

(c) *Promote* the sharing and free flow of information and experience among economies of the region concerning development strategies and policies, as well as trade, technology and investment;

(d) *Launch* concerted efforts for the development of physical infrastructure, and accord due recognition to the transport and communication links required to facilitate regional trade and economic cooperation;

(e) *Promote* capital and technology flows within the Asian and Pacific region to facilitate sustainable development consistent with the varying needs and stages of economic and social development in the region;

(f) *Strengthen* cooperation in the area of human resources development, which is recognized as a crucial input for sustained development and, to this end, encourage the exchange of academics, professionals, scientists and technologists within the Asian and Pacific region;

(g) *Increase* efforts in support of the economic and social development of the least developed, land-locked and island developing countries of the region which face severe resource and infrastructure constraints;

(h) *Recognize* the special technical assistance needs of the disadvantaged economies in transition for facilitating their structural reform process and for assisting them in the process of their integration into the mainstream of the region's development process;

2. *Requests* the Executive Secretary to take into full account the present declaration, which shall be known as the Delhi Declaration on Strengthening Regional Economic Cooperation in Asia and the Pacific towards the Twenty-first Century, and to initiate appropriate action to review and recommend measures for further strengthening regional cooperation consistent with the emerging regional identity and for addressing more effectively the needs of the region towards the twenty-first century;

3. *Formally reaffirms* its political support for the achievement of the objective of regional economic cooperation in Asia and the Pacific, and invites members and associate members to devote greater national efforts towards that end;

4. *Requests* donor Governments and multi-lateral agencies to provide support to implement this important Declaration;

5. *Invites* the subregional organizations and relevant regional institutions to cooperate with the Executive Secretary in the implementation of the provisions of the Declaration;

6. *Requests* the Executive Secretary to report to the Commission at its fifty-first session on the implementation of the Declaration.

758th meeting
13 April 1994

50/2. Action plan on infrastructure development in Asia and the Pacific²

The Economic and Social Commission for Asia and the Pacific,

Recalling General Assembly resolutions 45/199 of 21 December 1990 on the International Development Strategy for the Fourth United Nations Development Decade, and 47/190 of 22 December 1992 on the report of the United Nations Conference on Environment and Development,

Recalling Commission resolution 236 (XL) of 27 April 1984 on the proclamation of the Transport and Communications Decade for Asia and the Pacific, 1985-1994, and General Assembly resolution 39/227 of 18 December 1984 by which the Assembly proclaimed the Decade,

Recalling Commission resolution 47/10 of 10 April 1991 on phase II of the Transport and Communications Decade for Asia and the Pacific, 1985-1994, in which the Commission reaffirmed the critical role of transport and communications in economic development and the importance, therefore, of the improvement and growth of transport and communications infrastructure and services in a manner commensurate with the anticipated growth of all sectors of the economy generating the demand for transport and communications, and General Assembly resolution 48/177 of 21 December 1993 on resource mobilization for the implementation of the regional action programme for phase II (1992-1996) of the Decade,

Recalling resolution 48/1 of 23 April 1992 on a declaration on enhancing regional economic cooperation, in which the Commission urged strongly that high priority in economic cooperation be given to the promotion of intraregional trade and investment, and greater cooperation in science and technology and the development of infrastructure,

Recalling also the decision of the Commission, at its forty-ninth session, that the theme topic for the fiftieth session should be "Infrastructure development as key to economic growth and regional economic cooperation", and that the theme study would focus on the deficiency in the physical infrastructure facilities and the resources required for addressing that deficiency as well as the measures needed to attract private investment for establishing infrastructure facilities,

² See para. 192 above.

Recalling further that a study on the theme topic had been undertaken by the ESCAP secretariat and that the study was issued as a publication entitled *Infrastructure Development as Key to Economic Growth and Regional Economic Cooperation*,

Noting that the Commission at its current session has recognized four main areas for regional cooperation in infrastructure development: the sharing of experience and human resources development; the consideration of issues surrounding the mobilization of financial resources; the development of regional policy and the regulatory environment; and joint development of mutually beneficial infrastructure projects,

Recognizing that the lack of adequate infrastructure is acting as a severe constraint on the accelerated economic development of many of the economies of this region,

Recognizing also that the development witnessed in recent years in some of the other economies of the region has caused pressure on existing infrastructure and that forecasts for economic growth suggest that such pressure will continue,

Welcoming the recent initiatives for infrastructure development as well as for sharing the related experiences at the bilateral, multilateral or subregional levels, and emphasizing that such initiatives could bring optimal benefit to the region as a whole if they are in harmony with the overall context of regional infrastructure development,

Bearing in mind the necessity to assist the least developed, land-locked and island developing countries as well as the disadvantaged economies in transition in the development of their infrastructure,

Recognizing that owing to the magnitude of the investment required in infrastructure development, not only will the traditional ways in which finances are mobilized need to be improved and innovations made therein, but also complementary measures, including improvement in the means by which the infrastructure subsectors are administered and managed and increasing the role of the private sector, will need to be taken,

Recognizing also that experience in the development of infrastructure could be shared beneficially and that the impact of some major infrastructure projects in the region was already transcending national boundaries, thus creating demand for increased cooperation between countries of the region,

Further recognizing that the issues associated with sustainable development need to be addressed within the context of realistic long-term strategic plans for infrastructure development,

1. *Welcomes* the draft action plan on infrastructure development in Asia and the Pacific, annexed to the present resolution, as a constructive basis on which to develop a fully operational plan of action;

2. *Reiterates* the commitment and determination of its members and associate members to strengthen their infrastructure and to cooperate in improving subregional and regional infrastructure;

