

付 録

付録 1 訪問機関リスト

Bangladesh

Date	Time	Organization	Type
8-Sep	9:00 AM	JICA Bangladesh Office	Others
8-Sep	11:00 AM	ADB Transport	Development Partner
8-Sep	3:00 PM	Economic Relations Division, Ministry of Finance	Government Agency
8-Sep	3:30 PM	Japan-Bangladesh Chamber of Commerce and Industries	Others
9-Sep	9:00 AM	JICA Bangladesh Office	Others
9-Sep	10:00 AM	Capital Freight	Others
9-Sep	10:00 AM	Export Promotion Bureau, Ministry of Commerce	Government Agency
9-Sep	11:00 AM	Bangladesh Customs Department	Government Agency
9-Sep	11:00 AM	International Union for Conservation of Nature and Natural Resources	Others
9-Sep	11:30 AM	Access Freight	Others
9-Sep	3:00 PM	Bangladesh Freight Forwarders Association	Others
9-Sep	3:00 PM	Ministry of Local Government, Rural Development, and Cooperatives, Rural Development and Cooperatives Division	Government Agency
9-Sep	3:30 PM	Ministry of Industries	Government Agency
9-Sep	4:00 PM	Embassy of Japan	Others
9-Sep	5:00 PM	JETRO Bangladesh Office	Others
10-Sep	9:00 AM	Centre for Policy Dialogue	Others
10-Sep	10:30 AM	Ministry of Land	Government Agency
10-Sep	11:00 AM	Roads and Highways Department	Government Agency
10-Sep	11:00 AM	Dhaka Chamber of Commerce and Industries	Others
10-Sep	1:00 PM	Ministry of Communication	Government Agency
10-Sep	12:30 PM	Metropolitan Chamber of Commerce and Industry, Dhaka	Others
10-Sep	2:00 PM	Federation of Bangladesh Chamber of Commerce and Industries	Others
10-Sep	2:30 PM	Hanjin Shipping Co., Ltd.	Others
10-Sep	3:00 PM	Bangladesh Land Port Authority	Government Agency
10-Sep	4:00 PM	Mediterranean Shipping Company	Others
10-Sep	4:30 PM	Bangladesh Railway	Government Agency
11-Sep	9:00 AM	Chittagong Port Authority	Government Agency
11-Sep	10:00 AM	Ministry of Planning	Government Agency
11-Sep	11:00 AM	YKK Group	Others
11-Sep	11:00 AM	Bangladesh Institute of Development Studies	Others
11-Sep	11:30 AM	Bangladesh Institute of International and Strategic Studies	Others
11-Sep	2:00 PM	Customs	Government Agency
11-Sep	3:00 PM	Nippon Express (Nittsu)	Others
11-Sep	5:00 PM	JICA Industry	Others
11-Sep	5:30 PM	JICA Bangladesh Office	Others
11-Sep	6:00 PM	JETRO Bangladesh Office	Others
12-Sep	9:00 AM	Navana Group	Others
12-Sep	10:00 AM	Bangladesh Land Port Authority (Akhaura)	Government Agency
12-Sep	11:00 AM	A.K. Khan & Company Ltd.	Others
12-Sep	12:00 PM	India-Bangladesh Chamber of Commerce and Industry	Others
12-Sep	3:00 PM	Bangladesh Road Transport Authority	Government Agency
13-Sep	10:00 AM	Bangladesh Land Port Authority (Tamabil)	Government Agency
17-Nov	11:00 AM	Power and Participation Research Centre	Others

Date	Time	Organization	Type
17-Nov	2:30 PM	Board of Investment	Others
19-Nov	2:00 PM	Bangladesh Institute of Development Studies	Others
20-Nov	2:00 PM	Ministry of Industries	Government Agency
24-Nov	9:00 AM	Ministry of Communication	Government Agency
24-Nov	2:00 PM	World Bank	Development Partner
24-Nov	4:00 PM	JICA Bangladesh Office	Others
25-Nov	10:00 AM	Roads and Highways Department	Government Agency
25-Nov	-	Narayangunj	Others
28-Nov	5:00 PM	Private Sector Forwarder	Others

Bhutan

Date	Time	Organization	Type
28-Oct	9:00 AM	JICA Bhutan Office	Others
28-Oct	11:00 AM	World Bank (Transport and Environment)	Development Partner
28-Oct	2:00 PM	Bhutan Chamber of Commerce and Industry (BCCI)	Others
28-Oct	2:00 PM	Ministry of Home and Cultural Affairs	Government Agency
28-Oct	2:00 PM	National Statistics Bureau	Government Agency
28-Oct	3:00 PM	Ministry of Foreign Affairs	Government Agency
28-Oct	3:00 PM	State Trading Corporation of Bhutan	Others
29-Oct	10:00 AM	Department of Revenue and Customs, Ministry of Finance	Government Agency
29-Oct	11:00 AM	Department of Roads, Ministry of Works and Human Settlement	Government Agency
29-Oct	9:00 AM	Department of Forest, Ministry of Agriculture and Forests	Government Agency
29-Oct	11:00 AM	Bhutan Post	Others
29-Oct	12:00 PM	Ministry of Economic Affairs, Department of Trade	Government Agency
29-Oct	2:00 PM	DHL Express	Others
29-Oct	2:00 PM	Ministry of Information and Communications, Policy Planning Division	Government Agency
29-Oct	2:00 PM	National Environmental Commission	Others
29-Oct	3:00 PM	Leko Peckers	Others
30-Oct	-	Phuentsholing-Jaigaon Border Visit	Government Agency
31-Oct	-	Banglabandha Border Visit	Government Agency

India

Date	Time	Organization	Type
2-Sep	9:00 AM	JICA India Office	Others
2-Sep	11:30 AM	Research and Information System for Developing Countries (RIS)	Others
2-Sep	5:00 PM	Embassy of Japan	Others
3-Sep	9:00 AM	World Bank (Transport)	Development Partner
3-Sep	9:00 AM	World Bank (Environment)	Development Partner
3-Sep	10:15 AM	Indian Institute of Foreign Trade (IIFT), Department of Commerce, Ministry of Commerce and Industry	Government Agency
3-Sep	1:00 PM	ADB Transport	Development Partner
3-Sep	1:00 PM	ADB Environment	Development Partner
3-Sep	3:00 PM	Ministry of Development of North Eastern Region (and North Eastern Council Secretariat) with Joint Secretary	Government Agency
3-Sep	4:00 PM	Ministry of Development of North Eastern Region (and North Eastern Council Secretariat) with Secretary	Government Agency

Date	Time	Organization	Type
4-Sep	11:00 AM	Ministry of Home Affairs (Land Port Authority, Department of Border Management)	Government Agency
4-Sep	11:00 AM	National Highways Authority of India	Government Agency
4-Sep	2:00 PM	Japan Chamber of Commerce and Industry in India	Others
4-Sep	3:00 PM	Ministry of Road Transport and Highways	Government Agency
5-Sep	12:00 PM	Ministry of Environment and Forests	Government Agency
5-Sep	2:00 PM	JICA Environment	Others
5-Sep	3:00 PM	Ministry of Road Transport and Highways	Government Agency
5-Sep	4:30 PM	Ministry of Railways	Government Agency
5-Sep	5:00 PM	Ministry of Shipping	Government Agency
6-Sep	11:00 AM	International Union for Conservation of Nature and Natural Resources	Others
6-Sep	11:30 AM	UNESCAP Transport	Development Partner
6-Sep	12:30 PM	Department of Industrial Policy & Promotion	Government Agency
6-Sep	1:00 PM	Central Board of Excise and Customs (under Ministry of Finance, Department of Revenue)	Government Agency
17-Oct	11:30 AM	Federation of Freight Forwarders Association, B G. Somadder & Sons (P) Ltd	Others
17-Oct	11:30 AM	Kolkata Port Trust	Others
21-Oct	3:00 PM	Calcutta Customs House Agent Association	Others
4-Nov	3:00 PM	Department of Works and Housing, Nagaland State Government	Government Agency
5-Nov	11:00 AM	Department of Planning and Coordination, Nagaland State Government	Government Agency
5-Nov	11:30 AM	Indian Institute of Foreign Trade	Others
5-Nov	1:00 PM	Department of Transport, Nagaland State Government	Government Agency
5-Nov	-	Site Visit in Nagaland	-
6-Nov	9:30 AM	Mitsui & Co., Ltd.	Others
7-Nov	9:30 AM	Itochu Corporation	Others
7-Nov	11:30 AM	JETRO India	Others
7-Nov	5:00 PM	Department of Public Works, Mizoram (Roads Division)	Government Agency
8-Nov	10:00 AM	Department of Transport, Mizoram State Government	Government Agency
8-Nov	2:00 PM	Truck Terminal	Others
8-Nov	2:00 PM	Japan Chamber of Commerce & Industry in India	Others
8-Nov	-	Site Visit in Mizoram	-
11-Nov	11:30 AM	Sojitz Corporation	Others
11-Nov	-	Site Visit in West Bengal	-
12-Nov	10:00 AM	Customs Broker	Others
12-Nov	11:00 AM	CCT [Logistics] Group Ltd.	Others
12-Nov	3:00 PM	Department of North Bengal Development, West Bengal State Government	Government Agency
12-Nov	3:00 PM	Special Economic Zone (East and North East Region), Ministry of Commerce and Industry	Government Agency
12-Nov	5:00 PM	Bhabani Roadways	Others
12-Nov	3:00 PM	Directorate General of Foreign Trade	Government Agency
13-Nov	10:30 AM	Federation of Indian Export Organization	Others
13-Nov	1:30 PM	Directorate General of Commercial Intelligence & Statistics	Government Agency
13-Nov	10:30 AM	Commercial Tax Department, West Bengal Government	Government Agency
14-Nov	11:00 AM	Haldia Port	Others

