12. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary, conclusions and recommendations of the report. It summarizes the rationale of the study and the approach adopted in the analysis. The conclusions describe the findings of the study. Recommendations are made for implementation procedure of the new concept of the multistage ESIA process.

12.1 Current state of environment and status of EIA implementation in the ESCAP region

This study reviews the available reports and surveys, including three recently conducted studies by ESCAP, and analyses the road-development-related impacts on the environment that have taken place in the ESCAP region. The following observations have been made:

- While there exist various forms of adverse impacts on the natural environment in the region, the negative effects of road development on the social environment are also highly significant. Undesirable social consequences in terms of health, safety, economic well being, security, community cohesiveness, social values, and cultural heritage have been observed. In the ESCAP region, the proportion of such adverse social consequences is no less than that of the impacts on the natural environment.

- Despite the laws and regulations enacted in various ESCAP member countries, the state of EIA implementation in road projects was unsatisfactory in the region as a whole. The roles of agencies responsible were not well defined, resulting in a severe lack of coordination and monitoring. EIA implementation tended to be cursory and ad hoc with no continuity and follow-up. Compared with developed countries, there was relatively little commitment from the governments and public agencies of the region.

- Of those road projects in the ESCAP region that some degree of EIA implementation was made, the emphasis has been concentrated on engineering details during the design and construction phases. EIA requirements were not considered in every stage of the road development cycle. The EIA process was often initiated only after the master plan had been finalized, and ended together with the construction phase of the road project. Late initiation of the EIA process has greatly limited its effectiveness and benefits, while not carrying out post-construction monitoring and evaluation was equivalent to ignoring the long-term environmental and social impacts which have proven to have significant consequences in the region.

- The degree of environmental awareness was low among the highway professionals, officials of highway authorities and related government agencies. EIA requirements were not considered to be of primary importance in road project planning, design and construction. Most government officials, consultants and contractors took EIA procedures and requirements as merely a formality to be executed for project approval and work endorsement.

- The quality of EIA reports for road projects in the ESCAP region was unsatisfactory. This could be attributed to the lack of qualified professionals and the general absence of relevant environmental and social data. There were simply not enough trained and qualified professionals and technical personnel to support the
implementation of EIA for road projects. Historical and planning data were incomplete, and records of completed projects were often not available.

- None of the countries in the ESCAP region has a comprehensive set of guidelines for highway and environmental agencies to effectively perform the EIA process. Most highway or environmental authorities have adopted directly rules and guidelines used in developed countries. This has resulted in difficulties in implementation because of differences in technology and practices, unique local conditions, as well as political and social environments.

- Public participation in the EIA process of road projects has been very low in the ESCAP region. Very few, if any, road projects in the region were known to have seriously incorporated public opinions and input into the planning and design of road projects. The direct reasons for the insignificant public involvement were (a) the lack of interest on the part of the authorities and the officials in charge, (b) the shortage of funds allocated, and (c) the mechanisms and formats of public participation were inappropriate and ineffective.

In general, the overall situation of EIA implementation in the ESCAP region is unsatisfactory. Most ESCAP member countries do not possess the required institutional framework and expertise to implement EIA fully and effectively. The relatively low level of environmental awareness and the lack of commitment of decision makers, planners and government officials provide further obstacles to the implementation of EIA for road development projects.

### 12.2 Orientation of the analysis

The main focus of the study is to address the EIA implementation issues encountered in the ESCAP member countries, analyze them and propose ways and means by which the problems could be overcome to achieve an effective EIA implementation in the ESCAP region. Having examined the major EIA implementation weaknesses and problems observed in various member countries of ESCAP, as has been summarized in section 12.1, it is apparent that many of the problems encountered in EIA implementation in the ESCAP region are rather different from those in industrialized nations. Procedures that work in industrialized nations have been shown to be ineffective in many ESCAP member countries. New concepts and procedures need to be introduced in order to address the weaknesses and problems identified.

The study proceeds to single out the critical areas in need of improvement, and proposes measures by which improvement in EIA implementation could be achieved. The following five main areas for improvement have been identified:

1. There is a need for equal emphasis on the social and environmental impacts of road development projects. To correct the current tendency within the region to focus only on the engineering aspects of environmental impacts, it is proposed that the term EIA (environmental impact assessment) be replaced by ESIA (environmental and social impact assessment), so that the deserved emphasis on social impacts will not be ignored in the impact assessment of road development projects.

2. There is a need for a multistage ESIA framework to ensure that appropriate environmental and social impact assessment is made at every phase of the entire road development cycle. It is important that ESIA is initiated early to be part of the
road project conception and planning stage. It is equally important that the ESIA process is continued beyond the end of road construction into the post-construction monitoring and evaluation phase.

(3) There is a need for practical guidelines tailored for local applications to be developed. The availability of appropriate guidelines helps to enhance the effectiveness of ESIA implementation locally. Well laid out guidelines ensure that proper procedures are followed and adequately applied to achieve the required results of acceptable quality.

