highlighted in this paper, almost all projects appear to be contributing significantly to establishment of market economy and a few are having noteworthy impact on the more difficult specific issues raised. Table 3 summarizes sectoral distribution of loans made since 1990:

Table 2: ECSIN Projects: Portfolio Monitoring

Loan #	Country	Project Name	Age	Board Date	Closing Date	Original	4/30/98	Ratings	
						Commit	Undisb	IP	DO
						US\$ mil	US\$ mil		
Cr. 24990	ALBANIA	TRANSPORT/INFRASTRUC	5.1	5/20/93	6/30/99	18	3	S	S
Cr. 25340	ALBANIA	HOUSING	4.9	7/8/93	6/30/98	15	1	S	S
Cr. 26100	ALBANIA	DURRES WATER SUPPLY	4.1	5/10/94	12/31/01	12	6	S	S
Cr. 27320	ALBANIA	RURAL ROADS	3	5/25/95	6/30/99	15	10	S	S
Cr. 28880	ALBANIA	NATIONAL ROADS	2	6/20/96	6/30/01	25	22	S	S
Cr. 30660	ALBANIA	DURRES PORT	0.1	5/12/98	12/31/03	17	17		
Cr. 30670	ALBANIA	LAND DEVELOPMENT	0.1	5/12/98	3/31/04	10	10		
Cr. 27761	ARMENIA	HIGHWAY	2.7	9/14/95	12/31/00	31	16	S	S
Cr. 27510	AZERBAIJAN	BAKU WATER SUPPLY	2.9	6/28/95	12/31/01	61	33	S	S
Cr. 29050	BOSNIA-HERZEGOVINA	EMG. LANDMINES CLEAR	1.9	7/30/96	12/31/98	8	0	S	S
Cr. N0320	BOSNIA-HERZEGOVINA	TRANSPORT RECON. II	0.8	8/28/97	6/30/00	39	27	S	S
Cr. 30280	BOSNIA-HERZEGOVINA	RECON ASST-REPUBLIKA	0.5	12/23/97	12/31/00	17	14	S	S
Cr. 29020	BOSNIA-HERZEGOVINA	EMG. HOUSING REPAIR	1.9	7/30/96	6/30/98	15	0	S	S
Tr. 24033	BOSNIA-HERZEGOVINA	EMERG. TRANSP. REC.	2.2	3/25/96	6/30/99	41.6	11.5	S	S
Tr.24032	BOSNIA-HERZEGOVINA	WTR. SAN. URGNT WORKS	2.2	4/1/96	6/30/99	20	0.5	S	S
Ln. 37390	BULGARIA	WATER COMPANIES REST	4	5/26/94	6/30/02	98	49	U	U
Ln. 39220	BULGARIA	RAILWAY REHABILITATI	2.9	7/6/95	6/30/00	95	47	S	S
Ln. 30690	CROATIA	ISTRIA WS	9	5/23/89	6/30/99	28	16	S	S
Ln. 37600	CROATIA	EMERGENCY RECONSTRUC	4	6/21/94	9/30/98	128	6	S	S
Ln. 38690	CROATIA	HIGHWAY SECTOR	3.1	4/20/95	12/31/00	80	21	S	S
Ln. 41040	CROATIA	EMER. TRNSP/MINE CL.	1.5	11/21/96	6/30/00	102	72	S	S
Ln. 33980	CYPRUS	SOUTHEAST REGION SEW	6.8	8/30/91	6/30/99	32	18	S	S
Cr. 26580	GEORGIA	MUNICIPAL INFRA. REH	3.6	11/8/94	12/31/98	18	2	S	S
Cr. 28090	GEORGIA	TRANSPORT	2.4	1/18/96	6/30/99	12	3	S	HS
Cr. 29760	GEORGIA	MUNICIPAL DEV.	0.9	7/15/97	12/31/01	21	19	S	S
Cr. 30200	GEORGIA	SOCIAL INVEST. FUND	0.5	12/11/97	6/30/02	20	20	S	S
Ln. 35490	HUNGARY	ROADS	5.5	12/22/92	6/30/98	90	14	S	S
Ln. 39030	HUNGARY	BUDAPEST URBAN TRANS	3	6/15/95	6/30/00	38	23	S	S
Ln. 37250	KAZAKHSTAN	URBAN TRANSPORT	4.2	4/7/94	6/30/98	40	2	S	S
Ln. 41290	KAZAKHSTAN	PILOT WATER SUPPLY	1.5	12/23/96	12/31/01	7	7	S	S
Ln. 39640	LATVIA	MUN. SERVICES DEV.	2.5	12/14/95	6/30/01	27	18	U	U
Ln. 41450	LATVIA	HIGHWAY	1.2	3/27/97	12/31/00	20	16	S	S