3. *Requests* the Steering Group of the Committee for Regional Economic Cooperation to deliberate further on the draft action plan with a view to examining it in detail;

4. *Also requests* the Committee to hold its fourth session immediately following the sixth meeting of the Steering Group to consider the revised text of the draft action plan as recommended by the Steering Group and further examine the priorities and modalities for its implementation;

5. *Invites* donor Governments and funding agencies to provide the requisite extrabudgetary resources to facilitate the participation of least developed and Pacific island countries and disadvantaged economies in transition in the deliberations of the Steering Group and the Committee;

6. *Requests* the Executive Secretary:

(a) To encourage the members of the Steering Group and the Committee to consider including representatives of the private sector in the national delegations, where appropriate, in the areas of financing, managing and constructing infrastructure facilities;

(b) To report to the Commission at its fifty-first session on the outcome of the deliberations of the Steering Group and of the Committee concerning the draft action plan;

(c) To submit to the Commission at its fifty-first session, for consideration and adoption, the revised text of the action plan, which shall be referred to as the New Delhi Action Plan on Infrastructure Development in Asia and the Pacific;

(d) To ensure the inclusion of those projects and activities embodied in the action plan in the medium-term plan of the Commission.

758th meeting
13 April 1994

DRAFT ACTION PLAN ON INFRASTRUCTURE DEVELOPMENT IN ASIA AND THE PACIFIC

Introduction

I. POLICY ISSUES

II. RECOMMENDATIONS AND PROPOSALS FOR ACTION

A. Action at the country level

Recommendations

1. Upgrading information as a basic resource for infrastructure planning
2. Measures aimed at modifying consumption patterns
3. Reform of the administration of infrastructure facilities
4. Ensuring that the existing infrastructure is capable of producing design output
5. Effective planning, prioritization and investment in quality infrastructure projects
6. Mobilization and allocation of public sector resources
7. Private sector participation
8. Equity and welfare — the essential tasks of government and workers in creating the framework
9. Human resources development
10. Environmental impact of infrastructure development
11. Poverty alleviation, rural areas and disadvantaged population groups
12. Infrastructure needs of the least developed, land-locked, and island developing countries and the disadvantaged economies in transition

B. Action at the regional level

III. IMPLEMENTATION, PRIORITIES AND TIME-FRAME

Introduction

1. In responding to the Commission's directive, the secretariat has reported on the magnitude of the infrastructure deficiencies in its theme study,^a as well

as in document E/ESCAP/930, "Infrastructure development as key to economic growth and regional economic cooperation: summary". In the present annex, the main issues identified in the study are outlined and addressed through 12 recommendations and 40 proposals for action which, if implemented, will greatly enhance the potential contribution that the infrastructure sector can make towards social and economic development. Their implementation will also be effective in reducing the infrastructure requirement.

2. In formulating this action plan, the approach taken has been to set down a series of policy initiatives and actions which together form a framework that will increase the level of efficiency of the infrastructure sector, raise the level of confidence in the development process and thereby create an environment to attract the private sector to invest. The plan attempts to set forth a balanced approach with a focus on reducing waste and increasing the capacity of the existing infrastructure, with the objective of reducing the capital demand for new infrastructure. While it is recognized that this will not be an easy path for Governments to follow, it is fundamental to increased efficiency and economic growth. To assist Governments in implementing this approach, proposals for action have been suggested to put in place the fundamental requirements for partnership between government, management, labour, the private sector, donors and international organizations in the development of the infrastructure sector.

3. To support the action at the country level, recommendations are also made for regional action designed to facilitate and augment the commitment and determination of the Governments of the region to cooperate and work together to strengthen the national, subregional and regional infrastructure.

4. In the process of undertaking the research for the study, a number of policy issues that require consideration were identified. The following is a brief overview of these issues.

I. POLICY ISSUES

5. In the theme topic study on infrastructure it has been estimated that between now and 2000, around US\$ 1,500 billion will be required for infrastructure development in the developing countries of the ESCAP region. Of this total, US\$ 500 billion was identified as available or already committed. The financial gap therefore amounts to around US\$ 1,000 billion. It is most likely that this is an understatement, as, for example, detailed estimates for rehabilitation work have not been included. These estimates include some allowance for increase in efficiency; however, the study has also shown that there is considerable scope for further improvement in productivity. It is unlikely that sufficient funds will be found to close the infrastructure gap and consequently complementary measures in the area of improving efficiency will need to be adopted in order to speed up the process.

^a *Infrastructure Development as Key to Economic Growth and Regional Economic Cooperation* (ST/ESCAP/1364).

6. The principal policy issues arising out of the study relate to administration, management and finance; however, any action taken in one or more of these areas raises further policy issues. Similarly, many actions considered in the context of one particular issue can also be applied to other issues. For example, private sector participation to assist in funding may also assist in improving efficiency.

7. In broad terms, the policy issues fall into three main categories: those associated with the administration and management of infrastructure facilities; those associated with finance; and those which are consequent on or directly associated with infrastructure development. The text below follows this order.

Information

8. One of the initial findings of the study is that the quality of information concerning existing infrastructure, its condition and availability, the efficiency with which it is used, the underlying demand and the cost of providing it varies across countries. As a result, there are many cases in which there is insufficient information to make the important resource allocation decisions.

Administration

9. The means by which infrastructure subsectors are administered are widely regarded as a major impediment to the efficient provision and operation of these services and facilities. Typical obstacles include regulation of prices, controls on maintenance and investment decisions, inability to retain profits, responsibility for the provision of various welfare services and facilities, lack of public sector funds for investment and inability to attract or retain qualified staff.

