

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

**REPORT OF THE WORKING GROUP OF EXPERTS ON
THE TRANS-ASIAN RAILWAY NETWORK AND THE
ASIAN RAILWAY MASTER PLAN**

Moscow, 6 - 12 October 1982



UNITED NATIONS

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This report has been issued without formal editing.

1. Introduction

1.1 Background

A request to convene a panel of experts to initiate action towards the implementation of the Asian Railway Master Plan, including establishment of the norms and methodology to be adopted was voiced at the Intergovernmental Railway Group Meeting held in August/September 1980 and fully endorsed by the Commission at its 37th session which also noted that formulation of the Master Plan should be carried out in close correlation with the Trans-Asian Railway Network Project.

A formulated railway Master Plan would serve as a basis for integration of all railways of the region by conforming their stipulated plans for development and augmentation of capacities of the railway lines to uniform standards wherever feasible. It was felt that this task has to be accomplished on the basis of the anticipated volume of traffic, and the measures which were necessary to adjust the capacity of the lines to match the local situations would have to be identified. In determining these measures the standard of service required for the present as well as for a reasonably foreseeable future, both on quantitative and qualitative base would have to be assessed.

At the Intergovernmental Railway Group Meeting the Government of the USSR offered to host a meeting of a Working Group of Railway Experts on the Asian Railway Master Plan and the Trans-Asian Railway Network Projects with its contribution made through UNDP. Taking into account that the developing railways of ESCAP have specially emphasized the importance of the drawing up of the Asian Railway Master Plan at an early date, the USSR, at the fifth session of the Committee on Shipping, and Transport and Communications held in November 1981, proposed to convene the above meeting in 1982 together with the seminar-cum-study tour on railway track maintenance systems which had already been offered by the USSR to be held in 1982.

1.2 Organization of the meeting

The Meeting of Working Group of Experts on Trans-Asian Railway Network and Asian Railway Master Plan was held in Moscow combined with the Seminar-cum-study tour on railway track maintenance. The Seminar was held from 22nd September to 5th October and the meeting of Working Group followed the Seminar from 6 to 9 October 1982. The last day of 10 October was allocated for the adoption of the reports of the seminar and the meeting of Working Group and the closing session.

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The Meeting was attended by 15 experts from 11 countries namely Afghanistan, Bangladesh, China, India, Lao PDR, Malaysia, Nepal, Sri Lanka, Thailand, Viet Nam and USSR.

Two members of the ESCAP secretariat participated in the meeting to work as the secretariat to the meeting.

The Chief of Railway sector, Transport, Communications and Tourism Division of ESCAP expressed on behalf of the Executive Secretary of ESCAP his sincere appreciation to the Government of the USSR and UNDP for their assistance in holding the seminar and the expert meeting. He has of the opinion that the event was quite unique in its concept with combined the Seminar-cum-study tour on the railway track maintenance with the meeting of Working Group of Experts on the Asian Railway Master Plan and the Trans-Asian Railway Network as endorsed by the 38th session of the Commission. Those subjects treated by those Seminar and meeting were very much interrelated, as it is well-known to all people and these seminar and meeting should provide an excellent opportunity, therefore, to examine and discuss the topics in depth and in wider scope.

He draws the attention of the participants to the fact that Trans-Asian Railway Network Project and Asian Railway Master Plan are very significant projects and have always been supported by many member countries of ESCAP in its legislative meetings and that the importance of these projects exist in their great contribution to socio-economic and cultural integration of the countries of ESCAP region and also integration of ESCAP with Europe, Middle East, USSR and Africa.

He expected, through mutual exchange of views and discussion, to identify the major problems in developing and implementing these projects and to establish guide-lines including the defining of norms, scope of work and methodology for developing the Asian Railway Master Plan in close correlation with the Trans-Asian Railway Network Project.

Election of officers

Mr. R.P. Singh, Director Transportation, Ministry of Railways, India was unanimously elected Chairman. The Working Group formed itself into a Technical and Drafting Committee of the whole and the Chairman of the Meeting of the Working Group was elected Chairman of that Committee.