Date	Time	Organization	Type
14-Nov	-	Site Visit in Tripura	-
15-Nov	10:30 AM	Chief Secretary of Tripura	Government Agency
15-Nov	11:00 AM	Public Works Department, Tripura State Government	Government Agency
15-Nov	12:00 PM	Transport Department, Tripura State Government	Government Agency
15-Nov	1:00 PM	Directorate General of Industry and Commerce, Tripura State Government	Government Agency
15-Nov	5:00 PM	Integrated Check Point in Agartala	Government Agency
18-Nov	2:00 PM	Public Works Department, Manipur State Government, ADB Project Director	Government Agency
18-Nov	5:00 PM	Public Works Department, Manipur State Government,,Principal Secretary	Government Agency
19-Nov	11:00 AM	University of Manipur	Others
20-Nov	2:00 PM	North Eastern Council	Government Agency
21-Nov	10:00 AM	Public Works Department, Meghalaya State Government, Secretary	Government Agency
21-Nov	11:00 AM	Public Works Department, Assam State Government, Commissioner	Government Agency
21-Nov	1:00 PM	Public Works Department, Meghalaya State Government, Chief Engineer	Government Agency
21-Nov	3:30 PM	Commercial Tax Department, Assam State Government	Government Agency
22-Nov	11:00 AM	Public Works Department, Assam State Government, Engineer	Government Agency
22-Nov	2:00 PM	Public Works Department, Assam State Government	Government Agency

Myanmar

Date	Time	Organization	Type
9-Sep	9:30 AM	Greater Mekong Initiative	Others
9-Sep	11:00 AM	JETRO Myanmar Office	Others
9-Sep	2:00 PM	Japanese Company E (Trading Company)	Others
9-Sep	6:00 PM	Japanese Company F (Trading Company)	Others
10-Sep	10:00 AM	Japanese Company G (Logistics Company)	Others
10-Sep	3:15 PM	Japanese Company H (Trading Company)	Others
11-Sep	10:00 AM	Directorate of Investment and Company Administration	Others
11-Sep	1:00 PM	Union of Myanmar Federation of Chambers of Commerce and Industry	Others
12-Sep	10:00 AM	International Finance Corporation	Others
12-Sep	1:00 PM	Myanmar Agribusiness PCL	Others
13-Sep	10:00 AM	Myanmar Industrial Port Terminal	Others
13-Sep	1:30 PM	Japanese Company I (Trading Company)	Others
4-Nov	2:00 PM	Myanmar International Freight Forwarders Association	Others
6-Nov	3:00 PM	Team Leader, JICA Myanmar Transport Master Plan Study	Others
7-Nov	8:30 AM	ADB Myanmar	Development Partner
7-Nov	3:30 PM	Ministry of Rail Transportation	Government Agency
8-Nov	11:00 AM	Ministry of Transport, Ministry of Construction (Public Works), and Myanmar Railways	Government Agency

Nepal

Date	Time	Organization	Type
13-Sep	5:00 PM	JICA Nepal Office	Others
15-Sep	11:00 AM	Nepal Freight Forwarders Association	Others
15-Sep	11:00 AM	Ministry of Health and Population	Government Agency
15-Sep	11:00 AM	International Economic Coordination Division, Ministry of Finance	Government Agency
15-Sep	1:00 PM	Apollo Cargo	Others
15-Sep	1:00 PM	Trade Promotion Centre	Government Agency
15-Sep	3:00 PM	Nepal Intermodal Transport Development Board, Ministry of Commerce	Government Agency
15-Sep	3:00 PM	Himalayan Terminals	Others
16-Sep	9:15 AM	International Union for Conservation of Nature and Natural Resources	Others
16-Sep	11:00 AM	SAARC Secretariat	Development Partner
16-Sep	11:00 AM	Ministry of Science, Technology and Environment	Government Agency
16-Sep	11:00 AM	New York Cargo	Others
16-Sep	1:00 PM	World Bank Transport	Development Partner
16-Sep	1:00 PM	World Bank Environment	Development Partner
16-Sep	3:30 PM	Department of Customs, Ministry of Finance	Government Agency
16-Sep	3:30 PM	Ministry of Land Reform and Management	Government Agency
17-Sep	10:00 AM	Federation of Nepalese Chambers of Commerce and Industry	Others
17-Sep	10:30 AM	National Planning Commission	Government Agency
17-Sep	11:00 AM	Department of Railways, Ministry of Physical Planning, Works and Transport Management	Government Agency
17-Sep	12:00 PM	Department of Roads, Ministry of Physical Planning, Works and Transport Management	Government Agency
17-Sep	2:00 PM	Ministry of Physical Planning, Works and Transport Management	Government Agency
17-Sep	2:00 PM	Central Bureau of Statistics, National Planning Commission	Government Agency
17-Sep	2:00 PM	Public Freight	Others
17-Sep	3:30 PM	ADB Transport	Development Partner
17-Sep	4:00 PM	Confederations of Nepalese Industries	Others
18-Sep	11:30 AM	Nepal Foreign Trade Association	Others
19-Sep	10:45 AM	Export Promotion Board, Ministry of Commerce and Supplies	Government Agency
19-Sep	11:30 AM	Ministry of Federal Affairs and Local Development	Government Agency
19-Sep	12:00 PM	Ministry of Foreign Affairs	Government Agency
19-Sep	3:00 PM	South Asia Watch on Trade, Economics and Environment	Others
19-Sep	3:30 PM	Industrial Promotion Board, Ministry of Industry	Government Agency

Thailand

Date	Time	Organization	Type
16-Sep	9:00 AM	JETRO Thai Office (SME Promotion)	Others
16-Sep	11:00 AM	JETRO Thai Office (Public Relations)	Others
16-Sep	1:30 PM	National Economic and Social Development Board	Others
16-Sep	4:00 PM	Endo Lighting Thailand	Others
17-Sep	10:00 AM	Federation of Thai Industry	Others
17-Sep	2:00 PM	Thai Chamber of Commerce	Others
18-Sep	10:00 AM	Thai India Chamber of Commerce	Others
19-Sep	10:00 AM	Nissan	Others
19-Sep	1:30 PM	Nipro (Thailand) Ltd.	Others
19-Sep	4:00 PM	Yanmar Co., Ltd.	Others

Date	Time	Organization	Type
23-Sep	9:00 AM	International Union for Conservation of Nature and Natural Resources	Others
23-Sep	2:00 PM	Thai Airfreight Forwarder Association	Others
24-Sep	10:00 AM	Thai International Freight Forwarders Association	Others
25-Sep	9:00 AM	JICA Bangkok Office	Others
25-Sep	10:30 AM	World Customs Organizations	Development Partner
26-Sep	10:00 AM	UNESCAP Transport	Development Partner
26-Sep	11:00 AM	Ministry of Social Development and Human Security	Government Agency
26-Sep	1:30 PM	Kintetsu World Express Thailand	Others
26-Sep	2:00 PM	Asian Development Bank, Transport	Development Partner
26-Sep	4:00 PM	World Bank, Transport	Development Partner
27-Sep	9:00 AM	Office of Natural Resources and Environmental Policy and Planning	Government Agency
28-Nov	10:00 AM	National Economic and Social Development Board	Government Agency
28-Nov	2:00 PM	Department of Highways	Government Agency

付録 2a 第 1 回セミナー議事録

The First Seminar on the JICA Survey on Transport Infrastructure Development for Regional Connectivity in and around South Asia New Delhi, India, 16 January 2014

SUMMARY OF PROCEEDINGS

I. Introduction

1. The First Seminar (hereinafter the “Seminar”) on the JICA [Japan International Cooperation Agency] Survey on Transport Infrastructure Development for Regional Connectivity in and around South Asia (hereinafter “the Survey”) was held in New Delhi, India, on 16 January 2014. Senior executives in the public and private sectors, the academic and research community, and international development partner organizations attended the Seminar. The seminar program is provided as **Appendix 1** and the list of participants as **Appendix 2**.