Table 2: ECSIN Projects: Portfolio Monitoring

Loan #	Country	Project Name	Age	Board Date	Closing Date	Original	4/30/98	Ratings	
						Commit	Undisb	IP	DO
						US\$ mil	US\$ mil		
Ln. 40640	LITHUANIA	ENERGY EFFIC/HOUSING	1.9	7/11/96	12/31/00	10	9	S	S
Ln. 40840	LITHUANIA	HIGHWAY	1.8	9/5/96	12/31/00	19	12	S	S
Ln. 38680	MACEDONIA, FORMER YU	TRANSIT FACILITATION	3.1	4/18/95	6/30/99	24	1	HS	HS
Cr. 30610	MOLDOVA	FIRST CADASTRE	0.1	4/23/98	2/28/04	16	16		
Ln. 34990	POLAND	HOUSING	6	6/25/92	12/31/98	200	16	S	S
Ln. 35640	POLAND	ROADS	5.3	3/9/93	6/30/99	150	22	S	HS
Ln. 40320	POLAND	BIELSKO-BIALA WATER	2	6/4/96	6/30/03	22	16	S	S
Ln. 40800	POLAND	PORT ACCESS & MGMT.	1.9	8/1/96	6/30/02	67	59	HS	HS
Ln. 42360	POLAND	ROADS II	0.6	10/28/97	6/30/03	300	301	S	S
Ln. 42640	POLAND	FLOOD EMERGENCY	0.5	12/18/97	2/28/01	200	200		
Ln. 35930	ROMANIA	TRANSPORT	5.2	4/13/93	12/31/98	120	1	HS	HS
Ln. 39760	ROMANIA	RAILWAY	2.4	1/18/96	12/31/01	120	114	S	S
Ln. 40790	ROMANIA	BUCHAREST WATER SUPP	1.9	8/1/96	6/30/00	25	23	S	S
Ln. 41780	ROMANIA	SECOND ROADS	1	6/3/97	9/30/03	150	142	HS	HS
Ln. 37060	RUSSIAN FEDERATION	HIGHWAY REHAB & MAIN	4.3	2/17/94	6/30/98	300	51	S	S
Ln. 3850A	RUSSIAN FEDERATION	HOUSING	3.3	3/7/95	12/31/01	400	274	S	S
Ln. 38850	RUSSIAN FEDERATION	URBAN TRANSPORT	3.1	5/16/95	6/30/01	329	113	S	S
Ln. 39900	RUSSIAN FEDERATION	BRIDGE REHABILITATIO	2.2	3/28/96	12/31/01	350	329	S	S
Ln. 41440	RUSSIAN FEDERATION	ST. PETERSBURG REHAB	1.2	3/27/97	12/31/00	31	31	S	HS
Ln. 30700	SLOVENIA	SLOVENE COAST WSS	9	5/23/89	12/31/98	32	3	HS	HS
Cr. 30370	TAJKISTAN	P-C RECONSTRUCTION	0.4	1/29/98	9/30/00	10	10	S	S
Ln. 31510	TURKEY	ANKARA SEWERAGE	8.5	12/21/89	12/31/98	173	6	S	S
Ln. 35110	TURKEY	EARTHQUAKE RECONSTRU	5.9	7/23/92	12/31/99	285	54	S	S
Ln. 35650	TURKEY	BURSA WATER & SANITA	5.2	3/11/93	6/30/01	130	58	S	S
Ln. 38936	TURKEY	ANTALYA WATER SUPPLY	3	5/25/95	6/30/03	100	88	S	S
Ln. 40480/4048	TURKEY	ROAD IMPR. & SAFETY	2	6/20/96	3/31/03	250	198	S	S
Ln. 43150	TURKEY	CESME W.S. & SEWER.	0.2	4/14/98	12/31/03	13	13		
Ln. 41700	TURKMENISTAN	URBAN TRANSPORT	1	5/27/97	12/31/01	34	33	S	S
Ln. 41710	TURKMENISTAN	WATER SUP. & SANITA.	1	5/27/97	2/28/04	30	30	S	S
Ln. 39850	UZBEKISTAN	PILOT WATER SUPPLY	1.7	9/12/96	12/31/00	5	2	S	S

Table 3: Sectoral Distribution of Loans since 1990

	TRANSPORT		URBAN		WATER		TOTAL	
	No.	\$ mln.	No.	\$ mln.	No.	\$ mln.	No.	\$ mln.
Reconstruction	5	291	6	503	1	20	12	814
Nat. Networks	20	2,446			1	32	21	2,478
Capital City	3	112			2	86	5	198
Regions	3	411	8	724	8	404	19	1,539
Total	31	3,410	14	1,227	12	542	57	5,029

The large majority of the transport loans have been for rehabilitation and upgrading of the main national road network. Reconstruction and general urban loans have provided assistance for a very wide range of activities, including such non-traditional items as repair of underground railways and demining. The projects build reasonably on one another, reflecting the lessons of earlier ones and incorporating appropriate innovations such as use of social assessments and broader approaches to promoting road safety. Most projects, including those for Emergency Reconstruction, have made significant contributions to the introduction and spread of cost-benefit analysis in project selection and competitive contracting of works. By their conditionalities as well as their design, many have helped to bring about the reduction in fiscal burden of infrastructure that most of the borrowing countries have experienced. Most have helped lay the foundations for attracting private capital into the sector, and a few (Turkey Antalya Water, Poland Housing, Kazakhstan Urban Transport and Romania Railways) have gone significantly further. As regards land market development, reduction of environmental impact of infrastructure services and trade facilitation, individual projects have made useful, and sometimes path-breaking, contributions, but they have been limited in scale and have concerned relatively few countries.

78. Partners. The Bank's main partners in provision of capital assistance to the ECA countries have been EBRD, EIB and EU Phare/TACIS. Close relations have been maintained, particularly with EBRD, and many projects have been jointly supported, sometimes by all four agencies together in the EU Accession countries. With the substantial expansion of EU Phare resources in support of the accession process and the more formal agreement of March 1998 on cooperation with the three development banks, joint activity is likely to increase on specific projects in the ten countries that have formally applied for EU membership. The Bank is now regularly participating in technical coordination meetings with the EU, to facilitate combined financing from the different sources on different terms. Cooperation with EBRD extends to all ECA member countries other than Turkey. Because EBRD's mandate is to channel most of its funding to the private sector, and also because it is able to lend to sub-national governments without a sovereign guarantee, it may be expected over time to concentrate more on these markets. Nonetheless the especially strong capacity that it has developed for handling railway projects continues to mean that the Bank can concentrate its activity in that area on selected countries, directly collaborating with EBRD in the case of any large programs. In the Central Asian countries cooperation has also begun with ADB and OECF, and this may be expected to expand as they and the Bank increase their infrastructure activity in the area. Senior level contacts to seek a common approach to development issues should be pursued.

79. The Bank has also participated actively in a number of sub-regional international initiatives in the Baltic States, Central Europe, the Balkans and Trans-Caucasus/Central Asia. Especially important for the future may be the opportunity to have a real impact on the vexing problem of border-crossing delays by support to the joint efforts of the Balkan countries under the Southeast European Cooperative Initiative (SECI) promoted by the United States. Studies under the EU-supported TRACECA program for the Trans-Caucasus and Central Asia have already been of great help for Bank-assisted projects in several of the concerned countries. Cooperation can be expected to expand in support of further development of the "Silk Route" road/rail access to the landlocked countries of Central Asia.

