

# INTRODUCTION

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## 1. Background to the theme study

In a number of ESCAP member countries, power brown-outs or black-outs, water shortages, traffic congestion in major cities, limited road access to provincial capitals at certain times of the year, long waiting times at major ports, and inadequate telecommunications services, including long waiting lists for telephones, can be observed. These are all symptoms of the inadequate supply or management of infrastructure facilities. They are also manifestations of more deeply rooted problems and have a direct impact on domestic and international trade which in turn affect a country's growth and the welfare of its citizens. They form part of a range of obstacles to a country's growth and trade which includes such items as an inadequate trade financing system, excessive costs of financing, complicated distribution systems with excessive incidental fees, inconsistent exchange rate policies, bureaucracy and red tape<sup>1</sup>.

Many of the causes of these problems and obstacles can be directly traced to the Government's management of the macroeconomy, the means by which the public sector is administered, lack of coordination between, and overlapping responsibilities of, different ministries and agencies and the efficiency with which government agencies (including public enterprises) operate, both at the planning and day-to-day operational level.

Where the principal contributory cause of the above observations is the inadequate supply of infrastructure, many Governments are experiencing difficulty in finding or allocating adequate resources to undertake the necessary investment.

With these financial constraints as well as institutional weaknesses, many Governments are now pursuing the development of infrastructure projects by private sector participation.

Partially in response to some of these observations, the Commission at its forty-ninth session, held in Bangkok in April 1993, decided that the theme for its fiftieth session should be "Infrastructure development as key to economic growth and regional economic cooperation". The Commission's directive was as follows:

"The Commission observed that a major impediment to economic growth that was emerging or intensifying in most developing countries of the region was the deficiency in infrastructure (power supply, telecommunications; and transport, including roads, rural roads, railways and ports). It stressed that if that problem could be solved trade and investment would be stimulated and regional economic cooperation enhanced. The Commission, accordingly, decided that the theme topic for the fiftieth session of the Commission should be "Infrastructure development as key to economic growth and regional economic cooperation". The Commission directed that in its study on the theme topic the secretariat should, *inter alia*, focus on an assessment of the magnitude of the deficiency in the physical infrastructure facilities in the developing countries, as well as in the disadvantaged economies in transition of the region, on the resources required for addressing that deficiency and on the measures needed to attract private investment, both domestic and foreign, for establishing infrastructure facilities. The successful experience of countries in the region in attracting private investment in infrastructure development facilities, as well as the policies needed for efficient management of infrastructure facilities, should also be utilized. In the promotion of increased investment for infrastructure building, the sustainability of development should be taken into account. The study should also focus on areas in which regional cooperation could facilitate the establishment of infrastructure facilities."<sup>2</sup>

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<sup>1</sup> ESCAP/United Nations Development Programme, *Empirical Study of Trade and Investment within the Asia-Pacific Region* (ST/ESCAP/1184), 1992.

<sup>2</sup> ESCAP, *Annual Report* (E/1993/36, E/ESCAP/927), para 533.



## 2. The scope of the infrastructure included in the study

The *Economic and Social Survey of Asia and the Pacific 1990*, in part two, "Infrastructure development in the developing ESCAP region: needs, issues and policy options", made distinctions between physical, social and institutional infrastructure. Physical infrastructure included the energy supply network, transport and communications, and agricultural infrastructure. Social infrastructure included health, education, water supply and housing. Institutional infrastructure included financial institutions, management of public enterprises, management of regulatory mechanisms and non-governmental institutions. It was recognized that although there was considerable overlap between these types of infrastructure, the categorization was made on the basis of the primary objective for which the infrastructure was intended. In the case of physical infrastructure it was largely used as an input in the production process.

The Commission's directive for its fiftieth session identified physical infrastructure as the main area of focus, while specifically mentioning power supply, telecommunications, and transport, such as roads (including rural roads), railways and ports. This study adopts the 1990 Survey definition of physical infrastructure, being that required for the production process. The sectors considered therefore include the following:

- (a) Power supply (generation and distribution);
- (b) Water supply and waste water treatment;
- (c) Telecommunications;
- (d) Transport (airports, inland waterways, ports, railways and roads).

In terms of water supply the study covers domestic water usage, waste water and agricultural water supply, in addition to water used in the production

process. This approach has been followed because common reservoir sources and delivery systems are used for both domestic and industrial water usage. It would not be meaningful to address water supply infrastructure requirements and development only in terms of usage in productive processes. There can also be a hydroelectric power dimension to water supply development, and vice versa.

## 3. Organization of the report

This study is divided into six chapters. Chapter I investigates the demand for financial resources by assessing the magnitude of the deficiency in the physical infrastructure facilities and the resources required for addressing that deficiency. Chapter II investigates the supply of financial resources by looking at the domestic and foreign resources available. The principal conclusions of chapters I and II are that the financing requirement is enormous and it is unlikely that the financial resources required will be available. There is, however, considerable scope to reduce the financing requirement through more efficient management of infrastructure facilities. In this respect, chapter III of the study looks into the management aspects of all of the infrastructure subsectors considered in chapter I (with the exception of airports).

Chapter IV considers infrastructure investment from the private sector's perspective along with the modes of investment and the measures for attracting private sector participation. Chapter V outlines the important role that regional cooperation can play in the development of the region's infrastructure.

The final chapter collects together the main issues arising in both this study and part two of the 1990 Survey "Infrastructure development in the developing ESCAP region: needs, issues and policy options". The chapter also provides a set of recommendations at the country and subregional/regional level.