2. The rapid economic growth in South Asia and various development movements in Southeast Asia including establishment of an ASEAN [Association of Southeast Asian Nations] Economic Community by 2015 have generated momentum for enhancing regional connectivity both within South Asia and between South Asia and Southeast Asia. In this context, JICA initiated a data collection survey in August 2013 to better understand the current situation and identify the potential and prospects for regional inland transport infrastructure development in South Asia.

3. The aim of the Seminar was to present the draft (interim) survey findings and obtain comments and inputs from diverse stakeholders with a view to enhancing and improving the Survey. Specific aspects presented included: (i) background, (ii) road and rail infrastructure, (iii) logistics and cross-border facilities, and (iv) soft infrastructure.

4. The Seminar was directed by senior JICA staff members, led by Mr. Toru Arai, Director General, South Asia Department, JICA.

II. Session 1: Opening

5. Mr. Tamaki Tsukada, Minister (Economic and Development), Embassy of Japan in India, opened the Seminar by warmly welcoming all participants. He explained that Japan is interested in regional connectivity in South Asia because it serves Japan’s growth strategy. Japanese companies operate with highly integrated supply chains across the region. For example, there are many Japanese automotive companies operating in India, but they import many of their components from ASEAN countries. Connectivity between ASEAN and India is therefore crucial for them to be productive. Also, he observed that regional cooperation is a natural attribute of any important bilateral relationship. The partnership of Japan and India will become stronger if the two countries work together in the regional context. As a natural outcome of megaprojects assisted by JICA, it is necessary to expand the horizon further to encompass the economic integration of South Asia and ASEAN. He shared the example of Japanese assistance for transport infrastructure in the Mekong Region, which led to a dramatic increase in the number of Japanese companies operating in the region – this is the kind of vision or scenario Japan has in mind regarding connectivity in South and Southeast Asia. He expressed his wish to see cooperation between Japan and India (and other countries in the region) using the existing regional frameworks including the South Asia Association for Regional Cooperation (SAARC) and ASEAN. He called for a focus on road connectivity (e.g., the ongoing India-Myanmar-

Thailand Trilateral Highway project) and the development of less developed areas (i.e., North East India, Bangladesh, Bhutan, and Nepal), considering that inclusive growth is an important component of regional development. Lastly, he referred to “connectivity of the seas”, with South Asia and ASEAN connected across the Bay of Bengal; he noted opportunities to develop port facilities, e.g., in Tamil Nadu and Chennai, where there is a concentration of Japanese automotive industries. He welcomed today’s initiative by JICA and thanked the countries of the region for their participation. In the forthcoming summit meeting between Japan and India, this topic will be an important agenda item to be discussed by the two leaders.

6. Mr. Sanjiv Ranjan, Joint Secretary (DPA [Development Partner Administration]-III), Ministry of External Affairs, Government of India, noted that a couple of years ago the DPA was established to synergize India’s external assistance, including assistance to neighboring countries. Connectivity is important to unlock human potential; it allows economic agents to exploit their respective comparative advantages. Connectivity with ASEAN countries continues to be a strategic priority of India. A number of initiatives are ongoing or are under active consideration under bilateral frameworks as well as multilateral frameworks (e.g., ADB’s South Asian Subregional Economic Cooperation [SASEC] program, India-ASEAN). He highlighted certain projects, including the India-Myanmar-Thailand Trilateral Highway, linking Moreh in India and Mae Sot in Thailand. An Indian assistance project in Myanmar will by 2016 upgrade to highway standard two sections totaling 280 km well as improve about 70 bridges. He also mentioned the Kaladan Multimodal Transport and Transit Project, which commenced in 2008 with the upgrading of Sittwe Port in Rakhine and has reached an advanced stage of construction; an inland waterway terminal about 150 km upstream of Sittwe is under construction. Work on the Indian side is also ongoing. He further noted that India has several bilateral projects with Bangladesh (e.g., work in India on railway to link with Bangladesh’s railway network), Bhutan, and Nepal (e.g., two rail projects). He concurred with Mr. Tsukada that soft infrastructure (e.g., motor vehicle regulations, sanitary-phytosanitary [SPS] requirements) is important and needs to be addressed along with hard infrastructure; he stated that it is useful to look at these issues when projects are conceived so that they can be properly reflected. He also observed that regional connectivity requires considerable coordination given the multiplicity of ongoing initiatives; there is a need to assure that projects in one country are aligned with projects in neighboring countries. Finally, he urged a pragmatic approach regarding financing and the economic viability of regional connectivity projects.

7. Mr. C. Kandasamy, Director General (Road Development) and Special Secretary, Ministry of Road Transport and Highways, Government of India, discussed regional development corridors (e.g., Asian Highways, the Trilateral Highway), integrated check posts (with 13 proposed in the first two phases), and other initiatives (e.g., the SAARC Motor Vehicle Agreement). He stated that the Indian Roads Congress in its Coimbatore Session in January 2013 adopted a resolution that roads should not only be for vehicles but also for people. He urged a focus on catalytic, mega, greenfield, elevated smart corridors, citing Kolkata–Petrapole–Dhaka–Agartala–Myanmar–Thailand as an example “with potential to inspire”. He noted the need to minimize land acquisition with three-dimensional land utilization. He called for providing multi-modal, multi-sectoral benefits to local people through “active roads”, leading to a “regional welfare community”.

8. Mr. Girish Pillai, Advisor (Infrastructure), Ministry of Railways, Government of India, observed that connectivity between people can make a large difference. He focused on rail connectivity in India’s North East Region. He noted that access to ports for North East India, Bhutan, and Nepal (to Kolkata and Chittagong) requires dramatic improvement. He also identified the need for a quantum increase in rail connectivity between South Asia and Southeast Asia. Projects of immediate concern include Agartala-Sabrum (110 km), Sabrum to Chittagong (60 km), and Belonia-Feni links. In addition, Mr. Pillai noted that the rail link

between Jiribam and Imphal has been sanctioned (approved) and will require INR 4,500 crore between Jiribam and Imphal and INR 2,500 crore between Imphal and Moreh. Also, two railway projects involving Nepal are underway (190 km in total, including a Jogbani–Biratnagar link, at a cost of INR 2,000–2,500 crore), while five lines involving Bhutan have been surveyed (e.g., a 130 km Hasimara–Phuentsholing link costing INR 3,000-4,000 crore).

9. Mr. Toru Arai, JICA, observed that the seminar participants share a strong sense that economic growth in the South Asia region will accelerate over the next 20 years, and that value chains and the movement of goods will change dramatically in terms of both modes and volumes. Enhancing regional connectivity in and around the South Asian region is therefore critical. Issues include road and railway improvements, the construction of modern border facilities, and in the area of soft infrastructure, harmonization of transport-related regulations and rules including transport agreements. Since JICA is keenly interested in being actively engaged in this important area including both hard and soft infrastructure, it has been carrying out the ongoing Survey focusing on land transport infrastructure. They have invited the Asian Development Bank (ADB), the World Bank, and others to share the findings of their work; comments during the seminar will be valuable for enhancing the final survey output, which will be presented in a final seminar to be held in Guwahati, Assam State, on 13 February 2014. In addition, Mr. Arai mentioned that in March 2014 JICA will initiate a complementary survey on strategic development of the regional maritime sector. The two studies/surveys will enable a view of the “complete picture”. In closing, he expressed his hope that the Seminar can provide a venue not only for discussion of regional connectivity, but also for broadening professional networks in this field.

III. Session 2: Strengthening Regional Connectivity in and around South Asia

10. This session addressed the importance of improving regional connectivity in and around South Asia by sharing the Survey’s interim findings and lessons learned from country and development partner experiences.