Coordination

10. Within many infrastructure subsectors there is a lack of coordination between the various ministries and departments involved in the decision-making process. This slows down the implementation of infrastructure development. The problem is compounded when coordination is required with other ministries and departments outside the subsector. For example, transport planning and land-use planning should be part of an integrated process; in many instances, this is not the case. Consequently, policies that address these questions of "internal" and "external" coordination need to be considered and implemented.

Pricing

11. The regulation of prices almost invariably means that they are lower than the cost of providing the services and facilities of the infrastructure subsector's output. In addition, there is a considerable time-lag between the application for a price increase and the granting of the necessary permission. This underpricing of infrastructure facilities has two main effects: first,

resources are used inefficiently, and second, there are insufficient funds for the self-financing of the infrastructure subsectors — in fact, some infrastructure subsectors have been a major drain on public sector funds.

Operating efficiency

12. Some of these public sector losses could be reduced with more efficient management and operation of the facilities. While a number of initiatives have been taken in the direction of developing corporate planning approaches to management and, in some subsectors, implementing management information systems, management procedures are outdated and in urgent need of major upgrading. Without such performance-oriented procedures, it is difficult for management to locate the areas within the organization in which major losses are occurring and the sources of low productivity levels.

13. Cross-country and sensitivity analyses show that significant improvements can be made in the operating efficiency of infrastructure facilities, thereby reducing the infrastructure financing requirement significantly.

Maintenance

14. Maintenance is another area which has been seriously neglected in the infrastructure subsectors. There is an important trade-off between capital and maintenance expenditure; significant savings can be made in overall expenditure through adequate allocations to and effective management of maintenance activities.

15. One of the causes of low productivity and inattention to maintenance is that the planning system in most countries is oriented towards capital formation at the expense of production management. Consequently, attention needs to be directed towards placing greater emphasis on post-implementation operation and maintenance.

Planning

16. As adequate funds to close the infrastructure gap are not available, attention must be focused on the planning agencies' role in setting priorities for national development. The current manifestations of the inadequate provision of infrastructure facilities in countries of the region strongly suggest that reviews of the planning process are also required in this area.

Public sector financing

17. The financing of infrastructure development has been primarily in the domain of the public sector. The magnitude of the financing task, coupled with various institutional and policy considerations, largely dictates that a substantial proportion of this finance will continue to be derived from the public sector. The principal sources of these funds are domestic resources and self-financing.

18. Analysis of the fiscal regimes in countries of the region indicates that there is still appreciable room for increasing government revenue through widening and deepening the tax base. At the same time, fiscal instruments can be better designed and innovations, such as value-added taxation, can be introduced more widely. The issue of importance to the infrastructure sector relates again to the allocation of increased revenue to the sector.

Private sector participation

19. Private sector participation is a partial solution to some of the problems arising in the infrastructure sector, for example through the provision of funds outside of the government budget, the implementation of changes to improve efficiency, and the transfer of technology and management. However, a prerequisite to such participation is a favourable investment climate: this is composed of many elements, including the legal framework for private sector involvement, trade facilitation measures, and macroeconomic stability — especially in relation to prices and exchange rates, and financing costs and arrangements. In inviting private sector participation, Governments will be required to address these elements.

20. From an administrative and legal point of view, the process of involving the private sector is complex. For example, the principle of a build-operate-transfer (BOT) contract is one of risk-sharing, and thus there are a large number of agreements to be made between the principal project company and the responsible government agency, contractors, insurers, operators, lenders, trustee banks and shareholders. These contracts have to be carefully drawn up and implemented in order to ensure that the proposed activities are feasible and in the public interest. Many countries of the region have limited experience in these aspects of private sector participation.

Facilitation and regulation of private sector participation

21. In a number of countries, private sector participation, especially in the form of BOT, is viewed as the answer to infrastructure development. However, long lists of projects with the comment "suitable for BOT" are not generating the desired response. In this respect, consideration needs to be given to the preparation of project proposals from the perspective of the private sector investor.

22. The experience of privatization outside the region suggests that for the infrastructure sector, public monopolies have simply been replaced by private monopolies. As a result, the role of government has changed from active participant to facilitator and regulator of the area of involvement of the private sector. This has been the experience of privatization in, for example, the United Kingdom of Great Britain and

Northern Ireland, where public monopolies have been replaced by a private sector controlled by regulatory authorities.

Equity and efficiency

23. The practice of using the infrastructure subsectors as instruments of general socio-economic policy has confused the questions of efficiency and equity. A minimum requirement of any management information system established within an infrastructure subsector is that the cost of meeting such obligations be identified clearly.

24. If it is decided to introduce pricing reforms and to improve productivity, careful consideration needs to be given at the policy formulation stage to the impact on the members of society directly affected by such reforms.

Poverty alleviation

25. The structural changes associated with economic development place considerable pressure on specific groups within the community and the impact tends to vary widely from region to region. In the long term, human resources development is a key to redressing many of these inequalities. In the short term, however, policies need to be adopted which will mitigate the impact of the changes and facilitate sustainable economic development. In this respect, the development of infrastructure has a role to play in, for example, increasing the contribution of women to sustainable economic development, reducing farm-to-market transport costs, providing the basic facilities required to reduce the regional concentration of industrial development, and providing easier access to education and employment opportunities.

Environment

26. The development and operation of infrastructure facilities can have a major impact on the environment. There is a spectrum of policies which can be adopted in an attempt to mitigate these effects, ranging from unconstrained freedom to exploit the environment to a total ban on the offending activity. In the face of the evidence, both ends of the spectrum are untenable. The policy issue for consideration is the means of reducing to acceptable levels the adverse environmental impact of infrastructure development.