/Adoption

Adoption of the agenda

The Working Group adopted the following agenda:

1. Opening session
2. Election of officers
3. Adoption of the agenda
4. Presentation by the ESCAP secretariat of a background paper containing:
 - (a) the objectives of the projects
 - (b) progress of the projects
 - (c) outline of the European Railway Master-Plan, etc.
5. Presentation by each participating country a paper containing
 - (1) Existing situation of:
 - (a) railway network illustrated with maps and/or diagrams indicating main/trunk routes with their usage in percentage of their full line capacity;
 - (b) major bottlenecks of railway transport of the country;
 - (c) technical standards of:
 - (i) fixed and moving structure gauges diagram
 - (ii) brake systems
 - (iii) coupling systems (type, capacity height above rail level) etc.
 - (iv) permissible axle load, etc.
 - (v) improvement measures contemplated
 - (2) Outline of modernization/rehabilitation plan and perspective plan for railway transport development
 - (3) Outline of current and foreseeable situation of national and international railway traffic
 - (a) passenger transport: Volume and origin/destination wise
 - (b) freight transport: Volume, commoditywise and origin/destination wise
 - (c) commercial speeds: passenger trains and freight trains (average travelling speed)

- (4) Outline of current and foreseeable status of export/import including information on: (a) commoditywise, (b) origin/destination, (c) major transport mode, (d) annual growth rate, etc.
- (5) Expected impact of the development of the Trans-Asian Railway Network/Asian Railway Master Plan Projects on the country.
- (6) Suggestions for norms, methodology, scope of work to be adopted for drawing up the Asian Railway Master Plan.

6. Drafting of the report

7. Adoption of the report

2. Presentation of the country papers

First of all, the ESCAP secretariat presented a paper describing the objective and progress of these projects, which would serve as a background paper for participants and be useful for participants to initiate discussion on these projects. The ESCAP secretariat further presented a paper on the recent progress of European Railway Master Plan from which the concept of Asian Railway Master Plan originated. The methodology, norms and scope of work adopted by European Railway Master Plan is considered to be very suggestive in drawing up Asian Railway Master Plan.

Each participating country presented a country paper on its railway system describing the existing situation, development plan, traffic, expected impact of the projects on the country and suggestion for norms, methodology, scope of work to be adopted from drawing up the Asian Railway Master Plan.

The discussion among participants were mainly focussed on the impact of these projects on the countries and the suggestion of norms, methodology, scope of work to be adopted for drawing up the Asian Railway Master Plan. These discussion and observation are given in the next chapter.

3. Major discussions and observations related to the impact of the projects on the countries and suggestions for norms, methodology, scope of work to be adopted for drawing up the Asian Railway Master Plan

Major discussion and observation made by the experts are as follows:

3.1 Afghanistan

As a result of UNDP/ESCAP Co-operation with Afghanistan, the detail engineering of Afghan railway project was completed in 1978. But due to financial problems, the construction of this project was not carried out.

/Since

Since this project is extremely important for the international transportation, Afghanistan are requesting the UNDP/ESCAP and other international organizations to take steps for the construction of the project.

The new railway line thus constructed will form a part of Trans-Asian Railway Network and facilitate the transportation of goods and people on international route.

A proposal with regard to the alignment of the Trans-Asian Railway Network was presented by the expert from Afghanistan. That was railway route from Pakistan to Iran from Chaman to Mashhed via Kandahar, Herat, Islamcala. According to the opinion of Afghanistan, the route would provide not only a new alternative route additional to the direct railway between Pakistan and Iran via Zahedan and Kerman, but also give a route for more speedy construction, since the distance is nearly the same for both routes and the profile and layout of the route via Afghanistan seems to be much better than that via Zahedan and Kerman. In view of the smoother profile and layout of the proposed route, it would have also operational advantages.

3.2 Bangladesh

The experts from Bangladesh especially expressed the following observations:

Construction of the proposed line to bridge the missing link (Dohazari to Cox's Bazar with extension upto Gundum) and modernisation of the existing railway network in Bangladesh for operation of international traffic would require substantial investment cost in terms of foreign exchange which is considered almost preventive for a developing country like Bangladesh.