80. A wide variety of bilateral and multilateral sources have provided important technical assistance in support of many individual projects. Finland and Sweden have been particularly supportive, not only in the Baltic countries. IMF experts funded out of the Bank loan have played a key role in the trade facilitation work in Macedonia. Also through its regular operations, the IMF has been an important partner in several countries in promoting policy reforms relating to management and pricing of infrastructure services.

81. Within the borrowing member countries the Bank's principal partners are the agencies of national and local governments concerned with infrastructure services. But we have also tried to establish contacts with any other groups interested in the broader issues of infrastructure development. An active social science network has been developed with Swiss financial assistance in the Central Asian countries, bringing together representatives of national and local Academies of Sciences, private social research firms and NGOs. Useful relations have been developed with universities specializing in transport in some of the FSU countries and with NGOs interested in environmental aspects of infrastructure development in several of the Central European countries.

82. As more possibilities open for foreign private investment in the infrastructure sectors, more active partnerships will develop with IFC and MIGA. Contacts already occur but they tend to be sporadic whenever an opportunity of potential mutual interest arises. We should actively seek a more regular interaction. To date, however, neither IFC nor MIGA has provided support for an infrastructure project (other than energy and telecommunications) in the ECA region, although infrastructure-related activities in some countries have been assisted by IFC-supported leasing companies, and Bank support to the Bucharest water company is now being followed by IFC assistance in developing a plan for its privatization. A new opportunity that may be opening up is for the Bank to use its knowledge of the region's municipalities to help identify potential candidates for the proposed new IFC program of lending for privately developed public-service projects whose financial viability depends on municipal creditworthiness.

83. Instruments. The large majority of loans and credits made to date fall in the category of Specific Investment Loans (SIL), financing pre-analyzed and specified works and institutional changes needed to improve their economic results. The expedited Economic Recovery Loan (ERL) format has been used for a number of loans and credits assisting reconstruction following hostilities and natural disasters such as floods and earthquakes. Limited use has been made of Sector Investment and Maintenance (SIM) loans and of Financial Intermediary Loans (FIL). Early stages in the adjustment of the infrastructure sector to the emerging market economy also

benefited from the macroeconomic policy reforms (and imports funding) supported by the Rehabilitation Loans mounted for the ECA countries and some Structural Adjustment Loans (SAL). The dialogue on recent SALs for Russia has helped move forward, inter alia, federal government actions to promote urban land market development and develop plans for railways reform.

84. First experiments are underway in applying to infrastructure problems the more flexible lending instruments recently introduced by the Bank. The Learning and Innovation Loan (LIL) format, designed to provide speedy support for thorough piloting of approaches potentially applicable more widely, is being used to support comprehensive reform of the Ministry of Transport in Georgia and its relations with the main modal agencies; this is expected to help improve design of subsequent broader public sector reforms. The Adaptable Program Lending (APL) approach, offering sustained support for phased steps that build on one another to reach agreed long-run goals in a sector, is being discussed with several potential borrowers and appears likely to find application especially in the largest, most dispersed sub-sectors.

85. The speed with which LILs are intended to be prepared (not more than 90 days' processing in the Bank) undoubtedly makes them an attractive option for piloting country-adapted solutions to many of the generic problems highlighted in this paper, such as environmental effects of infrastructure services, urban land reform, municipal financial management or trade facilitation. For the follow-on stages to diffuse tested solutions more widely (as well as for broader programs not requiring prior testing), increased use can be expected to be made of SIMs, because of the mutual knowledge and understanding now built up between the Bank and sector agencies in many countries, and APLs, reflecting increased consensus on the broad objectives that a sector should reach as the result of a long-term reform process. FILs, focussing on staff capacities and on policies governing allocation of funds in the sector benefited, may also prove appropriate for supporting institutions channeling funds to regions/municipalities for improvement of their infrastructures and the financial management thereof.

86. It is to be expected that, with the maturing of the Bank's relations with the ECA countries, the Region will make an increasing number of "repeater loans," i.e. to a borrower who benefited from an earlier loan. For both the member country and the Bank, it makes sense to use the services of a project office already experienced in handling Bank funds and conditionalities to reach further objectives, selected according to country needs, such as consolidation of difficult institutional/behavioral change initiated with support of previous loan, scaling up and spreading of reforms to a larger number of regions or municipalities, achievement of the next stage towards readiness for attracting private financing to the sector. A repeater loan should normally be prepared and delivered at substantially lower cost to the Bank than a first loan to a new borrower.

87. As sub-sectors and sub-sovereign governments reach the stage of being able to tap private capital directly, the Bank's Partial Risk Guarantees may well be able to play a crucial role. As a result of the recent financial market developments, such guarantees may be even more necessary to enable some projects to go ahead, whereas other projects may become at least temporarily infeasible due to increased market perception of risk. By ensuring expeditious payment of debt service following government default on one or other of the undertakings

identified in the agreements set up for a project, a guarantee operation can raise the creditworthiness of the project up to or even above that of the national government and thereby assure private financing on the longer terms and lower interest that are necessary to make the project financially viable - and therefore feasible. The Guarantee mechanism is particularly well suited to the needs of the ECA region because of the recent efforts of countries to attract private capital and the consequent need to increase investors' confidence that the changes made in the policy and regulatory environment for private investment will be maintained. A few possible guarantee operations (mainly for highways and bridges) are presently under discussion with private sponsors, and some other countries have indicated interest to explore possibilities. Before promoting guarantees, caution is needed to ensure that the regulatory framework is sufficiently attractive that the private investors will genuinely carry their share of the commercial risks and that the government is not accepting responsibilities beyond the minimum required to begin a process of private capital flow into the sector.