11. Mr. Yuichiro Motomura, JICA Survey Team Leader and President of PADECO Co., Ltd., presented the Survey’s interim findings. He first provided some essential background, showing that South Asia is at the hub of the region and has huge potential for economic growth, and that traffic volumes will naturally follow, with associated infrastructure requirements, hard and soft. Regarding road and railway infrastructure, he showed that both the road and railway networks offer potential for enhanced connectivity. With respect to logistics and cross-border facilities, he observed that the freight transport and logistics system in the region is not well developed but can be modernized. He also stressed the need to develop soft infrastructure to promote economic growth. Since transshipment is required at most border crossings, through transport would increase efficiency. Since all of the countries have transit requirements, all of the countries can benefit from “win-win” transit arrangements. In addition, inefficient customs and border procedures can be improved. He next introduced potential projects for JICA assistance, including road and railway infrastructure projects along eight corridors, freight transport and logistics projects, and soft infrastructure projects (i.e., pilot corridor and border efficiency projects, projects at the regional level.)

12. Mr. Ronald Antonio Q. Butiong, Unit Head, South Asia Subregional Economic Cooperation (SASEC) Unit, ADB, congratulated JICA for placing high priority on developing regional infrastructure in and around South Asia, and welcomed the Survey, which will complement ADB’s support for regional cooperation projects. He explained that regional cooperation and integration (RCI) is a strategic priority and a core area of operations under ADB’s Strategy 2020. ADB’s Regional Cooperation Strategy for South Asia focuses on transport, energy, and trade facilitation, and promotes a pragmatic approach in planning, preparing, and implementing RCI projects. ADB has provided technical assistance to SAARC

and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), supporting, among others, the SAARC Regional Multimodal Transport Study and the BIMSTEC Transport Infrastructure and Logistics Study. Mr. Butiong explained that SASEC is ADB's main platform for supporting RCI in South Asia, including assisting priority projects identified under SAARC and BIMSTEC. ADB is supporting and plans to support SASEC road connectivity projects in Bangladesh, Bhutan, India, and Nepal, which will upgrade sections of SAARC Corridors 4 and 8, and an east-west corridor linking India and Myanmar. ADB's 2014-2016 RCI pipeline for South Asia includes road and rail projects in the SASEC countries, which will address missing links and strengthen capacities of road and rail networks in the SASEC corridors. ADB is also supporting the SASEC trade facilitation sector through a program loan to Bangladesh, Bhutan, and Nepal that will promote customs modernization reforms, national single windows, and trade portals. This is being complemented by capacity building technical assistance on trade facilitation with support from ADB, the Government of Japan (Japan Fund for Poverty Reduction), the Australian Agency for International Development (AusAID, now integrated into the Australian Department of Foreign Affairs and Trade), and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Mr. Butiong stated that SASEC countries gave broad support for a SASEC Trade Facilitation Strategic Framework (2014–2018). The Framework calls for implementation of pilot projects that will yield immediate results in the areas of customs modernization, technical and SPS standards, border crossing infrastructure, and transport facilitation. Mr. Butiong concluded by noting that ADB looks forward to continued close collaboration between ADB and JICA in developing regional connectivity in and around South Asia.

13. Dr. Nagesh Kumar, Director, ESCAP South and South-West Asia Office, and Chief Economist, UNESCAP South and South-West Asia Office, noted the potential of and prospects for strengthening connectivity in South and Southwest Asia. He first discussed connectivity and the underexploited potential of regional economic integration in South and Southwest Asia. Considering that South Asia is the least integrated region in the world, there is huge potential that can be tapped with improved land transport systems. He then focused on transport corridors, noting that when networks are extended, the benefits grow proportionately (“network externalities”). When lagging regions are connected with more prosperous regions, economic activity will increase, especially in the poorer regions, which will balance regional development. Accordingly, he called for seamless connectivity across South and Southwest Asia. With extended corridors, South Asia's potential to emerge as a hub for economic activity can be realized, with each country serving as a (sub)hub. He discussed two UNESCAP proposals for integrating Economic Cooperation Organization (ECO), SAARC, and BIMSTEC transport corridors: (i) a Turkey-Iran-Pakistan-India-Bangladesh-Myanmar road corridor along Asian Highway routes; and (ii) an Istanbul-Teheran-Islamabad-Delhi-Kolkata-Dhaka container railway corridor along Trans-Asian Railway routes. Next, he listed a number of South and Southwest Asia transport corridors. He then observed that the way forward includes adopting a master plan to be developed in phases. Finally, he summarized UNESCAP activities on transport connectivity in South and Southeast Asia.

14. Mr. Atul Agarwal, Senior Transport Specialist, South Asia Sustainable Development, World Bank, presented the World Bank's experience with cross-border initiatives in and around South Asia. He first noted the potential for promoting regional and economic integration in South Asia, which is a key emphasis for the World Bank. He introduced a number of ongoing World Bank Group activities supporting economic and regional integration (e.g., the Nepal[-India] Trade and Transport Facilitation Project). He observed that multilateral institutions can play a bigger role than they do at present – they have access on both sides of borders, and to all of the countries. He observed that synergies between and among multilateral (and bilateral) institutions are important. Many projects that may not look to be regional projects on a prima facie basis can help with regional integration. He discussed potential engagements of the World

Bank in trade and transport facilitation, e.g., promoting India-Nepal-Bangladesh trade (including implementation of a trilateral transit agreement, border post infrastructure, and integrated border management at border crossings linking the three countries) and promoting India-Myanmar-Bangladesh trade (including connecting Kolkata and Haldia Ports to Sittwe Port in Myanmar and onward multimodal connectivity to North East India; and connectivity between Chittagong Port and Mizoram, and Mizoram to Myanmar via Champhai-Zokhawthar). Finally, he called attention to the South Asia Regional Integration Partnership Multi-Donor Trust Fund in which other development partners may participate.

15. Dr. Prabir De, Senior Fellow, Research and Information System for Developing Countries, India, presented on the performance of trade and transport corridors in Eastern Southern Asia, based on 2013 SASEC research assisted by ADB and UNESCAP. Specifically, he discussed the results of a business process analysis for selected products transported along a Nepal Corridor (Kakarbhitta–Panitanki–Phulbari–Banglabandha), along a Bhutan Corridor (Phuentsholing–Jaigaon–Hasimara–Chengrabangha–Burimari), and along another Nepal Corridor (Kathmandu–Birgunj–Raxaul–Kolkata). Specific findings included the need for: (i) reducing the length customs and cargo handling time at the Port of Kolkata through automation and modernization; (ii) faster opening of letter of credit accounts with the help of information and communication technology (ICT); (iii) faster cargo insurance with the help of ICT, engineering, and competition between/among service providers; (iv) use of ICT to obtain permits and certificates; (v) synchronization of cross-border customs; (vi) removal of the regulatory burden on imports and exports; (vii) (minimum) process re-engineering; (viii) acceptance of subregional transit; (ix) development of border infrastructure; (x) national single windows for paperless trade; and (xi) consistent enforcement of basic trade facilitation measures. Based on this analysis, Dr. De recommended a number of specific trade facilitation projects (e.g., cooperation among border agencies, joint customs control and joint border management, development of a SASEC single window, use of modern vehicle tracking systems).

16. Mr. Tomohide Ichiguchi, Senior Representative, JICA India Office, focused on the North East Region of India, which is a priority area for the Government of Japan and JICA because it is important for regional connectivity and because it is one of India's economically lagging regions with inadequate infrastructure. However, given its natural resources and strategic location, the North East Region has potential to become a powerhouse in development, trade, and investment. In addition, political and economic reform in Myanmar highlights the potential for development of the region. Also, Japan has historical and cultural ties with the region. He explained that JICA has several ongoing and planned projects in the region, in various sectors. He noted that JICA cannot assist all of the potential projects mentioned by Mr. Motomura, but it has had advanced discussion on several of the prioritized projects, e.g., with MORTH on improving national highways in the North East Region, to complement improvements under the Special Accelerated Road Development Program in the North East (SARDP-NE). They will explore possibilities for applying Japanese technologies in bridge and tunnel construction and disaster prevention. MoRTH has identified about 10 national highway sections for potential JICA assistance that are important for the development of the North East states, some of which will help unlock regional connectivity with Bangladesh, Bhutan, and Myanmar. While there are a number of challenges (e.g., land acquisition, procurement difficulties), JICA will seek innovative management solutions. Finally, he expressed his hope that these projects will improve regional connectivity and ultimately bring about a more prosperous South and Southeast Asia.

17. Mrs. K. Damayanthi, Joint Secretary, Ministry of Development of North Eastern Region (MDONER), India, thanked JICA for conducting an insightful survey of connectivity improvements in and around South Asia. She observed that the Survey covers both hard and soft infrastructure, and that it lays down objective project evaluation criteria. However, as

observed by Mr. Butiong, ADB, the financial requirements are huge. The North East was seamlessly connected with ports and other areas before Partition but now suffers badly due to poor connectivity. She expressed appreciation for JICA's focus on the region. Mrs. Damayanthi observed that security issues are important, although the use of ICT (e.g., GPS tracking) will address the issue. She stated that the simplification of systems will lead to increased trade (e.g., trade of organic food products from the North East). She noted the importance of harmonizing transport regulations to reduce long delays at borders. She pointed to the potential of "win-win" arrangements between India and Bangladesh. Finally, she observed that if investments are delayed, costs will increase; she stated that "we must seize the moment".