In view of this, Bangladesh experts requested:

- (1) international organizations for assistance in financing the construction of the proposed missing link, and
- (2) ESCAP to depute a suitable technical team to study and determine the exact volume of work required for its rehabilitation of track and bridges fit for the international traffic.

3.3. India

The expert from India presented his observation as follows:

The primary impediments affecting the Trans-Asian Railways project, which for the sake of convenience may be grouped as the 'First Bottleneck', are the missing links of railway lines, which presently preclude the possibility of through communication in the region.

In order to get the project firmly on the rails, it is felt that instead of allowing more years to roll by while waiting for the missing links to be constructed, the scheme should commence as a rail-cum-ship service providing inter-connection by sea route between the following points:

- (a) Calcutta/Chittagong to Kuala Lumpur/Singapore
- (b) Bombay to Abadan or
- (c) Karachi to Abadan (This will cover Delhi and Lahore also).

The proposed land-cum-sea route alternative has the added merit that the implementation of the project can be accelerated without waiting till the all-rail route finally gets commissioned. It must, however, be stressed that it is not the intention to keep in cold storage the objective of connecting the missing rail links. To achieve this eventual objective, ESCAP must continue endeavours to mobilize both expertise and resources from the member countries so that the all-rail route between Asia and Europe becomes operational as early as practicable in view of its manifold advantages.

The 'Second Bottleneck' is that the various Railway systems covered by the TAR have different gauges - the Standard gauge, the Broad Gauge and the Metre Gauge. The problem is, therefore, how to ensure smooth flow of traffic on such a multi-gauge system.

However, it can be overcome by:

- (a) actual transshipment as done on the Indian Railways;
or
- (b) by bogie changing of vehicles which would avoid physical transshipment;
or
- (c) utilization of container.

The real advantage of the TAR will be in the bulk transportation of freight over long distances.

/For freight

For freight traffic transported through sea-cum-land route, greater emphasis must be placed on containerized cargo, which will ensure shifting of I.S.O. containers from railway wagon to ship, or ship to wagon or between wagons on different gauges.

A fresh approach to the Trans Asian Railway project, which may be acceptable to all member countries, needs to be evolved. The basis of such an approach could be the following:

- (1) In the first phase it would be more realistic and pragmatic to commence a rail cum-sea service, as mentioned before.
- (2) In the next stage, the scope of the project may be widened by converting the TAR into an EAR (an Euro-Asian Rail) project.

There should be a network with two sectors which will connect:

- (a) Singapore to London via Delhi-Istanbul-Paris with possibilities of providing connections at either end with Indonesia, China and Japan. This may be called the Southern Sector.
- (b) Vladivostock to Madrid via Moscow-Paris with connections at either end to Japan and U.K. This may be called the Northern Sector of the EAR.

A development of the concept from TAR to EAR is being suggested only with a view to reorient the scheme to changing situations, and in order to make the project operationally more feasible and financially more viable. The TAR scheme has remained a concept only till now. It has to be recognized that trade between Asian countries alone will not be able to attract substantial traffic to make the project financially viable. The main trade and commerce is between the countries of Asia and Europe and USA. The Northern Sector of the EAR as proposed will make USSR, the biggest land-bridge between the different countries of Europe on one side and Japan, Philippines and Western coast of USA on the other side. Likewise on the Southern Sector, India could be the land-bridge between the countries of the West Asia, Afghanistan and Pakistan on one hand, and Bangladesh, Nepal, Burma, Malaysia and Thailand on the other.

3.4. Lao PDR

The expert from Lao PDR expressed his views as follows:

Lao People's Democratic Republic is a land locked country at present having no railway line at all. Up to now, transit of goods for import and export is done by highway through Viet Nam and Thailand. Taking into account the future economic development of the country, the country can not be content with this

/situation.

situation. It will be indispensable during the next years to open the country to the world by a direct railway link to the sea. Therefore, as a first step, the country plans to construct a railway line linking the country to a sea port and later on to the Trans-Asian Railway Network.

