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ESCAP/OHRLLS/ECE/Government of Lao PDR Final Regional Review of the Almaty Programme of Action for the Landlocked Developing Countries

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DRAFT DISCUSSION PAPER 1 (A)

BRIDGING INFRASTRUCTURE GAPS

TECHNICAL SESSION 1

Promoting fundamental transit transport, and infrastructure development and maintenance in the LLDCs (Priorities 1 and 2 of APoA)

The views expressed in this draft discussion paper do not necessarily reflect those of the United Nations or any other landlocked developing country mentioned herein.

This draft discussion paper has been issued without formal editing.

CONTENTS

Page

I. Introduction

The creation and maintenance of efficient, safe and secure transport infrastructure networks is integral to achieving the Almaty Programme of Action's (APoA) overall objective of addressing the special needs of landlocked developing countries (LLDCs) and establishing a new global framework for action for developing efficient transit transport systems in them.

In particular, priority 2 of the APoA identifies inadequate infrastructure as being a major obstacle to establishing efficient transit transport systems in LLDCs. Further, the deterioration of transport infrastructure necessitates ongoing maintenance.

In recent years, the work of the Economic and Social Commission for Asia and the Pacific (ESCAP) secretariat in the transport infrastructure sector has been geared towards the realization of the vision of an international integrated intermodal transport and logistics system in Asia, with a focus on the development, upgrading of the Asian Highway (AH) and Trans-Asian Railway (TAR) networks together with the development of intermodal interfaces providing connectivity across borders and to ports. This vision aligns well with the APoA's overall objective.

This paper reviews progress, challenges and opportunities with primary focus on LLDCs and transit countries in the ESCAP region.

II. Review of progress in infrastructure development and maintenance

Improving and maintaining transport infrastructure can contribute significantly to the development of a region by enhancing its competitiveness through improved access to new or existing markets and by facilitating regional economic integration.

On the contrary, a sub-optimal regional transport network can result in higher costs for economic actors and hamper their activities. For instance, the ease of access to sea ports is of a great importance given the significant role of maritime transport in international trade. LLDCs have in this respect a natural competitive disadvantage due to their geographical location. As a result, exporting via maritime routes from these countries is more costly (actually twice more costly than the world average according to World Bank Doing Business surveys 2011 - see Table 1 in Annex). Unfortunately, this "cost gap" has not been bridged since 2005 even if progresses made since the adoption of the APoA should not be undervalued. It is also worth noting that infrastructure is only one part of the equation as administrative procedures (e.g. customs clearance) have a significant role to play for achieving an efficient transport network. The latter is more elaborated in another background paper on "Harmonization and strengthening of the regulatory and legal framework pertaining to international transport and transit".

Focusing on infrastructure, the progresses and remaining challenges can be illustrated through cross-country comparisons such as the World Bank 2012 survey of logistic professionals (Table 2 in Annex). According to these professionals, the quality of trade and transport related infrastructure (e.g. ports, railroads, roads or information technology) has improved during the last years with a global average score rising by more than 15%. Asian LLDCs remain however ranked relatively low in international comparison with only two of them in the top 100 - the survey participants marked the quality of infrastructure around 2 (low) and 3 (average) while the maximum grade is 5 (very high).

The Global Competitiveness Report, another business survey conducted by the World Economic Forum, provides useful input as regards the quality of transport infrastructure by modes. The Table 3 in Annex presents results coming from the 2012-2013 survey and they tend to confirm the overall difficulties of transport infrastructure in the region, especially as regards access to port facilities and roads (all the landlocked countries are below the world average in these two categories). On the contrary, some landlocked countries stand well in cross-country comparisons as regards railway

system (e.g. Kazakhstan for instance ranks particularly high). The difficulties for accessing port infrastructure come evidently not as a surprise as most of the 12 landlocked countries are 700-1000 km away from the nearest port, four (Kazakhstan, Kyrgystan, Tajikistan and Uzbekistan) being over 3000 km from the sea[1].

