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Working Group on the Asian Highway

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Policies and issues relating to the development of the Asian Highway

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Note by the secretariat

Summary

The present document contains an outline of policies and issues relating to the development of the Asian Highway. The Working Group may wish to provide the secretariat with further guidance on the policies and approaches relating to: (a) developing and upgrading the Asian Highway; (b) updating the Asian Highway Database; (c) improving road safety; (d) developing dry ports and intermodal transport corridors; and (e) improving linkages of the Asian Highway routes with local communities and economies. The Working Group may also wish to provide updates on the progress and status of priority projects for developing and upgrading the Asian Highway.

I. Introduction

1. The Intergovernmental Agreement on the Asian Highway Network[1] entered into force on 4 July 2005, marking the beginning of a new era in the development of international highways in the ESCAP region. The Asian Highway network, together with the Trans-Asian Railway network, for which another intergovernmental agreement[2] came into effect on 11 June 2009, have become important building blocks for the realization of the vision of an international integrated intermodal transport system in Asia, receiving priority attention in national programmes of member countries.

2. The present document outlines activities of the secretariat relating to the Asian Highway and road transport since the fourth meeting of the Working Group on the Asian Highway, held in Bangkok on 27 and 28 September 2011. It also provides a summary of discussions and recommendations made at recent legislative meetings.

* E/ESCAP/AHWG(5)/L.1.

1 United Nations, *Treaty Series*, vol. 2323, No. 41607.

2 United Nations, *Treaty Series*, vol. 2596, No. 46171.

II. Legislative meetings

3. Policies and issues related to the development of the Asian Highway and road transport continue to be subjects of interest at various legislative and expert group meetings and workshops.

4. The legislative meetings held in 2012 and 2013 included: (a) the second session of the Ministerial Conference on Transport (Bangkok, 12-16 March 2012); (b) the sixty-eighth session of the Commission (Bangkok, 17-23 May 2012); (c) the third session of the Committee on Transport (Bangkok, 10-12 October 2012); and (d) the sixty-ninth session of the Commission (Bangkok, 25 April-1 May 2013). These meetings highlighted the important role of the Asian Highway in promoting regional cooperation, the progress made in its development and formalization and the importance of road safety. Some excerpts from reports of recent legislative meetings are contained in the annex to the present document.

III. Activities of the secretariat

A. Developing and upgrading the Asian Highway

5. Following the mandates of the Commission and the recommendations made at sessions of the Committee, including those noted in the annex to the present document, both the secretariat and member States have been implementing activities to promote the development of the Asian Highway.

6. Phase II (2012-2016) of the Regional Action Programme for Transport Development in Asia and the Pacific, which had been adopted by the Ministerial Conference on Transport held in Bangkok in March 2012, mandated the ESCAP secretariat to promote regional and interregional connectivity and cooperation through further development of the Asian Highway and Trans-Asian Railway networks as well as dry ports.[3] The activities under the Regional Action Programme are aimed at bringing about the realization of an international integrated intermodal transport and logistics system for the region.

7. In this regard, the secretariat is implementing a project on "Promotion of investment in the Asian Highway network: prefeasibility studies of priority sections". Under this project, the secretariat furnished technical assistance to Bangladesh, Kyrgyzstan, Mongolia and Myanmar to undertake prefeasibility studies of selected priority routes and promote investment in the Asian Highway. National workshops to build capacity to undertake prefeasibility/investment studies were also delivered in those countries. The outcome of the prefeasibility studies would be presented at the Asian Highway Investment Forum, which is scheduled to be held in Bangkok on 8 and 9 October 2013.