18. Mr. Sagar Krishna Chakraborty, Project Director, Regional Connectivity and Integration (Rail Component) Project, Bangladesh Railway first noted the importance of Bangladesh as a regional transport hub (Chittagong and the potential deep sea port). He pointed out that with ADB assistance Bangladesh Railway has been studying seven subprojects with implications for regional connectivity. Capacity constraints are being addressed. A 20-year master plan is to be developed that will consider gauge harmonization issues. ADB is funding double-lining of the Dhaka-Chittagong section, which will also be assisted by JICA. He noted that the JICA Survey Team could productively take into consideration the ADB Bangladesh Regional Transport Hub technical papers prepared as part of the Regional Cooperation and Integration Project – Rail Component Consultants' Services.

19. Mr. Shishir Kanti Routh, Executive Engineer, Roads and Highways Department, Bangladesh, observed that the road corridors suggested by the Survey are in line with the corridors identified in regional initiatives, e.g., SAARC and BIMSTEC. He noted that they are developing road corridors to allow landlocked countries to use the seaports at Chittagong and Mongla; one cannot derive the full benefits if there are substandard and/or missing sections. The JICA Survey well identified Corridors RO1, RO2, RO3, and RO17. He observed that part of RO3C linking Nepal and Chittagong is being developed with ADB assistance (e.g., Panchagarh-Bangladbanda). While further improvements to increase capacity are more long term, the Panchagarh-Ranpur section is currently not in any study/program and need improvement. He noted that ADB is studying the Jessore-Khulna section, which connects with Mongla. A 44 km section to Silchar along the Bangladesh-China-India-Myanmar (BCIM) Corridor could be included in the JICA Survey. Finally, he noted that a 138 km section along RO7 may be considered because it is necessary for connectivity for connecting Bhutan with Chittagong.

20. Mr. Dophu Dukpa, Senior Regional Transport Officer, Road Safety and Transport Authority, Ministry of Information and Communications, Bhutan, noted that the Seminar was timely since there are a number of ongoing initiatives. He noted that road infrastructure development in Bhutan is constrained by the country's topography. He pointed out that Asian Highways 42 and 28, and SAARC Corridor 8, are important for Bhutan for access to seaports in India and Bangladesh. He noted that within Bhutan the Thimphu-Phuentsholing Road is being upgraded to Asian Highway standard with ADB financing. In addition, he mentioned the Pasakha access road and other components of the ADB SASEC Road Connectivity Project. Finally, he stated that Bhutan accords high priority to construction of a second east-west link in the south of the country.

21. Mr. Tulasi Prasad Sitaula, Secretary, Ministry of Physical Infrastructure and Transport, Nepal, thanked the survey team for its comprehensive study. He concurred that there will be dramatic growth in the region and there is a need to prepare for it. Processing times are lengthy, containerization has not progressed, and access to the sea is poor for Nepal, a landlocked country with topographical constraints. Asian Highways 2 and 42 in Nepal are not up to standard, the railway network needs to be developed, and "last mile connectivity" is inadequate. While the pace is slow, two railway lines and some roads are being developed with bilateral support from India; inland clearance/container depots (ICDs) are being developed with ADB

assistance and an ADB SASEC road connectivity project will soon commence. He thanked the Government of India, JICA, ADB and SASEC, and the World Bank for supporting connectivity initiatives. The corridors from Kathmandu to Kolkata and Chittagong are crucial. He would like to see the SAARC Motor Vehicle Agreement implemented soon. A master plan for integrated connectivity and staged implementation could be a key to success. Finally, he stated that Nepal seeks to benefit from Japanese technology.

22. Ms. Kobkul Motana, Director of Planning Bureau, Office of Transport and Traffic Policy and Planning, Ministry of Transport, Thailand, noted that the Seminar included considerable information that she had not heard before. She welcomed the connection to South Asia but noted the importance of reflecting Myanmar's views. She noted the international agreement on the ASEAN Highway and the ASEAN Transport Action Plan, and identified the need to complete missing links of the Singapore-Kunming Rail Link and the ASEAN Highway (which is part of the Asian Highway network). While these connections are complete in Thailand, they are waiting for connections in their neighboring countries. She stressed the importance of having a good bilateral agreement, even if the hardware is there. For example, they opened the Fourth [Thailand-Lao PDR] Mekong Friendship Bridge last month, but the bilateral agreement establishing traffic rights needs to be refined. She urged JICA to complete a master plan, agreed by the countries, to prioritize projects. Upon completion of Ms. Motana's presentation, Mr. Arai of JICA noted that the participation of Thailand is important for South Asia-Southeast Asia connectivity and because South Asia can learn from the GMS experience in enhancing connectivity.

IV. Session III: Open Discussion

23. Dr. Mohammed Mahfuz Kabir, Senior Research Fellow, Bangladesh Institute of International Strategic Studies (BISS), stated that 6.5%–7.5% is a more likely growth rate for Bangladesh than 6.0%. He said that India has become a “paradox” since it is a developing country but it exports capital and products; it will be the export hub for the region. Mr. Motomura clarified that the findings reported are interim and the JICA Survey Team will consider these and other comments in finalizing the survey report.

24. Mr. Anil Bamba, Member (Planning and Development), Land Ports Authority of India, asked whether one stop-border posts in Africa include the extraterritorial exercise of sovereign duties. Mr. Motomura clarified that this was the case (e.g., at Chirundu between Zambia and Zimbabwe).

25. Dr. Kabir, BISS, noted that the population of North East India is 40–45 million. Mrs. Damayanthi, MDONER, observed that while this is less than that of other South Asian countries, it is larger than that of some other countries in the region.

26. Dr. Kabir also noted that the foundation stone has been laid for a new port at Kalapara, which may change the transport connectivity situation especially for Bhutan and Nepal. He further noted that the provision of transit rights to North East India is sensitive in Bangladesh; a core committee on transit submitted a report in late 2011, but still diplomatic initiatives are required.

27. Mr. Manab Majumdar, Assistant Secretary General, Federation of Indian Chambers of Commerce and Industry, identified the importance of exploring innovative financing options through public private partnerships (PPPs). Also, he urged greater involvement of the private sector. He observed that if PPP projects are introduced in the context of 2–3 countries, the challenge will become more formidable. He would welcome JICA assistance for brainstorming on this issue.

28. Mr. Khamal Shaleen, Research Associate, South Asia Watch on Trade, Economics and Environment, observed that it is important to consider not only the quantity of transport infrastructure, but also the quality (e.g., it is possible to reinforce road structures so that they can better accommodate the traffic). He queried whether there is a possibility of a regional transit agreement among the SAARC countries, e.g., it is possible to develop a legal framework for transit analogous to that for free trade under the South Asia Free Trade Agreement (SAFTA).

29. Mr. Shri Ram Muivah, Principal Secretary, Transport and Public Works Department, Government of Manipur, noted that JICA has proposed assistance for 10 national highways in North East India, including two in Manipur. He stressed that once an agreement is reached it should be signed on a timely basis. In a prior case with another development partner it took six years to sign an agreement; costs had increased, and the development partner and MDONER were unwilling to shoulder the cost overrun. Accordingly, he urged both JICA and MORTH to make sure that the loan agreement is finalized on a timely basis.

30. Mr. R.B. Rauniar, Managing Director, Interstate Multi-Modal Transport (Pvt) Ltd., called for in-house institutional training and capacity building so that “these areas will not forever be dependent on outside consultants”. Mr. Arai, JICA, noted that this is a good point and stated that JICA will address it in moving from a regional survey to a master plan to implementation.

V. Closing Remarks

31. Mr. Shinya Ejima, Chief Representative, JICA India Office, made the closing remarks. He expressed gratitude for the collective efforts of all who attended the Seminar. He noted that it was a good opportunity to reach common understanding on the importance of enhancing regional connectivity in South and Southeast Asia to continue the dynamic growth of the region. Since the task is huge, it is not possible for it to be undertaken by any one country or development partner. Instead, coordination among countries and organizations associated with regional connectivity is indispensable. Many projects and initiatives are ongoing and it is encouraging that regional connectivity enhancement has started already. JICA appreciates the various comments and suggestions made on the Survey and will incorporate these in the final report. He again stressed the importance of South Asia-Southeast Asia integration and inclusive growth. Finally, he asked for the continued cooperation and support of the seminar participants and looked forward to seeing the participants in Guwahati for the final seminar.