Least developed, land-locked and developing island countries and the disadvantaged economies in transition

27. To date, expenditure on infrastructure in many least developed, land-locked and developing island countries has been underwritten almost wholly by substantial inflows of official development assistance (ODA). Given the recurrent requirement for such assistance, there is a real danger of donor lethargy.

There is therefore urgent need for these countries to develop long-term strategies which demonstrate clearly the path the country is following towards sustainable development. In the disadvantaged economies in transition, infrastructure has not been adequately maintained or has been damaged and destroyed. In these countries, the major issue is the rehabilitation of infrastructure.

Multimodal transport

28. The provision of infrastructure for and development of efficient transport systems is essential for the development of a country's trade. For many countries of the region, especially the land-locked countries, this requires a number of different modes of transport, transit through third countries and border-crossings. Countries of the region need to consider integrated systems approaches to the transport of goods, multimodal transport, transit arrangements and facilitation of border-crossings.

Human resources development

29. The key role of human resources development is clear from the above outline of the main issues associated with infrastructure development: improved administration, operating efficiency, maintenance or coping with the introduction of private sector participation. In this respect, clear policies need to be developed to ensure that the full potential of human resources is realized.

Regional and subregional cooperation

30. Regional and subregional cooperation can play an important part in human resources development through transfer of expertise, skills, technology and knowledge, and exchange of experience in infrastructure planning, finance, development, management, and operation and maintenance. The major issue for consideration in this area relates to the strengthening and development of mechanisms whereby the potential benefits of these transfers and exchanges can be realized.

31. The bilateral development of infrastructure facilities in, for example, the power sector is providing a major source of revenue and has equipped a number of least developed countries with the potential to develop their manufacturing sector. Without bilateral cooperation, the projects would not have been feasible at the time they were undertaken. In addition, cooperation has facilitated the financing of the projects.

32. Trade has been the driving force behind the impressive growth performance of a number of countries in the region. The development of regional and subregional policies for land transport provides the opportunity for countries of the region to take advantage of this force. In view of the fact that the 11 land-locked countries of the region include least developed countries

and disadvantaged economies in transition, the development of these linkages assumes even greater importance.

II. RECOMMENDATIONS AND PROPOSALS FOR ACTION

33. The following recommendations and proposals for action have been designed to focus development effort on addressing the major issues in the infrastructure sector. While the main responsibility for action will rest with the countries of the region, there is an important role for subregional and regional organizations in supporting initiatives and facilitating implementation through closer inter-agency cooperation. While the majority of the recommendations apply to all countries of the region, it is recognized that there will be exceptions.

A. Action at the country level

Recommendation 1. Upgrading information as a basic resource for infrastructure planning

Adequate information and accurate data are a prerequisite to the planning process, yet many countries have considerable problems in consolidating information on infrastructure facilities and future requirements in a consistent and coherent form. Infrastructure planning and construction have a long lead time which often extends beyond the duration of national five-year plans. There is need for more information and data on available infrastructure, its condition, the underlying demand, including the consumption of products and services, and the cost of providing these to the user community. With this valuable resource, Governments will be in a stronger position to formulate effective infrastructure development plans with long-term investment horizons and to have the requisite information to evaluate and deploy tools that will encourage more efficient consumption of the limited infrastructure output currently available.

Proposals for action

- (1) Develop consistent and coherent infrastructure information resources on current capital stock, demand and the key indicators which can be employed in quantifying critical shortfalls in infrastructure capacity.
- (2) Within each of the sectors using significant infrastructural facilities, identify and quantify the costs, both fixed and variable, of providing services and outputs to the user community.
- (3) On the basis of the data and information referred to in (1) and (2) above, develop longer-term, perhaps rolling, investment plans which can provide a more effective framework for the prioritization of project implementation and investment planning.

Recommendation 2. Measures aimed at modifying consumption patterns

It is evident that the products and services generated by the available and already overstretched infrastructure are being consumed inefficiently or even wasted. It is the role of Governments to implement creative approaches to enlighten the user community and encourage it to make decisions which will, directly or indirectly, have a beneficial impact on the consumption of available and future output. Governments are slowly taking issues of pricing out of the political arena; however, for the majority of public sector agencies, operating subsidies and cross-subsidization still prevail. Decisions in this area, taken from a position of awareness, can lead to improved consumption patterns; however, the resulting distortion in the market can and often does lead to inappropriate decision-making by the user community.

Proposals for action

- (4) Governments should review the application of subsidies and price-setting tools to encourage efficient usage of limited outputs and resources. These provide the clearest of signals to users, large and small, of the value of the output consumed and assist them in making decisions which will conform closely to the well-being of the country.
- (5) Public awareness campaigns and marketing can be important vehicles for the Government in creating an informed community which will be more prepared to adjust consumption patterns in line with resource availability. These can be employed beneficially at all times and not just at times of crisis, such as in periods of drought (when they can be seen to be effective), to reduce wasteful consumption and even increase reserves.
- (6) As a final resort, Governments may employ legislation, regulation or rationing to reduce consumption; however, with such firm action, which may be difficult to reverse and which can create shadow markets, there will always be a danger that the development process will be stifled.