The level of infrastructure development is also not homogeneous among the Asian LLDCs. On roads more specifically, substantial differences exist in terms of latest development and improvements. Mongolia, Lao People's Democratic Republic and Afghanistan have for instance a limited percentage of roads paved (below 30%) compared to Central Asian countries (above 80%) as shown in Table 4 in Annex. As regards network extension, substantial progresses have been made in most countries but more noticeably in Afghanistan, Lao People's Democratic Republic, Bhutan and Nepal where road density has more than double since 1990 according to latest data available (see Table 5 in Annex).

The relatively mixed picture coming from the preceding data should however not underestimate the major achievements made on regional transport infrastructure improvement since the adoption of the APoA. Indeed, governments across the region have made considerable efforts in recent decades to extend national road and railway systems and, in some cases, inland waterways, and to connect to their neighbours.

These efforts have been effectively supported by the entry into force of two key intergovernmental agreements related respectively to regional road and rail infrastructure (i.e. the Intergovernmental Agreement on the Asian Highway Network and the Intergovernmental Agreement on the Trans-Asian Railway Network) as well as by the Euro-Asia inland transport links (EATL) project. More recently, strong attention has been paid to the development of dry ports, which is of the greatest importance for landlocked developing countries and for which another intergovernmental agreement should be adopted in 2013.

For LLDCs in Central Asia, the SPECA Project Working Group on Transport and Border-Crossing (PWG-TBC)[2] has also provided valuable support for transport infrastructure development since its launch in 1998. To date 17 sessions of this working group have been organized under the leadership of Kazakhstan with the assistance of ESCAP and the Economic Commission for Europe (ECE) secretariats, which have proven to be an effective platform for cooperation among the countries.

These intergovernmental agreements and cooperation mechanisms actually created the necessary institutional backbone for a coordinated and rational planning of regional infrastructure. Within these frameworks, the road networks have been continuously upgraded in the region and some portion of missing links in the Trans-Asian Railway network have been planned and constructed.

The paragraphs immediately following contain detailed comments on the progress achieved on roads and rail as well on dry ports which are deemed to play a decisive role in the coming years to create an international integrated inter-modal transport and logistic system. Observations are also included on the secretariat's efforts to promote the development of these networks as well as to facilitate the necessary investments (including through private sector involvement).

(A) Asian Highway Network

Twenty-nine countries including 11 landlocked developing countries[3] (as of October 2012) have become parties to the Intergovernmental Agreement on the Asian Highway Network, covering over 143,000 km of road in 32 countries, which entered into force on 4 July 2005.

[1] Source: ESCAP publication: Trade Facilitation in Selected Landlocked Countries in Asia (18 June 2007)

[2] SPECA stands for United Nations Special Programme for the Economies of Central Asia and member countries are Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan

[3] Afghanistan, Armenia, Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, the Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, and Uzbekistan.

This agreement has been the basis of ESCAP secretariat's work to promote and facilitate the development and upgrading of the network, notably through four Working Group sessions in which the LLDC member States and other States have actively participated (the latest was held in Bangkok on 27-28 September 2011). With the same objective, ESCAP is implementing a project on "Promotion of Investment in the Asian Highway Network: Prefeasibility Studies of Priority Sections". Under this project, technical assistances are being provided to four developing member countries including to two LLDCS namely, Kyrgyzstan and Mongolia to undertake prefeasibility studies of selected priority routes and promote investment in the Asian Highway. As part of the project activities, national capacity building workshops to undertake prefeasibility/investment studies have been delivered in these countries. In a similar earlier study in 2007, technical assistance involving prefeasibility studies of the Ondorhaan - Choybalsan - Sumber - Chinese Border section along AH32 in Mongolia, and the Goris-Kapan section along AH82 in Armenia were undertaken.

Thanks to these efforts and the strong commitment of participating countries, major results in developing and upgrading the Asian Highway routes in LLDCs in the ESCAP region have been achieved. Approximately 30% of the AH roads in these countries (corresponding to more than 10,000 km) have been improved since 2004 (meaning they have reached a higher AH class standard). The portion of AH routes below the minimum standard (Class III) has decreased from 32% to 18%. There are nevertheless still 6,796 km of AH routes that need to be upgraded to meet such minimum standard. Although there are no "missing links" in terms of absence of roads, poor road quality can act as a deterrent for international transport due to increased vehicle operating costs. The current status of the network in the 12 LLDCs is shown in the table below.