Appendix 1: Seminar Program

Time	Subject	Speakers
9:30–10:00	Registration Venue: Pre-Function Area	
10:00–10:45	Session 1 Venue: The Viceregal	
	Opening Remarks by	Mr. Tamaki Tsukada Minister (Economic and Development), Embassy of Japan in India
	Address by	Mr. Sanjiv Ranjan, Joint Secretary (DPA-III), Ministry of External Affairs, Government of India
	Address by	Mr C. Kandasamy Director General and Special Secretary, Ministry of Road Transport and Highways, Government of India
	Address by	Mr. Girish Pillai Advisor (Infrastructure), Ministry of Railways, Government of India
	Address by	Mr. Toru Arai Director General, South Asia Department, JICA
10:45–11:00	Coffee Break	
11:00–13:30	Session 2: Strengthening Regional Connectivity in and around South Asia <i>This session will discuss importance of improving regional connectivity in and around South Asia by sharing JICA's survey findings on Transport Infrastructure for Regional Connectivity in and around South Asia and lessons learned from country and donor experiences.</i> Venue: The Viceregal	
11:00–11:20	Presentation on JICA Survey Findings	Mr. Yuichiro Motomura Head of JICA Survey Team
11:20–11:35	Presentation on Experiences of Cross-border Initiatives in and around South Asia	Mr. Ronald Antonio Q. Butiong Unit Head, South Asia Subregional Economic Cooperation, Regional Cooperation and Operations Coordination Division, South Asia Department, Asian Development Bank
11:35–11:50	Presentation on Experiences of Cross-border initiatives in and around South Asia	Dr. Nagesh Kumar Director, ESCAP South and South-West Asia Office, and Chief Economist, UN- ESCAP, UN ESCAP South and South- West Asia Office
11:50–12:05	Presentation on Experiences of Cross-border initiatives in and around South Asia	Mr. Atul Agarwal Senior Transport Specialist, South Asia Sustainable Development, The World Bank
12:05–12:15	Presentation on Experiences of Cross-border initiatives in and around South Asia	Dr. Prabir De Senior Fellow, Research and Information System for Developing Countries
12:15–12:25	Potential Projects in and around the North Eastern Regions in India	Mr. Tomohide Ichiguchi Senior Representative, JICA India Office
12:25–12:55	Comments from Concerned Governments Government of India	Mrs. K. Damayanthi Joint Secretary, Ministry of Development of North Eastern Region

Time	Subject	Speakers
	Government of Bangladesh	Mr.Sagar Krishna Chakraborty, Project Director, Regional Connectivity and Integration (Rail Component) Project, Bangladesh Railway Mr.Shishir Kanti Routh, Executive Engineer, Roads and Highways Department
	Government of Bhutan	Mr. Dophu Dukpa Senior Regional Transport Officer, Road Safety and Transport Authority, Ministry of Information and Communications
	Government of Nepal	Mr. Tulasi Prasad Sitaula, Secretary, Ministry of Physical Infrastructure and Transport
	Government of Thailand	Ms. Kobkul Motana, Director of Planning Bureau, Office of Transport and Traffic Policy and Planning, Ministry of Transport
12:55-13:25	Open Discussions	
13:25-13:30	Closing Remarks	Mr. Shinya Ejima Chief Representative, JICA India Office
13:30-14:30	Lunch	

Appendix 2: List of Participants

GOVERNMENT OF INDIA

Mr. Sanjiv Ranjan
Joint Secretary(DPA-III)
Ministry of External Affairs

Mr. C. Kandasamy
Director General
RD&RR
Ministry of Road Transport and Highways

Mr. Sunil Kumar Verma
Chief Engineer
Ministry of Road Transport and Highways

Mr. A.D. James
Deputy Secretary
Ministry of Road Transport and Highways

Mr. Niraj Verma
Joint Secretary
Ministry of Road Transport and Highways

Mr. D. Sarangi
Chief Engineer
Ministry of Road Transport and Highways

Mr. Girish Pillai
Advisor (Infrastructure)
Ministry of Railways

Mr. Arvind Madhav Singh
Joint Secretary
Ministry of Development of North Eastern
Region

Mrs. K. Damayanthi
Joint Secretary
Ministry of Development of North Eastern
Region

Mr. Y. S. Shahrawat
Chairman
Land Ports Authority of India
Ministry of Home Affairs

Mr. Bamba Anil Kumar
Member
Land Ports Authority of India
Ministry of Home Affairs

Mr. A.K. Dutta
Director
DFCCIL

Mr. V.K. Raina
Sea Link Expert
Consultant

GOVERNMENT OF BANGLADESH

Mr. Sagar Krishna Chakraborty
Project Director, Regional Connectivity and
Integration (Rail Component) Project
Bangladesh Railway

Mr. Abdul Jalil
Senior Assistant Secretary
Ministry of Railways

Mr. Md. Jamal Uddin Ahmed
Joint Secretary
Roads Division
Ministry of Communication, Bangladesh
Secretariat

Mr. Md. Ishaque
Deputy Chief
Roads Division
Ministry of Communication, Bangladesh
Secretariat

Mr. Shishir Kanti Routh
Executive Engineer
Roads and Highways Department

GOVERNMENT OF BUHTAN

Mr. Kunzang Wangdi
Officiating Director
Department of Roads
Ministry of Works and Human Settlement

Mr. Dophu Dukpa
Senior Regional Transport Officer
Road Safety & Transport
Ministry of Information and Communications

GOVERNMENT OF NEPAL

Mr. Tulasi Prasad Sitaula

Secretary
Ministry of Physical Infrastructure and Transport

GOVERNMENT OF THAILAND

Ms. Motana Kobkul

Director of Planning Bureau
Office of Transport and Traffic Policy and
Planning

GOVERNMENT OF MANIPUR

Shri. Ram Muivah

Principal Secretary
Transport and Public Works Department

GOVERNMENT OF BIHAR

Mr. Pratyaya Amrit

Secretary
Road Construction Department

GOVERNMENT OF UTTAR PRADESH

Mr. Khan Masarrat Noor

Chief Engineer
Public Works Department

ASIAN DEVELOPMENT BANK (ADB)

Mr. Ronald A.Q. Butiong
Unit Head, South Asia Subregional Economic
Cooperation
Regional Cooperation and Operations
Coordination Division
South Asia Department

Ms. Kavita S. Iyengar
Economist
India Resident Mission

Mr. Soumya Chattopadhyay
Regional Cooperation Consultant

THE WORLD BANK

Mr. Atul Agarwal

Transport Specialist

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE
PACIFIC**

Dr. Nagesh Kumar

Director and Chief Economist
South and South-West Asia Office

BANGLADESH INSTITUTE OF INTERNATIONAL AND STRATEGIC STUDIES

Dr. Mohammad Mahfuz Kabir

Senior Research Fellow

CENTRE FOR POLICY RESEARCH

Mr. K.C. Sivaramakrishnan

Chairman

RESEARCH AND INFORMATION SYSTEM FOR DEVELOPING COUNTRIES

Dr. Prabir De
Senior Fellow

SOUTH ASIA WATCH ON TRADE, ECONOMICS AND ENVIRONMENT

Mr. Khanal Shaleen
Research Associate

EMBASSY OF JAPAN IN INDIA

Mr. Tamaki Tsukada
Minister (Economic and Development)

Mr. Kei Masuda
Counsellor (Economic section)

Mr. Soichiro Yuyama
First secretary (Economic and Finance)

Mr. Hideki Taniguchi
Second Secretary (Agriculture & Bhutanese
Affairs)

Ms. Miyuki Eguchi
Project Formulation Advisor

Dr. Mohd. Faisal
Principal Economic Researcher

EMBASSY OF INDIA IN JAPAN

Dr. Mohd. Faisal
Principal Economic Researcher

EMBASSY OF JAPAN IN BANGLADESH

Mr. Hideshi Sasahara
First Secretary

JAPAN INTERNATIONAL COOPERATION AGENCY

Mr. Toru Arai
Director
General for South Asia Department

Ms. Arisa Watanabe
Regional Officer
Planning Division
South Asia Department

JICA INDIA OFFICE

Mr. Shinya Ejima
Chief Representative

Mr. Tomohide Ichiguchi
Senior Representative (Deputy Chief
Representative)

Mr. Chihiro Fukuda
Representative

Ms. Yui Nakamura
Project Formulation Advisor

Mr. Anurag Sinha
Senior Development Specialist

Mr. Sanjeev Moholkar
Principal Development Specialist

JICA EXPERTS

Mr. Keita Nakasu
Chief Advisor for Highway/Expressway Policy,
MORTH

Mr. Kiyoshi Dachiku
JICA Expert for Expressway Operations, NHAI

JICA BANGLADESH OFFICE

Mr. Takashi Hiramatsu
Project Formulation Officer

Mr. Suman Gupta
Senior Project Manager

JICA BHUTAN OFFICE

Mr. Hidetaka Sakabe
Representative

Mr. Krishna Subba
Administrative Officer

BENA, India Pvt. Ltd.