Based on the decision of the Government, feasibility studies, through in co-operation of ESCAP, have been done in 1978-1979 for four alternative routes, each of them following one of the alignment of the national highways No. 7, 8, 9 and 12. The Government of Lao PDR expressed the appreciation to ESCAP for the assistance which made it possible the Lao PDR to collect some knowledge for these projects. Unfortunately, due to limited financial resources, lack of competent technical manpower and material, these studies have not been continued as it ought to be.

Since there is a need for the land-locked country of Lao PDR to open sooner or later the door to the world by means of a railway network up to the sea, the expert requested the international organization, any interested countries for their financial and technical assistance in implementing this railway project.

3.5. Malaysia

The expert from Malaysia presented the following observations and recommendations.

At present Malayan Railway is running an International Express train from Kuala Lumpur to Bangkok in Thailand in conjunction with Royal State Railway of Thailand. This is to enable tourist to travel within these two cities cheaply and to enable them to see the scenery along the track. With the development of Trans-Asian Railway more tourist from all over Asia and Europe could travel by train to Malaysia cheaply. In these case the tourism industry will grow. The Trans-Asian Railway will develop a mass transportation at very economic price.

Goods can be transported by rail to/from the various country in bulk. For the long haul traffic it is cheaper to carry by rail. Due to the oil and energy crisis experience in the whole world bulk good is cheaper carried by rail than by any other transport.

The expert further presented the following recommendations with regard to the norms, methodology, scope of work for drawing up Asian Railway Master Plan.

1. The track is to be standardized to a meter gauge. Although Malayan Railway is proposing to change to Standard gauge track, this will only be implemented most probably in the year 2000.
2. Speed should be 120 Kmph. The present speed on Malayan Railway is 88 Kmph. Steps are taken to increase the speed to 120 Kmph. Malayan Railway is introducing a high speed passenger train.
3. The sleeper should be concrete. Malayan Railway is at present in the progress of changing to concrete sleeper. The track maintenance must be mechanised.
4. The wagon used should be of the cross-braced type.

3.6. Nepal

The expert from Nepal expressed his views as follows:

Feasibility study projects in current sixth five year plan for using electric traction to operate transport system in Nepal is already launched. In this connection feasible study for the railway system from BHAIRAHWA (Western part of Nepal) towards the eastern part of Nepal and between KATHMANDU (Capital of Nepal) and RAXAUL (Indian rail head) is being carried by foreign railway experts.

At present and foreseeable future Nepal needs following railway connections which will facilitate to have a link with Trans-Asian Railway Network.

In this context, ESCAP is requested to assist Nepal in the followings feasibility studied.

1. BHAIRAHWA (an industrial town situated in the western part of Nepal) should be connected with GORAKHPUR (India) by BROAD GAUGE. There is a meter gauge line from GORAKHPUR to NAUTANWA. NAUTANWA is about 8 kms far from the Indo-NEPAL border.
2. BIRGANJ (an industrial town as well as gateway of Nepal, situated in the middle zone) should be connected with MUZAFFARPUR (India) by BROAD GAUGE. There is a meter gauge line from MUZAFFARPUR to RAXAUL (INDO-NEPAL border)
3. BIRATNAGAR (an industrial town situated in eastern part of Nepal) should be connected with KATIHAR (India) by BROAD GAUGE. At present there is meter gauge line from KATIHAR to JOGABANI (INDO-NEPAL border)
4. Eastern part of Nepal should be a link towards the CHITTAGOAN (Bangladesh) via India.

3.7. Sri Lanka

The experts from Sri Lanka presented the following observations:

(a) As there is no direct Railway link from this Island to other neighbouring countries except the ferry service, from Talaimanner to Dhanuskodi (South India) which links passenger service, the impact of the development of Trans-Asian Railway Network/Asian Railway Master Plan to projects on the country could be expected by increasing the ferry service to cater for more passenger and freight traffic.

(b) As there is no direct Railway link from the country to other neighbouring countries as mentioned above and considering the very high cost of materials and construction work involved in having a Railway link across the sea is beyond the means of the country's economy, the existing norms need not be changed as far as Sri Lanka is concerned.