Table 1: Status of Asian Highway routes in 12 landlocked ESCAP member states

Country	**Primary**	**Class I**	**Class II**	**Class III**	**Below III**	**Total**	**Status Year**
	Length in km						
Afghanistan	0	10	2,519	0	1,718	4,247	2008
Armenia	0	147	766	13	40	966	2008
Azerbaijan	0	280	1,184	0	0	1,464	2010
Bhutan	0	7	116	0	47	170	2010
Kazakhstan	0	557	5,407	6,389	475	12,828	2010
Kyrgyzstan	0	0	604	682	409	1,695	2010
Lao PDR	0	0	244	2,307	306	2,857	2010
Mongolia	0	8	1,356	158	2,799	4,321	2010
Nepal	0	0	34	1,243	37	1,314	2010
Tajikistan	0	0	966	0	941	1,907	2010
Turkmenistan	0	60	0	2,120	24	2,204	2008
Uzbekistan	0	1,195	1,101	670	0	2,966	2008
Total (km)	**0**	**2,264**	**14,297**	**13,582**	**6,796**	**36,939**	
Percentage	**0%**	**6%**	**39%**	**37%**	**18%**	**100%**	
Corresponding % in 2004	*0%*	*1%*	*14%*	*53%*	*32%*		
Aggregated % for the AH network	*14.6%*	*15.6%*	*37.8%*	*23.7%*	*8.4%*		

As part of the advisory services provided by the ESCAP secretariat, the issue of road safety on the Asian Highway has also been raised through a series of national workshops on road safety organized in several LLDCs over the years 2009 to 2011. These include Azerbaijan, Kyrgyzstan, Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan and Uzbekistan. The workshops generally assisted the LLDC member States to articulate, develop and refine their national road safety strategies and

action plans containing measureable road safety goals and targets. Overall, these actions aim at increasing the level of road safety which is an important component of the quality of a transport system.

(B) Trans-Asian Railway Network

Beside road networks, efficient rail links have a central role to play for improving LLDCs' access to world markets. To facilitate discussion and planning of future expansion, upgrading and operation of the railway network in the region, an Intergovernmental Agreement on the Trans-Asian Railway (TAR) Network has been developed which supports efficiently stronger regional connectivity.

As of October 2012, the Intergovernmental Agreement on TAR Network, which entered into force on 11 June 2009, has been signed by 22 countries, of which 18 countries - including 5 landlocked developing countries[4] - are parties. The TAR network covers over 117,000 km of railway lines of international importance in 28 member countries.

In conformity with the terms of the Agreement, the Working Group on the TAR was established to review the implementation of the agreement and consider proposals for amendments. To date, the Working Group has been convened twice in which the LLDC member States and other States have actively participated. The second meeting of the Working Group, held in Busan, Republic of Korea, on 14-15 June 2011, among others, adopted amendments to annex I of the Agreement that were proposed by China, the Islamic Republic of Iran, Mongolia and Uzbekistan.

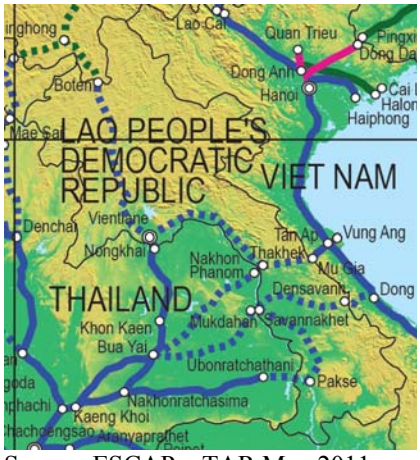
The main challenge for railway transport in the Asia region as a whole remains though the many missing links, which prevent the network from functioning as a continuous system. According to ESCAP estimates, these constitute about 10,500 km of rail track, or 9 per cent of the Trans-Asian Railway Network. However, new momentum is noticeable with increased resources being channeled into rail development projects from government allocations to the sector as well as financing from international financial institutions or under bilateral assistance.