(4) There is a need for an improved institutional framework and procedures. This is essential in tackling the various institutional problems highlighted in section 3. The legal framework must be properly set out to define the responsibility and accountability of various agencies and parties involved in the ESIA process. This will also pave the way for effective working procedures and coordination among different agencies.

(5) The level of public participation in the ESIA process in the ESCAP region is rather low and there is a need for a much higher level of public participation in order to achieve a sustainable road development programme. It is necessary to effectively address this issue from both the authority’s and the public’s perspective.

The analysis of the study is divided into two parts: Part one presents the concept of the multistage ESIA framework and Part two presents guidelines for the implementation of the multistage ESIA process. In Part one, the need to give equal emphasis to the natural and human environments is emphasized. The introduction of the ESIA concept ensures that this is achieved in a systematic fashion. The logical flow of the proposed ESIA process is presented in the context of the multistage framework. The following five stages of the ESIA process are defined:

- Environmental and social screening
- Initial environmental and social examination
- Environmental and social impact analysis
- Monitoring of environmental and social measures
- Post-construction environmental and social evaluation

Within the structure of the multistage ESIA framework, measures to overcome the various weaknesses and problems identified for the ESCAP region (see section 12.1) are proposed and elaborated. Special attention is devoted to the following aspects:

- Development of effective institutional infrastructure and legal framework
- Increase in the level of public participation
- Development and management of databases for ESIA
- Procedures in implementation and monitoring of ESIA

Part two of the report develops detailed guidelines, which provide additional details of the multistage ESIA concept. Guidelines are presented in line with the five-stage framework, providing guidance on the implementation of the ESIA process. For each stage of the ESIA process, the guidelines have been developed emphasizing the following aspects:

- Main tasks and activities to be undertaken
- Executing and approving authorities involved
- Roles and responsibilities of authorities, agencies and other parties involved
12.3 Conclusions and recommendations

This study has introduced two new concepts for the purpose of enhancing the effectiveness of EIA implementation in ESCAP member countries. The first is the adoption of the new term ESIA (environmental and social impact assessment) to replace the traditional term, EIA. It conveys the message that equal emphasis should be placed on the natural as well as the human environments in the ESIA process. The aim is to eliminate the misconception of many professionals and government officials in the region that the main concern of EIA is to mitigate the negative impacts of road projects on the natural environment. This report has provided sufficient evidence that ignoring the impacts on the human environment would lead to grave consequences that affect a large population base over an extended period.

The second concept introduced is the multistage framework for implementing the ESIA process. The analysis presented in this report has shown that a multistage ESIA framework would offer a workable mechanism to intimately incorporate the process of ESIA analysis into the road development cycle. By dividing the ESIA process into five stages, it is possible to logically link up the five ESIA stages with the different phases of the road development cycle. The scope of and activities in each of the five stages are clearly defined, and guidelines have also been established to offer guidance on how the activities in each stage should be conducted.

The multistage ESIA process offers a systematic approach to overcome most of the major problems currently encountered in many of the ESCAP member countries. It provides practical mechanisms to strengthen the legal framework, institutional coordination and professional accountability. Adhering to the multistage ESIA framework will ensure that the ESIA process will begin during the very early stage of the road-planning phase, thereby minimizing the chances of major planning “errors” in respect of the preservation of the natural and human environments. By following through the multistage ESIA process, one is also assured of continuity of ESIA implementation right to the post-construction evaluation and monitoring stage of road development.

An important feature of the multistage ESIA process is the emphasis on public participation in each stage of the process, right from the first stage at the beginning of the road development cycle. The lack of public participation is one of the most serious weaknesses of road development and EIA implementation in the ESCAP region. Application of the proposed multistage ESIA procedure will be an effective means to promote increased involvement of the general public, affected residents and businesses, consultants and professionals in the ESIA process in the ESCAP region.

Raising the general level of environmental and social awareness in the ESCAP region at large is another major issue of urgency. Implementation of the proposed multistage ESIA procedures in itself will be an enriching experience for the people involved in the process. It will go a long way in heightening the level of awareness of the need for ESIA. All the people involved, ranging from high level decision makers, government officials, professionals, to the general public will appreciate and benefit from exposure to the ESIA process.
As the concepts outlined in this report are new, some form of familiarization programme is required before even a trial implementation. A two-step familiarization programme is recommended. The first step of the programme should logically be one involving the decision makers and planners of the various ESCAP member countries. It would serve as a familiarization-cum-dialogue session to gather comments and feedback, and to seek endorsement on the proposed concepts. The second step involves country-level workshops targeting professionals and officers of prospective ESIA executing and authorizing agencies. Country-level workshops are necessary because the institutional structure, engineering practices, cultural and social values, as well as major ESIA issues vary from country to country. The emphasis of the ESIA process, including mitigation schemes and detailed implementation procedures, is likely to be different from one country to another. A country specific workshop tailored to the needs of the country concerned will serve well to develop a multistage ESIA framework to achieve the best results.