88. The Bank has also developed a growing program of Non-Lending Services (NLS), though not yet on a chargeback basis. Regional seminars - for example, for top officials on road safety for Central Europe in 1993, on different aspects of transport for the CIS countries in 1995, on trade facilitation for the Baltic States in 1997, and various custom-designed training programs carried out largely by EDI - have had a good reception and often proved fruitful in stimulating action in some participating countries. National seminars or consultative assistance have been provided on an increasing range of topics, notably in the last year: decentralization and intergovernmental finance in Poland, housing finance in Slovenia, railways reform in Estonia and Russia, road management and funding in Armenia, and others. These advisory assignments often relate to possible future Bank loans, but they are also undertaken in response to government request without any lending being envisaged. In view of budget constraints, for the future we should explore options for also involving other partners in these activities (which have an important development potential), reducing the cost to the Bank.

89. Selectivity. The decision rule for allocating Bank efforts among the many competing needs in the ECA infrastructure sector must take account of the macroeconomic significance of the institutional/policy impact sought, the probability of success, and the administrative costs involved. As pointed out in para. 70, the core of the task confronting the Bank is to assist the development of new mechanisms for channeling resources into infrastructures that were until a few years ago adequately, if inefficiently, financed from other sources. The mechanisms are not merely a new price or a new tax, but involve redistribution of responsibilities, change of incentives and stimulation of competition. If the influence of the Bank in shaping these changes is summarized as "institutional impact", then the function to be maximized is

$$\frac{\text{institutional impact} \times \text{probability of success}}{\text{administrative cost}}$$

Assessment of potential institutional impact requires good judgements of (a) the amount of change that may be viable on a sustainable basis by a given socio-economic environment at a particular point in time, (b) the scope and likelihood for changes to spread in a country with little further intervention, and (c) the difference (value added) that the Bank may be able to make -- as

distinct, for instance, from changes that would be equally well supported by other foreign lenders/investors or that may anyway be induced by ongoing trends.

90. Many factors must enter these judgments. The utility of the Bank to its borrowers in the infrastructure field consists mainly in its interactive combination of government policy work with institution-building; the institutions are critical to eventual policy implementation but often also in the development and experimentation phases before broad policies are finally decided. This comparative advantage of the Bank is also generally recognized by the other lenders, who are less substantively involved with higher levels of government and broad economic and sectoral policies. Once a prima facie case has been established for Bank involvement, in view of the significance and tractability of the problem to be addressed (relative to others in the country) and the importance of policy as well as institutional interventions to resolve it, the real likelihood of success has to be weighed. Experience indicates that the key factors determining the success of Bank-supported packages of policy and institutional reform in infrastructure have been as follows:

- (a) Dynamism of agency/ministry/municipality leadership to bring about improvements, and their conviction that the project-supported solutions incorporate the most relevant foreign experience and are well attuned to local needs.
- (b) Degree of importance attached by Government leadership (normally meaning, in the CIS countries for example, four bodies: Presidency, Prime Minister's Office, Ministries and Legislature), and the broader public, to resolving the problem addressed.
- (c) Amount of understanding created among affected groups and institutions of the rationale and appropriateness of solutions supported, and especially of the financial and other contributions that they will have realistically to make.
- (d) Extent of consistency of the changes to be supported by the project with broader changes underway in society and in economic and social policy.
- (e) Readiness of the project (especially project management arrangements and first-year contracts), and of the national legal framework, for proceeding to timely implementation and demonstration of positive results.

These judgments are obviously more difficult in unstable political situations and for projects involving issues of particular political sensitivity, such as substantial increases in prices to households. They are also harder to make at early stages of project preparation than later. To minimize work on projects that subsequently prove impossible to carry through to successful completion, it is useful to seek early written agreement with the country bodies principally concerned on the broad shape of reforms to be pursued, their phasing and timing.

Box 5.1 Borrower Self-Selection

Institutional impact in many of the areas discussed in this paper depends partly on policy change at the level of central government and partly on implementation actions by individual regions, municipalities, agencies or companies. Traditionally in the infrastructure sectors, the Bank and central Government have pre-selected such participants in order to carry out elaborate engineering, commercial and economic studies for major investment. An alternative approach is to set fairly stiff eligibility criteria for project participation, usually requiring concrete actions and/or demonstrated improvement of performance as well as initiation of appropriate planning steps, thus allowing participants to select themselves. What is especially striking in the ECA Region's experience in this regard is the contrast between the generally promising performance of projects using the second approach and the disappointing results when the first was used. A variety of examples could be cited but, among projects already mentioned in this paper, the Turkey Cukurova Urban Development project and main parts of the Latvia Municipal Services Development project reflect the pre-selection approach, while the Russia Urban Transport and Georgia Municipal Development projects reflect largely self-selection. The mistake in the ongoing Bulgaria Water project, which is facing implementation problems, even though it partially applied the self-selection approach, appears to have been insufficient dialogue and understanding with the municipalities themselves (as in Cukurova) and use of eligibility criteria consisting only of stated intentions rather than concrete reform actions.

91. More use should be made in project design of self-selection of ultimate beneficiaries, as suggested in Box 5.1. This approach can be readily combined with targeting of particularly needy areas of a country by appropriate definition of the broader population (e.g. only small towns, or the poorest few oblasts) and sensitive scaling of the eligibility criteria to attract from this population the municipalities with the best chance of successfully leading reform. The self-selection approach may have a potential further advantage in the particular circumstances of the ECA region. The earlier discussion makes it clear that very important issues in development of appropriate resource-channeling mechanisms for infrastructure are improvement of overall municipal financial management/creditworthiness and development of effective urban land markets. Eligibility criteria for participation in virtually any infrastructure project could, and in many ways should, include appropriately scaled performance requirements on these two basic dimensions of development capacity. By appropriate design, a project could thus give a boost toward broader progress of a region or city toward independent creditworthiness, as well as helping in greater depth to strengthen one or two particular services.

92. Looking across the infrastructure sector as a whole in the ECA countries, it is possible to envisage that a conflict might emerge for some countries between priorities for the use of Bank loan funds and priorities set in terms of desirable institutional impact from Bank intervention. While it remains impossible to make soundly based estimates of "total capital requirements" for infrastructure development in the region over the next ten or twenty years, in the case of most countries the greatest capital needs will be for strengthening and expansion of the road network, followed by general urban rehabilitation and improvement (including water supply and sewerage), with railway/port/air transport infrastructure rehabilitation and modernization requirements in third place. Priorities for further Bank institutional impact in many countries might now put regions and cities in first place, railways/ports/air transport second, and roads

third. Thus the road sector may sometimes be the highest priority for additional investment but the lowest for Bank institutional impact.