They further added the following observation:

Talaimanner Pier is the only link between Sri Lanka and South Indian railway network. Sri Lanka, being the biggest tea producer in the world, can contribute a good amount of freight traffic to European countries, through Trans Asian Railway Network. For this purpose

- (a) Talaimanner Pier which caters only for passenger traffic at present should be strengthened.
- (b) An efficient freight ferry service should be introduced between Sri Lanka and India.
- (c) The container service which has been introduced at present to Sri Lanka government railway should be strengthened.
- (d) Talaimannar Pier should be equipped with necessary equipments to handle container service.

In this context, ESCAP is requested to provide assistance in implementing the above mentioned items in consultation with Sri Lanka Government Railway.

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3.8. Thailand

The expert from Thailand expressed his views as follows:

Development of an integrated railway network is considered one of the most appropriate transportation infrastructure development for the South East Asian Region. In the formation of such a network, it is considered most essential that not only the construction of the missing gaps should be initiated but also the efficiencies of the existing railway system should be improved. The improvement of operating efficiency and expansion of railway capacity would undoubtedly be beneficial to economic and social development of the country.

The more direct benefit is that modernization is the only way to make the railway capable of surviving the competition in present-day transport world. Furthermore, if close co-operation on common matters among neighbouring countries regarding railway transport can be established, an increase of the interregional rail traffic can be expected.

With regard to the suggestion which will be useful in drawing up the Asian Railway Master Plan. The ESCAP's Report on observations and Recommendations on the Route, Rolling Stock and Fixed Equipment Compatibility Characteristics of the Trans-Asian Railway written by M.N. Bery should be revised and used as a guideline for drawing up the Asian Railway Master Plan.

Construction of missing link should also be considered and discussed continuously with the railways concerned to pursue its development.

3.9. Viet Nam

The expert from Viet Nam expressed the view as follows:

The Viet Nam railway is now in the stage of consolidation, repletion and synchronism of existing line, improvement and development of traction, transport facilities and depots, workshops with the aim to increase the transport capacity of railway in carrying cargoes and passengers. After finishing the construction of Hanoi railway junction, new line from Hanoi to Haifong and a second line from Hanoi to Vinh, the target of 10 mil ton/year, 3 bil ton/km/year, 6 to 7 bil passenger/km/year and 60 to 70 mil passenger/year will be achieved. Before carrying out the plan, the immediate task of the Viet Nam railway is to overcome all problems concerning with the provision (investment) of constructive materials, traction and transport facilities.

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In this context, Viet Nam Railways wish to get assistance from ESCAP in strengthening the transport capacity of Hanoi-Hochimin line.

This matter has already taken up by ESCAP and the ESCAP roving mission has already completed the report in 1978. ESCAP is requested to follow up the survey/study on modernization/rehabilitation of Hanoi-Hochimin line in continuation of the previous 1978 mission.

3.10. USSR

The expert from USSR expressed the views as follows:

The Asian Railway Master Plan should be based on the network of the Trans-Asian Railway and railway approaches of the same network laid from the main industrial and agricultural centers, and also from the major sea and river ports, which satisfies the interests of the developing countries and permits attaining the objective by successive stages, with minimum means and expenditures required.

The Asian Railway Master Plan should most expediently be accomplished in two stages.

The first stage should be aimed at forming the regional railway network within estimated time terms consented by the countries, considering the prospects up till the year 2,000, or even later.

The second stage of work should involve a study of the technical condition of the existing sections, and preparation of considerations concerning the anticipated parameters of the lacking sections to be designed. It is required that the present line capacity of the existing railway lines and junctions be assessed in the first place, and measures be outlined where necessary for increasing the traffic and transportation capacities taking account of their technical-economic estimates.

Remembering that the ESCAP's investigations "Observation and Recommendation of the Route, Rolling Stock and Fixed Equipment Compatibility Characteristics of the Trans-Asian Railway" prepared by Mr. N.N. Bery, and "Trans-Asian Railway Project. Preliminary Appraisal of Traffic Potential and Financial Viability" prepared by Mr. Shahid Ali Khan were completed back in 1970, the need for conducting similar research at the present phase is ever more accute.