8. In cooperation with the World Bank office in Viet Nam and the Directorate for Roads of the Ministry of Transport, Viet Nam, ESCAP organized the Expert Group Meeting on Road Maintenance and Management in Hanoi from 29 to 31 May 2013. The meeting brought together senior government officials from South Asia and South-East Asia to discuss different

[3] Commission resolution 68/4 endorsed implementation of the Ministerial Declaration on Transport Development in Asia and the Pacific, including the Regional Action Programme for Transport Development in Asia and the Pacific, phase II (2012-2016), and the Regional Strategic Framework for the Facilitation of International Road Transport.

approaches and major challenges in road maintenance. During the meeting various issues were covered relating to finance and asset management, new technologies, good practices and successful value-for-money systems in road maintenance in the region, capacity-building needs, and ways were discussed for revitalizing interest in road maintenance and management issues as part of the development agenda.[4]

9. The Intergovernmental Agreement on the Asian Highway Network has made it easier for member countries to secure grants and loans to upgrade Asian Highway routes.[5] The secretariat continues to work with member States, development banks (including the Asian Development Bank, the Islamic Development Bank and the World Bank) and other development partners to promote investment in the priority projects by facilitating discussion between member countries and potential donors.

10. In recognition of the importance of the Asian Highway and Trans-Asian Railway, the Asian Development Bank, in partnership with ESCAP, implemented a technical assistance project on promoting regional infrastructure development. Among other outputs, the establishment of a regional project development facility has been considered under the project.

11. During the process of developing and upgrading Asian Highway routes, national highways and other roads, it may also be necessary to consider the following:

(a) Promoting investment in the identified priority projects;

(b) Exploring various sources and forms of funding, such as build-operate-transfer, public-private partnerships and other innovative financing mechanisms;

(c) Ensuring the sustainable maintenance of Asian Highway routes and other highways through: (i) regular and periodic maintenance planning; and (ii) the establishment of road funds/boards;

(d) Undertaking environmental and social impact assessments for road projects;

(e) Capacity-building through the sharing of experience, knowledge, technology and best practices.

12. Member States may wish to provide an update on their progress in developing the Asian Highway network and on the status (for example, feasibility study completed, funds secured, or under construction) of the priority projects identified earlier.

B. Asian Highway Database

13. The Asian Highway Database includes comprehensive and detailed data and information on the Asian Highway routes in member States. The

[4] Apart from issues involving maintenance of national highways and roads, issues on rural road maintenance were also discussed at the meeting. Participants had the opportunity to visit a World Bank rural road maintenance project in Thanh Hoa Province, Viet Nam.

[5] J. Reynders and others, *Evaluation of the Japan-ESCAP Cooperation Fund 1996-2006* (Bangkok, ESCAP, 2007), annex III: Evaluation of the Asian Highway Initiative (transport), p. 210. Available from www.unescap.org/pmd/documents/me /Eval-JECF2007.pdf.

secretariat updates the database regularly to monitor the improvement of the network in member States. It is currently being updated using 2012 data and information received from member States. As of 11 June 2013, updates have been received from 10 member States. The information from the Asian Highway Database is available to member States and development partners through the ESCAP website (www.unescap.org/ttdw/common/tis/ah/member%20countries.asp).

14. In this regard, member States which have not already done so are encouraged to provide the secretariat with updated data and information on changes in the status of Asian Highway routes. The availability of such information from the database would facilitate the efforts of the secretariat and other organizations in undertaking analytical works involving the network. For example, the preliminary findings of an ESCAP study,[6] which used information from various sources, including from the database, show that in principle investments in the Asian Highway can have large net positive gains and favourable distributional effects.

C. Improving road safety on the Asian Highway

15. The issue of road safety has been on the global agenda for quite some time as the casualties from road crashes continue to rise at an alarming rate. Globally, road crashes kill about 1.24 million people and injure another 50 million each year. The recent *Global Status Report on Road Safety 2013*[7] published by the World Health Organization shows that 777,000, or more than half of the world's total road traffic deaths in 2010, occurred on roads in the ESCAP region. In comparison with the data for 2007, the total number of road traffic deaths in the *world* may not have increased in 2010. However, over the same period of time, the number of road traffic deaths in the *ESCAP region* increased by more than 10 per cent.