Mr. Takaaki Watanabe
Managing Director

FEDERATION OF INDIAN CHAMBERS OF COMMERCE AND INDUSTRY

Mr. Manab Majumdar
Assistant Secretary General

ITOCHU INDIA PVT. LTD.

Mr. Mitsuoka Naoto
Executive General Manager

JFE ENGINEERING INDIA PVT. LTD.

Mr. Izumi Sugibayashi
Managing Director

NEXCO

Mr. Yoji Kawai
Professional Engineer

NIPPON KOEI INDIA

Mr. Masato Nomura
Managing Director

NYK LINE (INDIA) LTD.

Mr. Mitsuyasu Okimura
Managing Director

Mr. Chander Kaul
Branch Manager

OBAYASHI CORPORATION

Mr. Yoshitake Higuchi
Deputy Manager
Civil Engineering Construction Department I

ORIENTAL CONSULTANTS

Dr. Bill Hayes
Chief Representative

PENTA-OCEAN CONSTRUCTION PVT LTD

Mr. Hideyo Hujii
Managing Director

SUMITOMO CORPORATION INDIA PVT LTD

Mr. Kohji Yamashita
Senior General Manager
New Business Development Department

JICA SURVEY TEAM

Mr. Yuichiro Motomura
Team Leader

Mr. Chiaki Kuranami
Deputy Team Leader/Regional Transport
Infrastructure Planner

Mr. Bruce Winston
Cross-Border Transport Network Specialist

Ms. Masako Hatta
Transport Planner I

Mr. Michael Chadney

Transport Planner II

Mr. Toshiaki Nagaya

Cross-Border Infrastructure Development Planner
(Border Facilities and Dry Ports)/Regional
Freight Transport Specialist I

Mr. Takayuki Urade

Industrial Development and Trade Promotion
Specialist I

Mr. Shinya Nagaoka

Environmental and Social Analysis/Social
Development Specialist

Mr. Shinichi Kimura

Project Coordinator/Transport Planning Assistant

PADECO

Mr. Noriaki Ebii

General Manager

付録 2b 最終報告セミナー議事録

The Final Seminar on the JICA Survey on Transport Infrastructure Development for Regional Connectivity in and around South Asia Guwahati, Assam, India, 13 February 2014

SUMMARY OF PROCEEDINGS

I. Introduction

1. The Final Seminar (hereinafter the “Seminar”) on the JICA [Japan International Cooperation Agency] Survey on Transport Infrastructure Development for Regional Connectivity in and around South Asia (hereinafter “the Survey”) was held in Guwahati, Assam, India, on 13 February 2014. Senior executives in the public and private sectors, the academic and research community, and international development partner organizations attended the Seminar. The seminar program is provided as **Appendix 1** and the list of participants as **Appendix 2**.

2. The rapid economic growth in South Asia and various developments in Southeast Asia including establishment of an ASEAN [Association of Southeast Asian Nations] Economic Community by 2015 have generated momentum for enhancing regional connectivity both within South Asia and between South Asia and Southeast Asia. In this context, JICA initiated a data collection survey on transport infrastructure development for regional connectivity in and around South Asia in August 2013 to better understand the current situation and identify the potential and prospects for regional inland transport infrastructure development in South Asia.

3. The aim of the Seminar was to present the final survey findings reflecting the intensive discussions during the First Seminar held at New Delhi, India, on 16 January 2014, and to deepen discussions on regional connectivity issues in the North East Region of India. Specific aspects presented included: (i) background, (ii) road and rail infrastructure, (iii) soft transport infrastructure, and (iv) cross-border facilities.

4. The Seminar was directed by senior JICA staff members, led by Mr. Yusuke Murakami, Director, South Asia Department, JICA.

II. Session 1: Opening

5. Mr. Tamaki Tsukada, Minister (Economic and Development), Embassy of Japan in India, opened the Seminar by expressing his gratitude to the participants. He congratulated the organizer, JICA, in selecting Guwahati to host this seminar because historically as well as at present Assam has enjoyed close links with its neighboring states and countries. He provided an overview of Japan’s bilateral relations in the region, with South Asian and ASEAN countries. He noted that there have been a series of high-level talks and strong cooperation with these countries, including a recent visit to India by Prime Minister Shinzō Abe, during which he proposed USD 2 billion USD equivalent of yen loans to India (the current bilateral program already amounts to USD 3 billion equivalent, making India the largest recipient of Japan’s official development assistance). The bilateral statement from the Summit for the first time addressed the topic of regional cooperation and connectivity, and directed officials to formulate a firm project to realize this vision. Therefore, the Seminar is timely. He observed that geographically North East India is where South and South Asia meet, and these two regions are important strategic investment locations for many Japanese companies, with now more than 1,000 Japanese companies operating in India. He also stressed the importance of the

neighboring countries, e.g., Bangladesh is one of the “next 11” economies following the BRICS.¹ Connectivity can be a “game changer” and can determine the investment behavior of private companies. In ASEAN, while Cambodia and Lao PDR are less developed, there has been a growing presence of Japanese companies because these countries connect the surrounding countries; he noted that Japan and ASEAN have worked together to create the East-West Corridor, which has shortened the travel time between Bangkok and Hanoi from two weeks to a couple of days. Similarly, Japan seeks to turn this vision into a reality in South Asia, to transform this remote area into a thriving hub by establishing the necessary infrastructure. Finally, he stated his hope that a concrete project would emerge from today’s discussions and that one day we might look back at today as “day 1 of our grand vision”.

6. Mr. M.P. Bezbaruah, Honourable Member, North Eastern Council, provided a brief outline of the North East’s expectations from an overall viewpoint. There have been a large number of projects and the implementation of each involves many states and countries; he stated that we must assure complementarities, cost savings, and the sharing of benefits among different projects. These are not always part of the discussion and implementation, and as a result there is often a feeling that nothing is happening. The North East should be part of all discussions and decision making on all issues. India cannot look east without looking at the North East. As stated by a former prime minister, the North East is a “bridgehead” between India and Southeast Asia; Southeast Asia is a “natural extension” of the North East. The region’s annual (nominal) GDP growth rate was 9.5% during the 11th plan period, which was greater than the national average. There are shared historical, cultural, and ethnic links that can be leveraged for greater trade and tourism. Connectivity is essential to ending the isolation caused by the partition. He stressed the importance of access to seaports through Bangladesh. He discussed both formal (commercial trade) and border trade. He noted that a systematic approach is needed to identify the comparative advantage of the North East for exports, on which basis steps for improving production efficiency can be taken. He also stressed the importance of improving marketing and transport links. Further, he stressed the importance of creating economic zones; he stated that assistance in this area would be of great help. Investment in connectivity without economic zones may not achieve the objective. He observed that 60% of the Asian Highway network (in the region) is still not of an international standard; also, the concept of roads should be viewed broadly; the Japanese *michi no eki*² concept could be usefully applied. In addition, he stressed the importance of air transport infrastructure, e.g., to attract tourists from Thailand. He also mentioned the importance of seamless national waterway connectivity, navigability, and protocol arrangements with neighboring countries to open routes to the sea. Finally, he stressed the importance of inclusive growth.

7. Dr. V.B. Pyarelal, Additional Chief Secretary, Government of Assam, stated that Government of Assam has been seeking to develop transport infrastructure. Regarding roads, he noted that the Public Works Department and other departments have been receiving external assistance. In addition, he discussed the Guwahati metro project, for which the detailed project report will be completed in the next few months; he noted that they may approach external agencies to help finance the project. He also noted assistance for the procurement of 400 buses to start operation in the next few months.

8. Mr. V.L. Patankar, Director General (Road Development) and Special Secretary, Ministry of Road Transport and Highways (MORTH), Government of India, congratulated

¹ BRICS is the acronym for the association of five major emerging national economies: Brazil, the Russian Federation, India, China, and South Africa.

² A *michi no eki* (道の駅) is a roadside station, i.e., a government-designated rest area found along roads. In addition to providing places for travelers to rest, they are also intended to promote local tourism and trade. Shops may sell local produce, snacks, souvenirs, and other goods.