93. Several alternative answers to this dilemma can be envisaged, depending on country circumstances. First, there remain at present important institutional/policy issues to resolve in most countries in roads management, connected with further commercialization of road management and including notably highway safety, taxation of freight vehicles, improvement in trucking regulation, deepening of cost-benefit analysis in selection of works and further improvement of contract management. Second, attention is increasingly needed for secondary road networks, assistance for which could well be distributed within a country in such a way as to stimulate regional improvement on the broader urban land reform and financial management issues mentioned above. Third, it is always possible to act on the denominator of the formula given in para. 89, minimizing processing costs for a loan to a very competent borrower, with very limited requirements of institutional strengthening. Ultimately, however, if public capital is truly fungible, as the Bank's recent macroeconomic research suggests, it would behoove the Bank in the situation described to channel its resources to the city and regional administrations in need of institutional reform, assuming (or agreeing) that some of the domestic resources which would otherwise have gone to them would be released for needed road-building.

VI. CONCLUSIONS

94. The themes developed in this paper need to be discussed with member countries, and the results considered in preparation of Country Assistance Strategies for the individual ECA countries. Appropriate broad directions for the Bank's work in infrastructure can nonetheless be identified.

95. *Geographical Distribution.* In the medium run we expect that the emphasis in lending will gradually shift eastwards from Central Europe to Central Asia, as a result of rising public and private capital flows to the former from the EU and growing absorptive capacity of the latter. This shift will not, however, occur immediately because preparation for EU Accession raises capital requirements and because adaptation of regional/municipal authorities to market-economy standards lags behind that of central governments and has to be accelerated. Expanding EU-Phare and EIB programs may meet much of the increased need for external capital in the Accession countries but less of that for broad institutional strengthening and related policy reform. Links with ADB and OECF should be strengthened to ensure complementarity and mutual support of activities in Central Asia.

96. *Synergy among Sectors.* The main objectives and issues for all three infrastructure sectors are common, and problems closely interrelate. More advantage should be taken, in selection and design of projects, of opportunities for contributing to resolution of infrastructure-wide problems, especially slow progress toward self- and market-financing and outdated public policies affecting infrastructure activities (e.g. urban land controls, superfluous regulation, inadequate vehicle taxation).

97. *Stakeholder Seminars.* Consultation with groups and institutions to be affected by a project needs generally to be wider and sometimes longer than typical in the past, to ensure there is sufficient understanding and commitment to enable effective implementation. Regional

seminars -- planned this year, for example, on road safety, trade facilitation and intergovernmental finance -- are a useful element. The crucial stage is at the country level, often connected with preparation and dissemination of focussed sector studies (including, where appropriate, surveys of intended final beneficiaries) carried out by small Bank-Government teams. To enable expansion of these activities, we should try to develop them more jointly with our financing and technical assistance partners.

98. *Knowledge Management.* To disseminate more effectively the experience accumulated by our borrowers and ourselves, and to contribute to the consensus-building needed for successful reform projects, we should also increase production of short notes addressing issues of wide interest and the gathering of information on experience in the region. Results should be made available on an external Internet web-page including borrowers' statistics not otherwise readily available (e.g. road revenues/expenditures, water company financial performance, municipal finances, road safety, unit prices under Bank-financed contracts) which can help motivate and stimulate improvement in infrastructure's performance; particular attention should be given to borrower experiences with innovative solutions to problems widely encountered. The Department also plans to compile, with the assistance of our clients, two-page country data sheets on trends in the transport sector as well as the key laws governing the sector's operations. This information would be updated regularly.

99. *Motorization.* One of the most crucial issues confronting the transition countries' governments is whether, by appropriate interventions, they can avoid some of the urban transport problems that almost all market economies have experienced. This is a complex matter involving issues, inter alia, of long-run urban form and land-use planning, urban traffic management and road/rail design, externalities of different transport modes, pricing mechanisms and their political acceptability, and alternative standards of social equity and inclusiveness, all with direct implications for answering the urgent questions of how much budgetary support to provide for the inherited public transit systems and how to finance it (including possible private sector involvement). To help it provide better-founded advice on these topics, the Region proposes to take an active part, along with interested ECA cities and NGOs, in the comparative research planned by the Development Research Group with Sweden.

100. *Agreed Reform Strategies.* To contribute to mutual understanding and to avoid later difficulties (including the dropping of projects at late stages of preparation or during execution), we should not normally promote major preparation work for a project until we have agreed with the key concerned parties in the country a brief document specifying the main lines of the reforms planned, their envisaged phasing and timing, and the intended future shape of the sector.

101. *Self-Selection of Participants.* Within the framework of an agreed national reform strategy for the sector, we should make wider use of carefully chosen eligibility criteria that participating entities (e.g. municipalities, regions, water companies) would have to fulfil at the various stages of project preparation in order to remain within the scheme. These criteria should include not only investment preparatory steps and council resolutions but also performance improvements that are feasible in the short-term (e.g. in respect of collections, water losses, urgent repairs, tariff adjustments, management staffing), vital legal or accounting changes and, in some cases, progress on reforms in other key infrastructural areas (e.g. urban land reform, municipal financial management).

102. *Assuring Funds for O&M.* To accelerate progress in the crucial area of infrastructure providers' cost recovery, and at the same time avoid politically unrealistic projections, we should analyze planned progress in a broader context than usually used to date -- taking account, for example, of increases also needed in other public service prices (and house rentals), the schedule for their adoption, and changes underway in other relevant variables such as wages and social services. Where subsidization has to be assumed from local government, its capacities to actually pay the amounts envisaged need to be assessed within the context of overall revenues/expenditures.