16. According to the latest data available from the Asian Highway Database (2010),[8] in terms of fatalities per billion vehicle-km, primary class Asian Highway roads have the best safety record, while those below class III have the worst record. The upgrading of roads to access-controlled primary class and other higher classes produces significant benefits in terms of reducing fatality rates.[9] Substantial improvement in terms of safety can also be gained when roads below class III are upgraded to the minimum class III standards. The road safety record for class II roads, however, shows worse performance compared with those in class III, possibly due to other relevant

[6] See *Growing Together: Economic Integration for an Inclusive and Sustainable Asia-Pacific Century* (ST/ESCAP/2629), pp.72-73. Available from www.unescap.org/commission/68/theme-study.html.

[7] The *Global Status Report on Road Safety 2013: Supporting a Decade of Action* is available from www.who.int/violence_injury_prevention/road_safety_status/en/index.html.

[8] In the Asian Highway Database, road safety data for 2010 are available for 45.5 per cent of the length of the Asian Highway, including 695 road sections (or 46.6 per cent of all sections), covering 64,818 km in 24 countries.

[9] The average fatality rate for primary class roads was 2.90 fatalities per billion vehicle-km, the lowest rate among all types of roads, and 166.79 fatalities per billion vehicle-km for below class III roads, the highest among all types of roads; the average fatality rates for other classes of Asian Highway routes were 31.49 fatalities per billion vehicle-km (class I), 95.70 fatalities per billion vehicle-km (class II) and 68.30 fatalities per billion vehicle-km (class III). Further information on this matter is available in E/ESCAP/AHWG(5)/1.

factors, such as higher traffic flows, higher shares of motorized vehicles and greater average travel speeds.

17. The upgrading of roads has also been linked to improved Asian Highway safety in many countries, particularly when the upgrades involved: (a) the construction of barriers to separate opposing directions of traffic and different types of vehicles; and/or (b) the improvement of road shoulders.

18. In order to focus global and regional attention on addressing this issue, the General Assembly, since 2003, has adopted six resolutions calling for strengthened international cooperation and multisectoral national action to improve the road safety situation. In its resolution 64/255 on improving global road safety, the General Assembly proclaimed the period 2011-2020 as the Decade of Action for Road Safety with a goal to stabilize and then reduce the forecast level of road traffic fatalities around the world by increasing activities conducted at the national, regional and global levels.

19. Commission resolution 68/4, which endorsed the Ministerial Declaration on Transport Development in Asia and the Pacific, also provided the secretariat with a broad mandate to assist member countries in meeting their commitments under the Decade of Action for Road Safety.

20. The importance of road safety was further highlighted at the United Nations Conference on Sustainable Development, which was held in Rio de Janeiro, Brazil, in June 2012; road safety was recognized "as part of our efforts to achieve sustainable development" in the outcome document of the Conference, entitled "The future we want".[10]

21. Pursuant to global and regional mandates, the ESCAP secretariat has developed regional road safety goals, targets and indicators for the period 2011-2020.

22. The secretariat has been organizing national workshops and providing advisory services to assist member countries in developing road safety strategies and setting or refining national road safety goals and targets for the Decade of Action for Road Safety. Since the fourth meeting of the Working Group in September 2011, national workshops on road safety were held in collaboration with the relevant national ministries in Azerbaijan (October 2011), the Lao People's Democratic Republic (November 2011) and Sri Lanka (February 2013).

23. In collaboration with the Korea Transportation Safety Authority, the secretariat held the Regional Expert Group Meeting on Progress in Road Safety Improvement in Asia and the Pacific in Seoul, Republic of Korea, from 8 to 10 May 2013. The theme of the meeting was on vulnerable road users in line with the theme of the second Global Road Safety Week. The meeting adopted a joint statement on improving road safety in Asia and the Pacific and on helping to create a better understanding of road safety as a part of the sustainable development agenda beyond 2015 (see annex II).