Recommendation 3. Reform of the administration of infrastructure facilities

The creation of an effective decision-making framework for infrastructure development and operation can increase output efficiency in the infrastructure sector significantly. The administration of any country is slow to change. This is particularly true of the developing, and particularly the least developed countries of the region; yet the rapid pace of change in technology, economic climate and especially usage patterns requires a responsive environment. In addition, infrastructure

per se transcends traditional ministerial boundaries. Bureaucracy, lack of delegation, unclear objectives and conflicting policies all have an adverse impact on the efficiency with which the infrastructure sector can perform. While there are some areas in which central government is required to retain a conspicuous controlling role, for example, coordination, policy planning, strategic considerations, environmental regulation and social well-being, there is an overwhelmingly strong case for the delegation of authority, decision-making and responsibility to lower levels which are involved more intimately in the operation of infrastructure assets.

Proposals for action

- (7) Central government administrative controls and procedures should be reviewed and streamlined. Attention should be given to the interaction among, and increased coordination of infrastructure falling under the responsibility of different ministries which may complement each other or compete for users, but certainly compete for resources. Improved land-use planning will be an important component of this activity. A more responsive framework for decision-making and the delegation of authority to competent agencies and organizations should be encouraged within a coordinated plan of action.
- (8) Governments should guide and assist the various agencies and organizations involved in infrastructure to evaluate their internal administrative practices and procedures with a view to identifying areas in which more commercial management practices could be associated with appropriate levels of autonomy.
- (9) Consideration should be given to the metamorphosis of government agencies, or elements thereof, through a process of corporatization (by the transfer of assets and authority to a pseudo-private organization under public control) with internal responsibilities that mirror the private sector in terms of clearly defined financial and operational objectives along with decision-making authority, thereby removing some of the administrative inefficiency. Corporatization can be used as a stepping-stone to privatization.

Recommendation 4. Ensuring that the existing infrastructure is capable of producing design output

A wide range of examples exist of infrastructure projects which are now in operation at "maximum output" yet which fail to achieve a production capacity that is even close to the expectations in the original design. The reasons for this include outdated

management systems, inefficient operational practices and inadequate maintenance. Within the infrastructure sector, Governments and lending agencies tend to give priority to capital development. Thus the already inadequate budgets for investment in existing facilities are spread ever more thinly over an increasingly wider asset base.

Proposals for action

- (10) Modern, performance-oriented management procedures should be instituted and supported by appropriate management reporting systems. They should include fully integrated quantified operational and financial objectives agreed between management and their controlling body. Full consideration should be given to computerization of the organization, and particularly information systems, to ensure timely reporting to support management in decision-making. Where management skills are weak or where transfer of technology is seen to be particularly beneficial, a management contract may provide the opportunity for increased efficiency.
- (11) Operational practices should be reviewed. Particular attention should be given to areas where significant investment has been made, or is contemplated, in new technology and mechanization but where old chains of command, practices and manning levels remain and anticipated productivity gains have not materialized.
- (12) Better planned, managed and financed maintenance will enhance the output of the infrastructure sector and increase the economic life of projects, reducing the costs of both product and new infrastructure demand. Adequate budgets should be provided for maintenance tasks and, where necessary, special hard currency funds should be released expeditiously. In appropriate circumstances, funds should be set aside for the modernization of existing infrastructure and facilities as a priority over new construction.

Recommendation 5. Effective planning, prioritization and investment in quality infrastructure projects

National planning agencies should be strengthened, more effective modalities institutionalized and tools provided which will establish clear and quantified guidance to assist in prioritizing projects and exposing the cost of politicizing investment decisions. It is well recognized that for the majority of disadvantaged countries there will remain a shortfall in funding for increased infrastructure capacity for at least the next few years. It is therefore vital that investment

is made in the most deserving projects. While it is recognized that politics will always be a factor in the investment decision-making process, every effort must be made to demonstrate clearly benefit and cost flows through the project cycle in the hope that, presented with adequate information, decision makers will make the right choice and donors will be more confident that funds are being used judiciously.

Proposals for action

- (13) Comprehensive information and data, in a consistent form, should be made available on all competing projects. This will provide the basis for effective prioritization of investment timing, perhaps with a distinction between projects which can be identified as being funded preferably by the public and private sectors, depending on projected economic and financial returns.
- (14) Arrangements should be institutionalized which will create "transparency" in the investment decision-making process with the aim of minimizing irregularities and abnormalities. Mechanisms may include providing added strength to national planning agencies to assist them in minimizing political interference in the planning process and public debate of investment plans to minimize the potential for investment leakage.
- (15) Computer tools should be developed and used to assist in the planning process. Such tools can assist in the financial and economic evaluation of benefits by providing a clear and comprehensive logical progression from projection through costs to benefits. They will also assist in the management and control of consultants by making assumptions more transparent and options more easily tested and enabling project data to be updated as situations change.

Recommendation 6. Mobilization and allocation of public sector resources

Attention needs to be devoted to the general question of public sector resource mobilization and the specific issues of the allocation of capital (or development) budget to the infrastructure subsectors; in addition, self-financing policies, including cost-saving measures, should be implemented. The magnitude of the infrastructure financing task, coupled with various institutional and policy considerations which demand a phased approach to implementation, largely dictate that a substantial proportion of infrastructure finance will continue to be derived from the public sector, at least in the medium term. The allocation of public sector resources to the infrastructure subsectors is inadequate and reveals no discernible pattern as regards optimum share or level. However, there is evidence and a broad

consensus to show that allocations are inadequate. It is also noted that far from being a source of non-tax revenue, a large number of these undertakings have been a net drain on the government budget. An examination of resource mobilization in countries of the region indicates that there is considerable room for increasing public sector revenue through widening and deepening the tax base.