The following paragraphs will shortly describe the main missing links relevant for the Asia LLDCs and the progresses recently achieved as well as the key challenges remaining.

1. *South-East Asia - Lao People's Democratic Republic*

Lao People's Democratic Republic has yet to develop a proper rail network. An embryonic step was taken in March 2009 with the inauguration of a 3.5-km extension of the Thai network from Nongkhai (Thailand) to Thanaleng (Lao PDR). The next step is the extension of this rail link to Vientiane for which Thailand has agreed to provide financial support and which could be finished by 2014. Coupled with the development of an Inland Container Port in the vicinity of Vientiane, the line will facilitate rail movement to the port of Laem Chabang (140 km east of Bangkok) on the Gulf of Thailand and, further south, to the port of Port Klang (Malaysia) on the Strait of Malacca.

Map 1 : TAR missing links



Source: ESCAP – TAR Map 2011

Rail connection with China are also progressing with a memorandum of understanding signed in 2010 between the two countries to build the line from Vientiane to Boten which is a major section in the Singapore-Kunming Rail Link Project. Following delays on financing arrangements for the US$ 7-billion project, the two governments are now expecting construction to

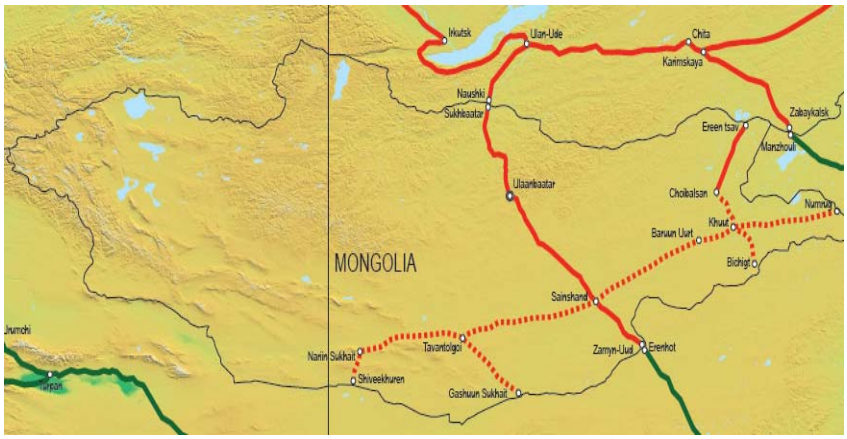
[4] Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, and Uzbekistan.

start in 2013[5]. With a view to accessing sea ports, Lao PDR and Viet Nam have discussed the possibility of a rail link between Vientiane and the port of Vung An. Overall, 1439 km of rail links are considered for construction to equip the country with a rail network for an estimated total cost of over $7bn.

2. *East and North East Asia - Mongolia*

In Mongolia, the Government approved in 2010 the expansion of its rail network. The construction of approximately 1,800 km of new routes is currently planned to provide the required infrastructure to convey more efficiently Mongolia's natural resources to international markets, in particular from the mines at Tavan Togloi and Nariin Sukhait (coal) and Oyu Tolgoi (copper). Based on an estimated cost of $2.5 to 2.8 million per kilometer, the total investment for the new rail routes is estimated to reach approximately $ 4-5 billion. Operations on the new lines could start as early as 2015. The routes just mentioned are indicated in the map below in red dot lines.

Map 2 : The existing and planned trans-Asian railway network in Mongolia

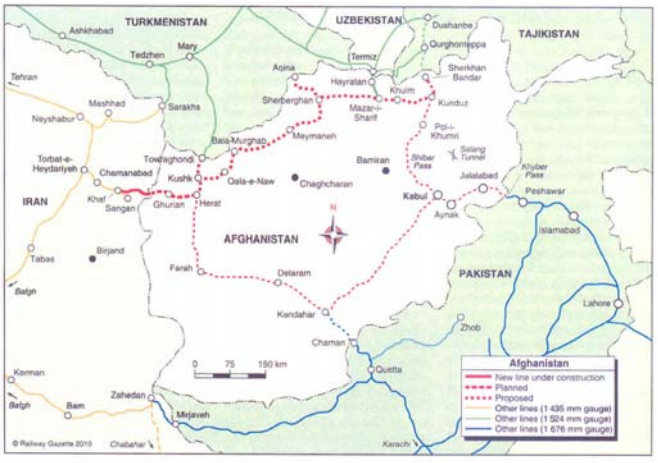


Source: ESCAP – TAR Map 2011

3. *South West Asia and Central Asia – Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan*