24. The Working Group may wish to endorse the joint statement for consideration of member States and other stakeholders, as appropriate.

[10] General Assembly resolution 66/288.

25. The ESCAP secretariat in collaboration with the secretariat of the Economic Commission for Europe is planning to organize the "Europe Asia Road Safety Forum" in New Delhi on 4 December 2013.

26. A number of countries have prepared or are in the process of finalizing their draft national strategies and action plans on road safety. Member States may wish to initiate policy measures and implement national road safety action plans and programmes in order to achieve the global and regional goals and targets and to monitor their achievements.

D. Developing dry ports

27. In using the Asian Highway and Trans-Asian Railway networks as two major building blocks, the secretariat has been promoting the development of an international integrated intermodal transport and logistics system for the region. Another complementary and important element of such a system is the development and operation of a network of dry ports, which would serve as intermodal interfaces and enable the efficient transfer of goods between different modes of transport, as well as introduce efficiency in the operations of both the Asian Highway and Trans-Asian Railway networks.

28. The use of intermodal linkages through dry ports and interfaces can increase the modal share of more resource-efficient transport modes, such as railways and inland waterways. This shift would help to reduce the demand for road transport and thereby reducing the need for expanding the capacity of exiting highways and/or limiting the need for building new ones. Greater utilization of railways and inland waterways would also help to reduce the cost of freight transport, increase efficiency in the overall supply and distribution chain, and reduce the carbon footprint of freight transport.

29. The Committee on Transport at its third session from 10 to 12 October 2012 finalized the draft of an intergovernmental agreement on dry ports. The Commission, at its sixty-ninth session from 25 April to 1 May 2013, through resolution 69/7 adopted the Intergovernmental Agreement on Dry Ports. It will be open for signature during the second session of the Forum of Asian Ministers of Transport, which is scheduled to be held from 4 to 8 November 2013.

30. To complement the work on the development of the Agreement, the secretariat furnished technical assistance to Cambodia, the Lao People's Democratic Republic and Myanmar in conducting prefeasibility studies on dry ports. Based on the outcome of the prefeasibility studies, a workshop on the development of an integrated transport and logistics system in the Association of Southeast Asian Nations (ASEAN) region was organized in November 2012.

31. The secretariat is currently implementing a project on capacity-building for the development and operation of dry ports of international importance to identify best practices in planning, designing, financing and operating dry ports. As an activity under this project, ESCAP in collaboration with the International Union of Railways organized a seminar on capacity-building for the development and operation of dry ports of international importance in Busan, Republic of Korea, on 11 and 12 June 2013. The seminar was organized for countries of North and Central Asia and East and North Asia and was held in conjunction with the Korea Railway and Logistics Fair in Busan, Republic of Korea, from 12 to 15 June 2013.

32. Member States may wish to initiate and implement policy measures recognizing the role of intermodal interfaces, including dry ports, in integrating the Asian Highway and Trans-Asian Railway networks into a comprehensive transport system that could lead to efficiency gains in the overall transport process while, at the same time, minimizing the adverse impacts of a rapidly growing transport sector.

E. Sustainable and inclusive development

33. The transport sector is a major consumer of scarce natural, financial and other resources. It also creates a large carbon footprint and many socially and environmentally adverse impacts, especially with regard to the road sector.[11] Given that the issues in sustainable development are expected to remain at the forefront of the development agenda beyond 2015, policymakers, planners and others responsible for the development and implementation of highway projects (vis-à-vis transport projects) need to consider how future development in the sector could promote more sustainable and inclusive development in the region.