103. *Roads and Highways.* The Bank has made major, timely contributions to strengthening the national highway networks of all interested countries and to putting national road systems on a sounder financial footing. Future assistance should be focussed on cases where combined policy and institution-building work is critical to further reducing the burden of the roads sector on general tax revenues, whether by cost reduction and tax adjustment or by attracting private investment. Very few road/bridge projects in the region can be expected to be financially viable in the near future on a 100% private financing basis, even assisted by Partial Risk Guarantees. But the Bank should encourage moves toward involvement of private capital by (a) providing sovereign loans for construction of tolled stretches which will be transferred to private operators as government equity contributions, (b) offering contingent loans to back government minimum revenue guarantees during early years of operation of a privately financed toll facility, and (c) encouraging recourse to long-run maintenance/rehabilitation contracts for existing roads remunerated out of tolls (as in Latin America) or shadow tolls (as in UK). The potential for private construction of urgently needed urban by-passes with remuneration by a shadow toll financed out of urban access charges also needs examination as a potentially superior alternative to private motorway schemes at the current stage of development in the ECA countries.

104. *Key Environmental Issues in Road Transport.* The Bank should work systematically with member countries, through discussions on transport loans as well as other broader issues, to reduce the serious health scourges represented by road accidents and road vehicles' emissions of lead. Annex II shows the current situation on each issue, country by country. Progress in country performance should be monitored year by year, and some countries' efforts may be assisted by agreeing specific future targets.

105. *Trade Facilitation.* More systematic attention should be given in the selection and design of transport projects to measures needed to advance trade facilitation, both within and between countries. Those measures which are of policy nature may also be advanced through the Bank's macroeconomic dialogue and SALs. Special attention should be given to supporting serious joint efforts among neighboring countries under regional programs.

106. *Railways.* Railways continue to play a very important part in the transport systems of most ECA countries but impose severe fiscal burdens in many. In line with general policy, the Bank has given support only to those committed to major adjustment to the changing market that they face. Now an increasing number of governments, especially in the largest countries, are deciding in favor of fundamental railway reform and restructuring with a view to gradual privatization. Working jointly with EBRD, the Bank should be prepared to play a major part in assisting this process through advice and financing, especially in the case of the largest railways. APLs may be the best means of assuring sustained support for a steady, phased transition.

107. *Other Modes of Transport.* Despite generally adequate capacity of ports, air transport facilities and inland waterways for handling current diminished traffic flows, important public investment needs arise in specific cases in connection with deferred maintenance, restructuring and adjustment to new trade flows and new technologies. The Bank will concentrate on those cases where it can contribute significantly to the emergence of structure and regulation conducive to competition and efficient private-sector involvement.

108. *Water and Sewerage.* There is an urgent need for restructuring and strengthening of entities responsible for water supply and wastewater treatment in the whole southeastern quadrant of the region, and most especially in Central Asia. The emphasis must be on institutional development and on financial strengthening. In addition, efficiency improvements are imperative to limit the need for rate increases. The distinct problems of rural areas must receive attention as well as urban areas. The private sector cannot be expected to risk significant investment funds until the macroeconomic and sectoral environment becomes more reassuring, but it can provide (in a limited number of cases) valuable management services. Increased involvement of the other IFIs and bilateral agencies should be sought to meet the challenge, and the Bank should cooperate closely with them. The figures used for summarizing the adequacy of countries' water services (Annex II) are very deficient in ECA. The Region will seek better estimates covering more of the countries, and will monitor progress, with a view to the DAC and Bank goal of safe water accessible to all by 2015.

109. *Urban Services.* Adjustment of municipal management to effective operation in the context of a market economy presents a large problem throughout the region. Bank support is in high demand for (a) assisting with the implementation of decentralization policies and corresponding strengthening of local governments' financial management in the EU Accession countries; (b) financing a wide variety of urban services (including solid waste) in the southern countries of the region; (c) urban transport renewal, and increasingly urban traffic management, in a wide variety of countries; and (d) cultural heritage projects in a number of the many countries in the region with sites of great interest which have been decaying under recent pressures. The Bank has had promising initial experience with Municipal Development Funds and similar Government-owned central channeling mechanisms which may need to be developed more widely in the region as an interim measure until both municipalities and local private capital markets strengthen. The Bank has also begun to have success with efforts to help pass services over to private management and financing as soon as that is feasible (e.g. franchising bus routes), and this emphasis be extended.

110. *Urban Land Market Development.* The Bank will increase the priority it gives to urban land reform in the region in view of the large inefficiencies involved in present land management and the serious obstacles they present to growth of private manufacturing and commerce and, on the other hand, the success of its initial efforts to support titling/zoning reform in Russia. The issue is sufficiently important to gain a place of increasing prominence in our policy dialogue. In addition, it can be supported through more projects supporting title registration and reform of land use controls as well as through conditionalities attached to loans for such projects or for development of other urban/regional infrastructures and services.

111. *Private Participation.* Opportunities for private investment in infrastructure are gradually opening in the ECA countries. The Bank's guarantee facility is particularly well-suited

to the needs of the region and can support major private investments and, through intermediaries, smaller projects. Several possible operations are under discussion with sponsors. The requirement for guarantees to reassure investors should be relatively short-lived in any particular sub-sector in a country, but the need can be expected gradually to open in other sub-sectors and other countries. Our contacts with IFC and MIGA should be further reinforced as opportunities for foreign investment expand. The Bank should be able to help identify municipalities suitable for IFC's proposed new facility for lending based on sub-sovereign guarantees.

112. *Emergency Reconstruction.* Emergency reconstruction has accounted for more than 15% of ECA infrastructure lending in the last seven years. It is hoped that the need will be far less in the coming years. However the Region has developed good capabilities for rapid preparation of appropriate loans (most recently demonstrated by the Poland Flood Emergency loan approved in December 1997, the Tajikistan Post-Conflict Reconstruction credit approved in January 1998 and two projects now under preparation for Turkey and for Tajikistan, following recent serious floods) and for assisting efficient implementation (including new programs such as demining). The Region should retain the relevant capacity.