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In organizing the development of the Asian Railway Master plan, it seems to be expedient to consider the following proposals:

(a) The problems relating to development of the Asian Railway Master Plan should be included into the agenda of the Intergovernmental Conference of ESCAP Railway Experts scheduled for 1984. By that time, the work to be accomplished at the first stage of development of the Asian Railway Master Plan must be completed, and the resulting materials must be used for detalizing the programme of future activities.

The Intergovernmental Conference should also use this basis for outlining the programme of future activities during the period following 1984;

(b) The primary attention at the Roving Mission of ESCAP railway experts must be directed toward fulfilling the work relating to preparation of the Asian Railway Master Plan for rendering concrete assistance to the developing countries of the region to their requests.

(c) The ESCAP programme concerning the railway transport must fully embrace all the ESCAP activities in development of the Asian Railway Master Plan.

4. Conclusions and Summary of Recommendations

4.1. The Group agreed that the purpose of the Meeting was satisfactorily achieved.

4.2. The Group agreed that the role of railway and railway transport in the national economy must be reevaluated in view of the present and foreseeable energy problems, and its development must be given priority. In this context, the Group stressed the importance of the projects of the Trans Asian Railway Network and the Asian Railway Master Plan.

4.3. The Group welcomed the proclamation of "Transport and Communication Decade" which had been recommended by the 5th session of the Committee on Shipping, and Transport and Communications held at Bangkok in November 1981 and strongly urged that implementation of the Trans Asian Railway Network Project and drawing up of the Asian Railway Master Plan must be carried out as soon as practicable as a significant programme of ESCAP in the framework of development programme for Transport and Communications Decade. In this context, the Group requested the ESCAP secretariat to make every effort to mobilize the financial resources necessary for the promotion of these projects from UNDP, other international financing agencies and interested donor countries.

4.4. The Group recommended that following on-going or under planning studies of ESCAP should be urgently implemented with the financial co-operation of international financial agencies such as UNDP and other interested donor countries:

- (a) Technical and Economic study to promote and facilitate intra and inter-regional rail freight traffic in the context of the energy crisis.

The study tries to focus on a comparative economic and technical feasibility of (1) the existing sea line system; (2) sea-cum-land bridge system; and (3) through railway system; in order to recommend the optimal role for international transportation between Asia and Europe with due consideration being given to the foreseeable future traffic pattern commodity-wise. The study on sea-cum-land bridge system which was also proposed by Indian Expert was strongly supported by the Group.

- (b) Study on development of containerization in relation to inland multimodal transport in the developing countries of the ESCAP region.

The study is envisaged for introducing multimodal container traffic in the inland transport system. The main outcome of the first phase of the study is expected to be:

- (i) Survey and appraisal of the present regional situation of containerized inland transport;
- (ii) identification of problems common to most developing countries of the ESCAP region with regard to surface container transport and recommendations on the most suitable approaches to these problems;
- (iii) identification of fundamental technical and operational pre-requisites for movement of containers;
- (iv) development of an appropriate methodology through which comprehensive cost/benefit analysis of inland container traffic could be carried out.

The methodology will be useful in its own way and can also serve as a basis for further activities aimed at introducing and/or further developing container transport within the region. The study is now being carried out with the financial co-operation of the Government of the Netherlands. The Government of the Federal Republic of Germany is also assisting in undertaking a study of mechanization of inland container terminals.

- (c) Promotion of standardization of railway facilities, rolling stock and technical, commercial and operating methods.

The activity will be carried out by the Railway Cooperation Group, the formation of which was endorsed by the 38th session of the Commission. The first meeting of the Railway Cooperation Group is likely to be convened early.

4.5. The Group recommended that the drawing up of the Asian Railway Master Plan should be based on the network of the Trans Asian Railway. It would necessarily have to be freight oriented. It further recommended to the ESCAP secretariat to take the following steps of action in consultation with the Governments' concerned:

- (a) To determine the main industrial and rural development centres and the main sea and river ports, etc., for which railway outlets from the Trans Asian Railway and other trunk lines may be important;
- (b) To determine the network of railway lines on a priority basis;
- (c) To determine traffic flows likely to occur by the year 1990 and 2000;
- (d) To determine main existing and expected bottlenecks and to map out measures to overcome them;
- (e) To map out programmes for modernization, rehabilitation and increasing the traffic capacity of the existing lines to meet traffic requirements adequately, and to provide assistance in the implementation of those programmes;
- (f) To determine the missing links in the network and provide assistance in their technical and economic feasibility study and construction.