34. The ways in which intermodal facilities such as dry ports can improve better utilization of existing infrastructure assets and reduce the demand for road transport have been described in the previous section. The use of modern technology can also help in achieving better utilization of existing road infrastructure. For example, the use of information and communication technologies (ICT) can help road freight service providers and operators to reduce the proportion of empty back-haulage and/or increase the load factor of their trucks.[12] Similarly, highway operators in developing countries may consider greater use of appropriate intelligent transport system applications to improve efficiency in highway operation and traffic management. They can make road transport safer, faster, less polluting, more energy efficient and cheaper.[13]

35. Promising new technologies, such as perpetual pavement, new methods and techniques in highway design and construction, and building materials are emerging. These new technologies and materials need to be carefully evaluated

[11] For example, the transport sector is a major consumer of energy resources, particularly petroleum products. It is also one of the major emitters of carbon dioxide. In 2008, the world's road, rail and aviation sectors consumed 2,299 million tons of oil equivalent (toe). Of that amount, the Asia-Pacific region was responsible for 26 per cent, or 598 million toe. The bulk of this amount in the region, 79.4 per cent (475 million toe), was consumed by the road sector. In the same year, the transport sector in the region was responsible for producing 1,704 million tons of carbon dioxide (CO_2) emissions, which accounted for about a quarter of the global CO_2 emissions from this sector. Most of the emissions came from the road sector, which released 1,390 million tons of CO_2. (See *Statistical Yearbook for Asia and the Pacific 2011* (United Nations publication, Sales No. E.11.II.F.1), p.142.)

[12] Many studies show that the proportion of empty haulage can be as high as 30-50 per cent.

[13] Many countries in the region have considered various applications of intelligent transport systems: electronic toll payment and pricing, coordinated or linked traffic signals (mostly in urban areas) and traveller information systems being the three most common applications. Depending on the existing situation and type of application, the benefits of such applications may vary greatly, but they could be substantial. A report published by the United States Department of Transportation provides the details of these applications and their potential benefits and costs. The report, entitled *Intelligent Transport Systems: Benefits, Costs, Deployment and Lessons Learned 2008 Update*, is available from http://ntl.bts.gov/lib/30000/30400/30466/14412.pdf (accessed on 21 June 2013).

and considered for adoption/adaptation as required. They have the potential to substantially reduce overall life cycle costs of road and highway construction and maintenance. The use of perpetual pavement, for example, can substantially increase the life of asphalt pavements from 15-20 years currently to as many as 40-50 years. Owing to the longer life of pavements and reduced need for maintenance, particularly over long maintenance periods, greenhouse gas emissions from the production of building materials and the construction and maintenance of roads would be much lower.

36. The replacement of existing concrete pavements by asphalt pavements is another area that deserves consideration when their replacement/rehabilitation is due. Compared with concrete pavements, asphalt pavements have much smaller carbon footprint over their life cycle; for perpetual pavements the carbon footprint is even smaller.[14] Greater use of cold and warm mix asphalt, where possible, is another option to reduce carbon emissions from road construction.

37. The post-harvest losses of cereal and other crops due to poor storage and transport is an important development issue for most developing countries. A large proportion of fresh food and vegetables is also lost on their way to market.[15] Another related issue is how to establish functional linkages between local rural economies and the national economy by using major highways, particularly access-controlled highways. These twin issues may be addressed, at least to a large extent, by promoting rural logistics centres along the Asian Highway and other important national highways. These centres can help in multiple ways; for example, they can improve efficiency in rural supply and distribution chains, serve as a direct market outlet for local produce and generate non-farm local employment. In addition, they can serve as rest and service areas for highway users and have the potential to be used as a point-of-service delivery for selected public services, such as information and communications technologies, health care, education and training. The potential multiple roles of these centres make them suitable for use as important intervention tools to make highway networks directly supportive of more inclusive development in rural areas.[16]

38. ESCAP along with other regional commissions is implementing a project entitled “Development and implementation of a monitoring and assessment tool for CO_2 emissions in inland transport to facilitate climate change mitigation”; it is funded by the United Nations Development Account. As part of the project, a global status report on inland transport CO_2 emissions