113. *ECA City Association.* In view of the useful promotional and educational role that international associations of municipalities have played in other regions, notably in Latin America, the Bank should give renewed attention to the possibilities of developing an association of ECA cities with which it could collaborate in organizing seminars and other activities for exchanging experience on common problems and possible solutions. Support could be sought from some of the west European governments most interested in local government development as well as from people involved in city association activities in Asia and Latin America. In cooperation with the central urban anchor unit and EDI, we plan for the immediate future systematic consultations with some of the national associations already existing in the region as well as with potential outside partners, with a view to a broader conference on the matter in 2000.

**PRIORITY STEPS TOWARD PRIVATE PARTICIPATION
IN INFRASTRUCTURE IN ECA COUNTRIES**

	HOUSING	SOLID WASTE	WATER/ SEWERAGE NETWORKS	BULK WATER & SEWAGE	URBAN TRANSPORT	INTER-URBAN BUS	TRUCKING	ROADS & HIGHWAYS	RAILWAYS	PORT SERVICES	INLAND WATER TRANSPORT	AIRPORTS	AIRLINES
1. Russia	ULAM PRCG	PRVD	PRCG CPRG	CNTG UNBG	PRCG UNBG SHRI	PRVD	PRVD	CNTG PRCG SHRI	CNTG UNBG REGN	REGN SHRI PRVD	PRVD	CPRG	REGN UNBG
2. Belarus	ULAM PRCG	CPRG	PRCG CPRG	CPRG	UNBG	REGN	REGN	CNTG PRCG SHRI	CNTG PRCG CPRG	N.A.	CPRG	UNBG	CPRG
3. Ukraine	ULAM PRCG	CPRG	PRCG CPRG	CPRG	PRCG UNBG	CPRG UNBG	PRVD	CNTG PRCG	CNTG PRCG CPRG	CPRG REGN SHRI	CPRG	CPRG	CPRG
4. Moldova	ULAM PRVD		CPRG PRCG CNTG	CPRG PRCG CNTG	PRCG CPRG UNBG	CPRG UNBG	CPRG	CNTG PRCG	CNTG PRCG CPRG	N.A.		CPRG	CPRG
5. Kazakhstan	ULAM PRCG		CPRG PRCG CNTG	CPRG PRCG CNTG	PRCG CPRG SHRI	PRVD REGN	PRVD REGN	CNTG PRCG	CNTG PRCG CPRG	CPRG	CPRG	CPRG PRCG SHRI	PRCG REGN
6. Kyrgyz Republic	PRCG	PRVD	CPRG PRCG	CPRG PRCG	CPRG PRCG SHRI	PRVD REGN	PRVD REGN	CNTG PRCG	CPRG PRCG	N.A.	N.A.	CPRG PRCG SHRI	PRCG REGN
7. Tajikistan	ULAM PRCG	CPRG	CPRG PRCG		CPRG PRCG			CNTG PRCG	CPRG PRCG	N.A.	N.A.	CPRG	CPRG REGN
8. Uzbekistan	ULAM PRCG	CPRG PRCG	CPRG PRCG	CPRG PRCG	CPRG UNBG PRCG	CPRG UNBG REGN	CPRG UNBG REGN	CNTG PRCG	CPRG PRCG	N.A.	CPRG	CPRG	CPRG REGN
9. Turkmenistan	ULAM PRCG	CPRG PRCG	CPRG PRCG	CPRG PRCG	CPRG PRCG	CPRG UNBG REGN	CPRG UNBG REGN	CNTG PRCG	CPRG PRCG	CPRG PRCG CNTG	CPRG	CPRG PRCG	CPRG PRCG

	HOUSING	SOLID WASTE	WATER/ SEWERAGE NETWORKS	BULK WATER & SEWAGE	URBAN TRANSPORT	INTER-URBAN BUS	TRUCKING	ROADS & HIGHWAYS	RAILWAYS	PORT SERVICES	INLAND WATER TRANSPORT	AIRPORTS	AIRLINES
10. Azerbaijan	ULAM PRCG		CPRG PRCG	CPRG PRCG	CPRG PRCG SHRI	CPRG UNBG REGN	CPRG UNBG REGN	CNTG PRCG	CPRG PRCG	CPRG REGN	N.A.	CPRG	CPRG PRCG REGN
11. Armenia	PRVD		CPRG	CPRG	CPRG	PRVD	PRVD	CNTG PRCG	CPRG	N.A.	N.A.	CPRG	CPRG
12. Georgia	PRVD	PRVD	CPRG PRCG	CPRG PRCG	PRVD	PRVD	PRVD	CNTG PRCG	CNTG CPRG	CPRG SHRI	N.A.	CPRG	PRVD
13. Estonia	PRVD	PRVD	CPRG	CPRG	UNBG REGN	PRVD	PRVD	CNTG PRCG	SHRI REGN	PRVD	PRVD	PRVD	PRVD
14. Latvia	PRVD	CPRG PRVD	CPRG PRCG	CPRG PRCG	CPRG PRCG REGN	PRVD	PRVD	CNTG	CPRG UNBG REGN	PRVD	PRVD	PRVD	PRVD
15. Lithuania	PRVD	CPRG	CPRG	CPRG	CPRG PRCG	PRVD	PRVD	CNTG PRCG	CPRG	PRVD	PRVD	CPRG	CPRG
16. Poland	PRVD	CPRG	CPRG	CPRG	CPRG	PRVD	PRVD	CNTG PRCG SHRI	UNBG REGN	UNBG PRVD	PRVD	CPRG	CPRG
17. Czech Republic	PRCG	CPRG PRVD	CPRG PRVD	CPRG	CPRG	PRVD	PRVD	CNTG	CPRG UNBG REGN	N.A.	PRVD	CPRG	CPRG
18. Slovakia	PRCG		CPRG	CPRG	CPRG PRCG	CPRG	CPRG	CNTG	CPRG	N.A.		CPRG	CPRG
19. Hungary	PRVD	PRVD	CPRG SHRI	CPRG UNBG	CPRG UNBG CNTG	PRVD	PRVD	CNTG SHRI CPRG PRCG	UNBG PRCG REGN	N.A.	PRVD	CPRG CNTG	PRVD
20. Romania	PRVD	CPRG	CPRG PRCG	CPRG PRCG	CPRG UNBG	CPRG UNBG	PRVD	CNTG PRCG	CPRG UNBG REGN	CPRG	CPRG	CPRG	CPRG