In this regard, the group requested the ESCAP secretariat to complete the steps of action (a), (b) and (c) above as soon as practicable.

4.6. The Group agreed that the scope of the Trans-Asian Railway could be widened in due course by better liaison with railways in Europe since trade between the Asian countries alone will not be able to attract substantial traffic to make the project financially viable as main trade and commerce is between the countries of Europe, USSR, USA and Asia. This network may provide efficient transportation services between the European and Far East countries with possible utilization of either the Trans Asian Railway with possible extension to China and Japan, or the Trans Siberian Railway.

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4.7. The Group noted that ESCAP's two studies namely: (1) "Trans Asian Railway Project. Preliminary Appraisal of Traffic Potential and Financial Viability" prepared by Mr. Shahid Ali Khan and (2) "Observation and Recommendation of the Route, Rolling Stock and Fixed Equipment Compatibility Characteristics of Trans Asian Railway" prepared by Mr. M.N. Bery were completed back in 1970, and therefore recommended that similar studies at the present phase should be carried out, and the earlier collected data and information be updated to form the basis for future action.

4.8. The Group, considering the actions to be taken in drawing up the Asian Railway Master Plan, recommended that the roving mission of ESCAP railway experts should be made full use of in preparing the Asian Railway Master Plan because it could minimize the expenditure required by the developing countries and the ESCAP secretariat in implementing the relevant works.

The Group also requested the ESCAP secretariat to include these important projects in the programme of work and priorities 1984-1985 of ESCAP, and to report the progress of work to the Intergovernmental Railway Group Meeting to be held in 1984.

4.9. The Group strongly recommended that the ESCAP Secretariat should be assisted by a small Sub-group of railway experts to follow up the projects of the Trans-Asian Railway and the Asian Railway Master Plan on a continuing basis. ESCAP should obtain all relevant data and information from the concerned Railways in the region through a questionnaire, obtain a confirmation about the alignment they propose for the Trans Asian Railway Network, and get details about the development, modernization, and rehabilitation plans for their entire railway system, along with the quantum of their present import and export traffic, and the traffic flows expected on their portion of the Trans Asian Railway Network by the year 1990 and 2000. This Sub-group should continue its function during the proposed Transportation and Communications Decade so that it deals exclusively with the preparation of the Asian Railway Master Plan and completion of the TAR project within this decade. ESCAP should mobilise the necessary resources in this regard.

4.10. In order to ensure the continuity of the development of the project the Group strongly urged that the Railway of every country in the region should nominate an officer or a team of officers to deal with the Trans Asian Railway project and the Asian Railway Master Plan and work in close co-ordination with the ESCAP Secretariat.

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4.11. The Group strongly recommended that assistance should be given to land-locked countries like Nepal, Afghanistan and Lao to have new rail links with connections to the TAR/Asian Railway Master Plan. Strengthening of the ferry services would also be required between India and Sri Lanka, Malaysia and Indonesia, inside Bangladesh, and other places where necessary.

4.12. The Group recommended that the paper on Railway Route Comparison between Europe and Iran via Turkey or the USSR should be published in the ESCAP Transport and Communications Bulletin for distribution among countries of the ESCAP region as well as members of this Group.

4.13. The Group would like to put on record its sincere appreciation to the Government of USSR and UNDP for their assistance in holding the Meeting of Working Group of Experts on the Trans Asian Railway Network and the Asian Railway Master Plan, and the State Committee for Science and Technology, to State Committee for External Economic Relations, and Ministry of Railway Transport, USSR, for the excellent arrangement of the Meeting. The Group hoped that the assistance of the Government of the USSR could be continued in these important projects of the Trans Asian Railway Network and the Asian Railway Master Plan.

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