Proposals for action

- (16) Governments should devise financial and economic guidelines for the infrastructure subsectors. Such guidelines would incorporate a general principle that prices reflect the costs of providing the subsector's services and facilities. The guidelines should include a clear definition of the costs. Where, for social or other reasons, this is deemed not to be possible, the relevant costs and consumers should be clearly identified.
- (17) Governments should review carefully the level of funds allocated to the infrastructure sectors, including the mechanism by which the funds are allocated, and ensure that at least minimum investment resources are available to cover operation and maintenance costs.
- (18) Governments should review the means by which domestic resources are mobilized and, where appropriate, implement measures aimed at increasing such mobilization. In the area of fiscal policy, instruments can be better designed, innovations introduced and measures taken to reduce tax evasion. In the financial markets, there is scope for introducing or expanding the accessibility of financial institutions and introducing new financial instruments.

Recommendation 7. Private sector participation

The potential for increasing the role of the private sector in infrastructure financing, management, operations and risk-sharing should be explored so that it can make a greater contribution to national progress within the overall context of infrastructure development. The private sector is seen in many countries as the engine which has driven economic growth. It has access to financial resources, technical expertise and, sometimes, markets which the public sector alone may find difficult to exploit. It is claimed that under the right circumstances the private sector usually exhibits higher levels of productivity and cost efficiency than the public sector. With privatization of the existing infrastructure, Governments may also be able to raise capital, for priority projects, through the sale of assets.

Proposals for action

- (19) Governments should identify the areas in which the private sector can participate beneficially in infrastructure investment, management and

operations. Considerations will be founded on delineation of the particular problems that private sector participation is expected to overcome and the issues that will be raised if the policy is implemented. Factors such as national interests, the need for and level of retained control, labour reaction, projected financial returns on projects, the sharing of risks and the investment burden will need to be taken into account.

- (20) Governments should create a climate that will attract the private sector to participate in infrastructure investment. This will involve, but not be restricted to, providing a legislative framework that safeguards national interests while providing the opportunity for flexible and responsive decision-making, and supports private ownership. Appropriate mechanisms should be enabled to allow discretionary redeployment of accrued profits and benefits.
- (21) Governments and agencies should provide comprehensive details of projects for potential private sector financing, including projected returns on investment, both financial and economic. The availability of such information provides the basis for constructive dialogue between the public and the private sector.
- (22) To create additional confidence, the public sector should take action to decrease the level of risk that the private sector will have to shoulder. In particular, within a project cycle, a process of pre-qualification of a reasonable number of competent firms should be adopted, thus minimizing waste and demonstrating government commitment.
- (23) Governments should consider alternative forms of private sector participation which, under given circumstances and retained level of control, will provide alternative benefits, for example, in terms of technology transfer (management contract and long-term leasing), efficiency and reduced cost (corporatization and privatization), minimizing investment and government involvement (build-operate-transfer) and recovering sunk investments (privatization and the sale of assets).

Recommendation 8. Equity and welfare — the essential tasks of government and workers in creating the framework

Labour, government and management need to work together in resolving issues which will arise if improvements in productivity are to be attained and traditional labour markets reduced to a level that is in line with real demand. An underlying theme in the move towards economic development is increased

efficiency in production, which will lead to reduced employment opportunities in the traditional public sector enterprises. Many Governments are at present implementing policies within which State agencies are strongly encouraged to create employment and provide social welfare facilities, such as schools and hospitals. Yet this policy will have to change if action is taken to create additional capacity efficiently, whether infrastructure and operations are retained within the public domain or, in part, turned over to the private sector. Alternative forms of economic participation should be encouraged, including self-employment and entrepreneurship.

Proposals for action

- (24) Labour should be involved as a full partner with government and management in the planning process. Given an equitable position, with appropriate safeguards and benefits, labour can play a vital role in promoting the development of infrastructure.
- (25) Labour, government and management should together identify the real employment requirements of existing and planned infrastructure. Action should be taken to provide the opportunity for labour and management to move to alternative, non-traditional, employment through mechanisms such as two or more years' leave of absence with the security of guaranteed re-employment if necessary, or even the provision of grants for the establishment of small-scale enterprises.
- (26) As the infrastructure sector becomes more efficient, effective social welfare schemes should be set in place which will respond to the needs of the less fortunate, who may not have employment opportunities or access to State agency schooling and hospitals.

Recommendation 9. Human resources development

Effective human resources development strategies and programmes to upgrade skills should be fully integrated into the infrastructure development process. The planning, design, operation and maintenance of infrastructure facilities all rely equally on the appropriate skills being available. Investment in human resources development is recognized as one of the fundamental and cost-effective factors contributing to economic growth. Additional resources should be focused on improving educational and training opportunities which will enhance capability in the infrastructure sector and can provide the opportunity for mobility of labour, thereby harnessing the strength of the often abundant human resources. In the short term, opportunities to explore alternative sources of expertise to strengthen capability and create the opportunity for technology transfer may be employed.

Proposals for action

- (27) Guidelines for the integration of human resources development strategies into infrastructure development and their financing should be developed and implemented. Such guidelines should not just focus on the allocation of capital budget but encompass the continuing need for quality training and retraining to ensure that the needed skills are in place.
- (28) A human resources development department should be established in each of the infrastructure subsectors with direct reporting to the highest authority in order better to develop and utilize the organization's personnel. The department should deal with human resources planning, career development and organizational development.
- (29) The capability and capacity of educational institutions should be enhanced and reoriented to match the requirements in the infrastructure sector more effectively. Qualified instructors should be recruited, adequate facilities and equipment provided and institutes encouraged to develop curricula and deliver relevant courses, including those designed to prepare personnel for self-employment.