	HOUSING	SOLID WASTE	WATER/ SEWERAGE NETWORKS	BULK WATER & SEWAGE	URBAN TRANSPORT	INTER-URBAN BUS	TRUCKING	ROADS & HIGHWAYS	RAILWAYS	PORT SERVICES	INLAND WATER TRANSPORT	AIRPORTS	AIRLINES
21. Bulgaria	PRVD		CPRG PRCG	CPRG PRCG	CPRG UNBG	CPRG	PRVD	CNTG PRCG	CPRG PRCG	CPRG	CPRG	CPRG	CPRG
22. FYR Macedonia	PRVD	CPRG	CPRG	CPRG	CPRG	PRVD	PRVD	CNTG	CPRG	N.A.	N.A.	CPRG	CPRG
23. Albania	PRVD		CPRG CNTG PRCG	CPRG	CPRG PRCG REGN	PRVD	PRVD	CNTG PRCG	CPRG PRCG REGN	PRVD CNTG	N.A.	CPRG	CPRG
24. Bosnia-Herzegovina	PRVD	CPRG	CPRG PRCG	CPRG	CPRG UNBG	CPRG UNBG	PRVD	CNTG	CPRG PRCG	N.A.	REGN	CPRG	CPRG
25. Croatia	PRVD	PRVD	CPRG PRCG	CPRG	CPRG PRCG	PRVD	PRVD	CNTG SHRI	CPRG PRCG	CPRG PRVD	REGN	CPRG	CPRG
26. Slovenia	PRVD PRCG	CPRG	CPRG	CPRG	CPRG UNBG	PRVD	PRVD	CNTG	CPRG UNBG	N.A.	N.A.	CPRG	PRVD
27. Turkey	PRVD	CPRG PRCG	PRCG CPRG	CPRG PRVD	CPRG	CPRG	PRVD	CNTG	CPRG PRCG	UNBG SHRI	CPRG	CPRG	CPRG

CNTG: Contracting **PRCG:** Pricing **REGN:** Regulation **ULAM:** Urban Land Market **N.A.:** Not Applicable
CPRG: Corporatizing **PRVD:** Privatized (*largely*) **SHRI:** Risk-Sharing (*with private*) **UNBG:** Unbundling

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INDICATORS FOR SOME KEY ENVIRONMENTAL ISSUES
IN INFRASTRUCTURE: COUNTRY BASELINES

	<u>Road Accidents fatalities</u> per 10,000 vehicles (latest year available)	<u>Use of Unleaded Gasoline</u> % market share (1996)*	<u>Safe Water</u> % of population with access (1995)**
1. Russia	19.1	50*	
2. Belarus	19.7	79*	100
3. Ukraine	23.0	84*	97
4. Moldova	34.4	50*	
5. Kazakhstan	36.5	80	93
6. Kyrgyz Republic	16.3	n.a.	75
7. Tajikistan	7.7	n.a.	
8. Uzbekistan	10.9	20*	62
9. Turkmenistan	16.1	n.a.	85
10. Azerbaijan	24.0	57	
11. Armenia	12.1	0*	
12. Georgia	12.0	98*	
13. Estonia	5.5	81	
14. Latvia	15.6	60	
15. Lithuania	9.6	78	
16. Poland	6.3	48	89
17. Czech Republic	4.2	55	
18. Slovakia	6.7	100	
19. Hungary	5.6	64	98
20. Romania	7.9	5*	96
21. Bulgaria	5.0	6	98
22. FYR Macedonia	6.3	n.a.	
23. Albania	27.8	100	96
24. Bosnia-Herzegovina	n.a.	n.a.	
25. Croatia	8.1	30*	96
26. Slovenia	5.6	54	
27. Turkey	12.4	18*	92
COMPARATORS			
EU	3.8	68	n.a.
USA	2.1	100	90
Brazil	5.3	100	72
Australia	1.6	45 (1994)	95
Four Nordic Countries	2.0	100	n.a.

* These countries also allow much higher lead content in leaded fuel than the 0.15 gram/liter permitted in others. A further problem in many of the countries asterisked, and some others in the CIS, is that the market shares shown for unleaded fuel appear to be exaggerated because they reflect quality at refinery/port gate, after which lead is often added before final sale to vehicle owners.

** The figures are drawn from the World Bank's World Development Indicators (which cites the main source as country reporting to WHO), and directly from WHO Global Health Indicators. The figures shown for most, if not all, of the ECA countries covered appear to be very overoptimistic. For instance, compared with the 75% access shown above for Kyrgyz Republic, the report on a recent World Bank field visit indicates that organized water service is available only to 67% of the population (27% house connections, 40% standposts or water tankers) and that many of these facilities, especially in the south of the country, are either non-operational or delivering unsafe water. It would appear that safe water coverage must in fact be at best some 50-60%, close to the worldwide average of 51% cited in the World Development Indicators for the low income countries (excluding China and India), the income group to which the Kyrgyz Republic belongs.

SUB-REGIONAL GROUPINGS OF COUNTRIES

The following sub-regional groupings of countries are used in this paper:

Central and Eastern Europe (CEE):

1. Central Europe : Croatia, Czech Republic, Hungary, Poland, Slovak Republic, Slovenia
2. Balkans : Albania, Bosnia, Bulgaria, FYR Macedonia, Romania
3. Turkey
4. Baltics : Estonia, Latvia, Lithuania

Commonwealth of Independent States (CIS):

1. Slavic and Moldova: Belarus, Moldova, Russia, Ukraine
2. Trans-Caucasus : Armenia, Azerbaijan, Georgia
3. Central Asia : Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan

Former Soviet Union (FSU) refers to all member countries of the CIS plus the three Baltic States.

The EU Accession Countries are : Czech Republic, Estonia, Hungary, Poland and Slovenia (first round) and Bulgaria, Latvia, Lithuania, Romania and Slovak Republic (second round).

The paper also uses, in places, a broader division of the region, between "northwest quadrant" and "southeast quadrant;" the transverse in mind is a line from Yekaterinburg to Zagreb.