Afghanistan has a specific position in the region as it is landlocked while, at the same time, being a transit country for the Central Asian LLDCs. As such, any progress made in Afghanistan can have an impact on the other LLDCs. Historically, no rail network has been developed in the country but the situation changed in 2010 with the completion of a 75-km single-track rail link from the border with Uzbekistan at Khairaton to Mazar-i-Sharif. Meanwhile, work is being implemented on the construction of a 205-km link between Sangan in eastern Iran and Herat in western Afghanistan.

Map 3: Planned rail network in Afghanistan



Source: Railway Gazette International – October 2010

[5] Railway Gazette website accessed on 31 Oct. 12 (http://www.railwaygazette.com/news/single-view/view/chinese-loan-agreements-revive-trans-laos-project.html)

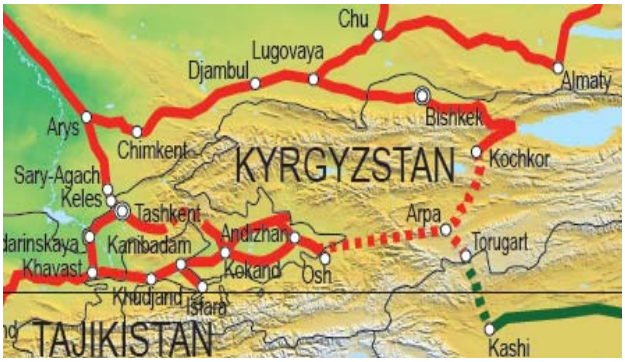
Further, plans are also under way to link the main cities located in the north and south of Afghanistan with their neighbouring countries, i.e. Islamic Republic of Iran and Pakistan. The network being considered will comprise two main corridors, namely:

i) an eastern north-south corridor with a distance of about 720 km from Mazar-i-Sharif to Jalalabad via Kabul with a branch line to the copper mine at Logar;

ii) a northern east-west corridor with a distance of about 1,250 km from Kundus to Herat via Mazar-i-Sharif. Branches will connect this main line to rail borders points in Tajikistan and Turkmenistan[6]. These corridor and branch lines will offer rapid transit for Central Asian republics to Iranian ports on the Persian Gulf, i.e. Bandar Abbas and Chabahar;

iii) Meanwhile, branch lines have been discussed from Chaman and Torkham in Pakistan to Kandahar and Jalalabad, respectively. These links could give access to the ports of Karachi and of Mumbai and to the port of Gwadar when Pakistan Railways complete the 900-km Mastung - Gwadar line.

Map 4 : TAR missing links in Kyrgyzstan



Source: ESCAP – TAR Map 2011

Beside development in Afghanistan, other projects are planned which should positively influence the connectivity of Central Asian countries with neighbouring subregions. In particular, a 268-km line from Kashi (China) to Andizhan in eastern Uzbekistan through Torugart, Arpa and Osh in southern Kyrgyzstan for which discussion started in the late 1990s. However, the high estimated construction cost of about US$2 billion has so far prevented groundwork to start effectively. The project received new attention in 2012 with the signing of a Memorandum of Understanding between China and Kyrgyzstan to stipulate the definition of technical designs. Meanwhile preparation for a feasibility study has already started.[7] In addition, the project needs to address several technical challenges related to the terrain and the length of structures such as bridges and tunnels. At the same time, it is estimated that the proposed rail link will shorten the route from China to Europe by about 900 kilometers[8]. Currently, the main land bridge to Central Asia from China is operated by Chinese Railways, which runs seven container-block trains per week between the port of Lianyungang and Alashankou, near the border with Kazakhstan[9].

Other rail projects are also taking place in the region. These projects do not fall directly under the Trans-Asian Railway activities of ESCAP in so far as the related link(s) have not yet been nominated