Recommendation 10. Environmental impact of infrastructure development

Infrastructure development can have a massive and irreversibly detrimental impact on the environment. It is the responsibility of Governments and their agencies to ensure that, irrespective of the scale of infrastructure projects, the impact on the environment is minimized. With growing competition and the search for least-cost production capability in the developing countries, appropriate environmental guidelines and standards must be established and monitored. These standards should be applied conscientiously in all project phases, including design, construction, operation and the residual impact. More effective modalities need to be put in place which can create the opportunity for the evaluation of the growing number of projects whose impact transcends national boundaries.

Proposals for action

- (30) Environmental impact assessment should be mandatory for all projects in the infrastructure sector. Governments should review current environmental guidelines and standards.
- (31) Adequate maintenance and improved management of existing infrastructure, which has already had an impact on the environment, should be given high priority as a means of extending economic life and minimizing the need for new building.

- (32) The impact of existing infrastructure on the environment should be evaluated and, where appropriate, operating systems upgraded through the adoption of more environmentally friendly technologies.

Recommendation 11. Poverty alleviation, rural areas and disadvantaged population groups

The integration, with infrastructure, of effective regional policies will provide the opportunity for improved physical access while creating a wealthier community. The development of infrastructure can be equated directly with economic development and, potentially, job creation. In many countries the rural population is a significant part of the community, but has only restricted access to infrastructure services, which limits the role rural people can play in economic development and effectively prevents them from receiving basic services. The infrastructure sector has failed to explore the possibilities for involving disadvantaged population groups, particularly in rural areas where there exists considerable potential for their recruitment.

Proposals for action

- (33) Governments should review regional planning policies and infrastructure sector employment potential which will create the opportunity for reducing the concentration of poverty.
- (34) Special attention should be given to the development of infrastructure that will enhance the opportunity of the rural population to contribute to economic growth.
- (35) Policies should be developed to encourage agencies and organizations to give serious consideration to the involvement of women and disadvantaged population groups and thereby explore alternative sources of expertise and broaden the base of the workforce.

Recommendation 12. Infrastructure needs of the least developed, land-locked, and island developing countries and the disadvantaged economies in transition

In the least developed, land-locked, and island developing countries and the disadvantaged economies in transition, special and significant problems exist which intensify the difficulties in providing adequate and efficient infrastructure. Owing to lack of investor confidence in some cases, many of these countries have to rely on ODA to underwrite investment in infrastructure. However, ODA is largely allocated on an annual basis, leading to annual fluctuations; sometimes the major focus is on capital investment,

along with tied aid, rather than maintenance. In addition, some donors have started to question the effectiveness of ODA in countries where it would appear that it is having limited impact on economic progress. At the very basic level, there is a desperate need for spare parts, maintenance equipment and materials: this is only partly due to currency exchange regulations.

Proposals for action

- (36) The least developed, land-locked, and island developing countries and the disadvantaged economies in transition can increase the confidence of donors by ensuring that investment resources, including ODA, are devoted to projects that contribute directly to increasing the pace of economic development. The implementation of administrative and management improvements, as set out in previous recommendations, should be of high priority in this process.
- (37) Long-term strategic plans leading to sustainable economic development, with details of related national initiatives aimed at increasing efficiency, should be developed to provide a framework for assistance.
- (38) Immediate attention should be given to the maintenance and rehabilitation of existing infrastructure so that it can perform the basic functions for which it was originally designed. Where necessary, special arrangements should be put in place for the expeditious release of the hard currency funds required for spare parts and materials.
- (39) Policies designed to create "development concentration zones" should be considered with the objective of attracting investment. Industrial development zones, industrial estates and export processing zones have already been commissioned successfully in the region to provide enhanced levels of infrastructure and services to appropriate investors. This approach also allows Governments to be selective in focusing investment and job-creation opportunities so as to benefit specific communities.
- (40) Approaches to provide improved access and transit arrangements, especially for land-locked countries, should be integrated into national infrastructure planning. Particular attention should be given to the facilities required at border-crossings.

B. Action at the regional level

34. While action at the country level is the responsibility of Governments, it can be facilitated by

action at the regional level. In addition, regional action can be cost-effective in assisting countries of the region in achieving their development objectives in terms of satisfactory levels of infrastructure development and performance. Action in support of national initiatives may include the provision of technical assistance, the development, at the regional level, of models and tools which may be applied in a number of countries at the national or project level, and the production and dissemination of training materials; regional research and development, including comparative studies which could form the basis of exchanges of experience and know-how; and coordination, cooperation and facilitation of development activities which will become more important as the impact of infrastructure projects increasingly transcends national boundaries. In particular, special focus will be required on the special training, information and other needs of those countries with the lowest levels of development.

35. Specific areas where regional cooperation can play a supportive or even catalytic role in development include the following:

Information/data collation and resource. To provide the basis for regional cooperation, technical cooperation among developing countries (TCDC), and research, information and data should be collected on a regional basis. This can assist in the identification of similar types of projects where information exchanges may be particularly useful, for example on technology, contract formulation and costs. In addition, details of educational and training opportunities across the region could be disseminated.

Comparative studies. Countries of the region are building valuable experience in the implementation of a wide range of initiatives, including public sector reform, implementation of improved management procedures, corporatization, joint ventures, privatization and development of industrial estates, which could provide a valuable resource for the region if properly evaluated and, where necessary, transformed into generalized guidelines.

Technical assistance. For all countries, and particularly the disadvantaged among them, there is need for technical assistance at all levels to support the infrastructure development process. Examples include advice on the drafting of terms of reference, project evaluation, improving management procedures and information systems, maintenance of infrastructure, procurement issues and computerization.

Development and dissemination of models and tools. Purpose-designed models, tools and software to assist Governments and agencies in undertaking their activities more efficiently can be cost-effective if developed at the regional level. Examples could include forecasting models which, taking into account competing and complementary developments across the region, could predict demand and investment requirements;

financial and economic planning models designed to assist in the evaluation of investment projects; and management software, for which there is general demand, such as in the area of asset maintenance and control.

Identification of regionally significant projects. The impact of many significant infrastructure projects is now transcending regional boundaries. A perception of potential benefits and perspectives of the sharing of facilities, aligning routes and equitable cooperative arrangements between countries or subregions can be obtained at the regional level. Many examples exist in the railway (Trans-Asian Railway), road (Asian Highway), power, communications, water and port sectors, where regional-level involvement may be essential to effective planning. Such an approach could also strengthen the opportunities for growth triangles.

Facilitation. Facilitation at border-crossings can provide the opportunity for minimizing delays, costs and demand for infrastructure. With the growth of trade, the development of freight forwarding and the introduction of multimodal transport, all of which have an important international ingredient, inputs at the regional level are becoming increasingly important.

Human resources development. Training materials can be developed and delivered through training-of-trainer activities, seminars and workshops, as well as being distributed to national institutions. Networking of training and research institutions, initiated at the regional level, can complement and supplement capability. Action could also be taken to initiate intercountry exchanges of experts to bring practical knowledge and experience of the development process and provide on-the-job training.

Involvement of subregional organizations. Subregional organizations have an increasingly vital role to play within the infrastructure development context. They already provide a forum for consultation at the policy and technical levels, including coverage of infrastructure issues. This activity can usefully be extended to enhance cooperation among Governments, both mutually and through regional initiatives which can lead to cross-subregional collaboration.

Meetings of chief executives. Regional meetings should be held, at the chief executive level, in which discussions of topical issues should be initiated to assist in fostering a climate for closer collaboration and problem-solving through the sharing of experience. Examples of issues which would be covered in such meetings include pricing policy, technology developments, human resources development and new initiatives.

Inter-agency cooperation. Opportunities for increased collaboration between regional agencies, including ESCAP and ADB, should be enhanced through joint identification and, where appropriate,

carrying out studies, projects and activities. The implementation of phase II (1992-1996) of the Transport and Communications Decade for Asia and the Pacific has already demonstrated the potential benefits of closer collaboration in focusing development assistance and minimizing the duplication of activities.

III. IMPLEMENTATION, PRIORITIES AND TIME-FRAME

Implementation

36. Just as coordination and cooperation will be key factors in the effective implementation of plans and programmes at the national level in overcoming shortfalls in the infrastructure sector, they are particularly necessary among agencies and organizations, both within and outside the United Nations system, that are active in providing assistance to countries.

Priorities

37. The action plan promotes an integrated approach to addressing the issues of infrastructure development. Its 12 recommendations, 40 proposals for action at the country level and supporting regional action are, however, not comprehensive: they represent priority activities which together will significantly enhance the performance of the infrastructure sector. They will also reduce the investment "gap" by increasing output from existing infrastructure and demonstrating to potential donors the earnest efforts being made to create the right investment climate. In developing the action plan, special consideration has been given to the maximum utilization of available regional resources for the benefit of capacity-building.

38. Further delineation of these priorities within the overall framework of the action plan will follow the formulation of specific programmes and projects for implementation. Detailed priority-setting at the national level, and perhaps with regional assistance, will depend on a critical perception of the major constraints and shortcomings within the prevailing political and social context. Not all the recommendations will apply equally to all countries.

Time-frame

39. Preferably, action in implementation of the plan should begin immediately. It is, however, recognized that the proposed removal of the deeply rooted institutional obstacles to infrastructure development is not just a technical issue but involves a re-education process that will touch upon many sensitive areas. In addition, the lead time and scale of infrastructure projects dictate that, for the programme to be implemented in full, the concerted, coordinated efforts of countries and regional institutions will have to be brought to bear over the coming years through and beyond the new century.

50/3. Participatory human settlements development³

The Economic and Social Commission for Asia and the Pacific,

Recalling its resolution 268 (XLIV) of 20 April 1988 on shelter strategies towards the year 2000,

Recognizing the role of the Governments as facilitators of a comprehensive shelter delivery system with multisectoral participation, including the promotion of housing as a means of social intervention and a catalyst for economic activities and solution of problems of the low-income groups,

Convinced that sustainable development policies must, inter alia, address integrated concerns of the environment, including energy, water resources management and waste disposal, and human settlements,

Realizing that human settlements policies must be broad-based and form an integral part of development programmes and macroeconomic policies and that these programmes and policies have deep social implications,

1. *Adopts the Regional Action Plan on Urbanization prepared by the Ministerial Conference on Urbanization in Asia and the Pacific, held in Bangkok on 1 and 2 November 1993, as a blueprint for urban development and improved urban management;*

2. *Urges members and associate members to encourage the active involvement of non-governmental and community-based organizations in the policy and strategy formulation process and in the implementation of shelter projects;*

3. *Further urges members and associate members to establish national- and local-level urban forums composed of representatives from the relevant departments and different levels of government, as well as the private sector, community associations and non-governmental organizations, to institutionalize the process of cooperation and collaboration in the formulation of urban action plans;*

4. *Calls upon members and associate members to involve all actors concerned with human settlements issues in their preparations for the United Nations Conference on Human Settlements (Habitat II) to be convened in Istanbul, Turkey in 1996;*

5. *Requests members and associate members to explore the possibility of including, as part of their respective educational curricula, the subject of human settlements;*

6. *Expresses support for:*

(a) Increased responsibilities to local governments in infrastructure construction and maintenance;

³ See para. 328 above.