JICA for organizing the seminar in Guwahati. He confirmed the commitment of the Government of India (GOI) to the overall development of the road network under its purview, for the entire country, including the network in the North East region, and the regions around the North East. The GOI has emphasized road development starting 15 years ago, e.g., with the National Highway Development Programme and the Special Accelerated Road Development Programme. He noted that in recent national plans there have been substantial increases in road sector investments (e.g., a 2.5 fold increase from the 11th to the 12th plan). He observed that while road development by the private sector was to reach 47% during the 12th plan period, this has proved to be a huge challenge due to the limited availability of equity and loan financing for the private sector; nowhere in the world has this proportion exceeded 25-30%. Certain steps from the GOI would increase private sector investment in the road sector, but there would be a need to restructure projects to build upon synergies with other sectors to make the projects more attractive. He mentioned a number of initiatives by the GOI to enhance connectivity, e.g., Asian Highways, the Trilateral Highway, the Kaladan Multimodal Transit Transport Project, integrated check posts, the development of roads in border areas. The aim is to move forward quickly to facilitate development of the entire region, to achieve overall social and economic development goals. He thanked JICA for conducting the study, which should formulate results-oriented plans. Finally, he noted that MORTH has already proposed possible JICA assistance projects to the Department of Economic Affairs, Ministry of Finance, “so that the dream for the North East and the entire region can be achieved much faster”.

9. Mr. Murakami, JICA, expressed his sincere gratitude to the seminar attendees. He stated the background and aim of the Seminar, as set out in paragraphs 2 and 3 of this summary of proceedings. He noted that the Seminar was mainly focused on the North East Region of India, as a hub of overland activity for the six survey countries. The North East Region is a priority for JICA’s cooperation with the country, as confirmed in the recent summit of the two countries’ leaders. He mentioned that JICA invited the Asian Development Bank (ADB), the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the Research and Information System for Developing Countries (RIS), and JICA’s Bangladesh Office to share insights and experience on cross-border. Also, MORTH’s regional office in Guwahati, the Inland Waterways Authority of India (IWAI), the Northeast Frontier Railway, and the JICA Survey Team will share their views and discuss road and rail infrastructure in the North East in a panel discussion. Comments made during the Seminar will provide valuable inputs for the final survey report. In addition to this study on overland connectivity, he noted that JICA will initiate a survey on strategic development of the maritime sector in the region. Finally, Mr. Murakami asked for continuous cooperation and support so that survey results will lead to the implementation of concrete projects on a timely basis.

10. Mr. Y. Joykumar, Project Director, Public Works Department, Manipur, observed that externally assisted projects in the North East require clearance/approval of the Ministry of Home Affairs, the Ministry of External Affairs, MORTH, and the Ministry of Development of North Eastern Region (MDONER). Such clearance/approval is quite cumbersome and is a major reason for delays in implementation. Mr. Joykumar asked whether the North Eastern Council can move the GOI to implement single window clearance or assign MDONER as the nodal agency for such clearances. Mr. M.P. Bezbaruah, North Eastern Council, also noted the cumbersome clearance/approval processes and expressed a desire to see them streamlined. He observed that while the North Eastern Council broadly follows the priorities of state governments, according to the regional Look East policy most projects are finalized by the various concerned ministries (e.g., the Ministry of External Affairs). He also noted the priority of improving internal air connectivity within the North East.

11. Mr. Ram Muivah, Principal Secretary, Transport and Public Works Department, Manipur, asked about the repayment mechanism for JICA loans for road projects in the region.

Mr. V.L. Patankar, MORTH, observed that while it is a question of time before it is clear which of the mentioned projects will proceed, repayment will be the responsibility of the GOI.

III. Session 2: Strengthening Regional Connectivity in and around South Asia (including the North East Region of India)

12. Mr. Yuichiro Motomura, JICA Survey Team Leader/Transport Infrastructure and Facility Planner, as well as the President of PADECO Co., Ltd., presented the Survey's findings. He first provided some essential background, showing that South Asia (including North East India) is at the hub of the region and has huge potential for economic growth, and that traffic volumes will naturally follow, with associated infrastructure requirements, hard and soft. Regarding road and railway infrastructure, he showed that both the road and railway networks offer potential for enhanced connectivity. He stressed the need to develop soft transport infrastructure to promote economic growth. With respect to logistics and cross-border facilities, he observed that the freight transport and logistics system in the region is not well developed but can be modernized. Since transshipment is required at most border crossings, through transport would increase efficiency. Since all of the countries have transit requirements, all of the countries can benefit from "win-win" transit arrangements. In addition, inefficient customs and border procedures can be improved. He next introduced potential projects for JICA assistance, including road and railway infrastructure projects along eight corridors, soft infrastructure projects (including pilot corridor and border efficiency projects, and projects at the regional level), and freight transport and logistics projects.

13. Ms. Kavita Iyengar, Economist, India Resident Mission, ADB, presented ADB's experience with cross-border initiatives in and around North East India, including South Asian Association for Regional Cooperation (the SAARC Regional Multimodal Transport Study, access to Bangladeshi ports by Bhutan and Nepal), South Asian Subregional Economic Cooperation (updating SASEC transport connectivity), and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (the BIMSTEC Transport Infrastructure and Logistics Study, the BTILS). She noted that the "building block, multi-speed, multi-track approach" adopted by ADB requires government ownership. Therefore, she discussed initiatives by country, covering India (the India SASEC Road Connectivity Project, regional road improvements, and land customs stations by the GOI), Bhutan (the Bhutan SASEC Regional Road Connectivity Project), Bangladesh (the Bangladesh SASEC Regional Road Connectivity Project and land port development), and Nepal (the Nepal SASEC Road Connectivity Project, the North Eastern State Roads Investment Program). Ms. Iyengar also discussed the Bangladeshi railway sector, including ADB's railway sector multitranche financing facility. She discussed future projects, including capacity enhancement of the existing transport network, the SASEC railway connectivity investment program in Bangladesh, multimodal connectivity between Bhutan and Bangladesh, and "last mile" connectivity. Finally, she discussed various project preparation activities (the Subregional Transport Project Preparatory Facility in Bangladesh, the Transport Project Preparatory Facility in Nepal, new technical assistance projects or design facilities to prepare projects in Bhutan and Nepal, and an update of the BTILS).

14. Dr. Manas Bhattacharya, Senior Consultant, UNESCAP South and South-West Asia Office, introduced various UNESCAP initiatives in (i) connectivity and corridor development, relating to the Asian Highway, Trans-Asian Railway, and dry ports; (ii) identification of transport corridors linking South and Southwest Asia and beyond to leverage the strategic location of the region as a hub for east-west trade; (iii) connectivity for border development; (iv) models of secure and efficient cross-border transport, including a border crossing management information system for goods transport; and (v) policy dialogue in support of greater

connectivity and facilitation. He provided a number of useful web links to UNESCAP research on these topics.

15. Dr. Prabir De, Senior Fellow, RIS, presented on the role of production networks in increasing production in India's North East Region. First, he observed that the Survey provides useful directions for the funding of projects in the region. He discussed North East India and India's Look East Policy and the importance of removing the economic isolation of the region. He stated that borders should be seen as economy-building assets rather than deterrents to development. Dr. De discussed the current trade arrangements of the region (e.g., private sector driven resource links between the North East Region and Bangladesh, transit trade links between the North East Region and Myanmar). He then provided an illustration of emerging production networks in the North East Region, focusing on the example of the North East Region and Bangladesh; he also provided an example of connectivity-induced production networks between the North East Region and Myanmar. Next, he addressed trade facilitation in the North East and introduced the latest developments in regional connectivity, including the ASEAN-India Transit Transport Agreement proposed by the Indian Prime Minister at the ASEAN-India Summit in Brunei in September 2013. Dr. De also introduced a number of new proposals (e.g., new ports and special economic zones; an India-Myanmar-Lao PDR-Viet Nam Corridor, as an example of Look East Indian-ASEAN Connectivity). He then addressed impact assessment, focusing on the effect of improved connectivity on production networks; he reported that less paperwork and red tape, better telecommunications infrastructure, and the availability of warehouses were particularly important for the private sector. He mentioned that a number of measures are necessary to overcome the barriers and support regional connectivity (e.g., integrated transport planning for the North East, improvement of infrastructure and services, harmonization of rules and procedures). He closed with a list of specific recommendations including examples such as the completion of the Trilateral Highway, removal of restrictions on the entry of motor vehicles, implementation of standardized border crossing procedures, electronic submission of trade documents, engagement of international development partners to enhance connectivity.

16. Mr. Kei Toyama, Senior Representative, JICA Bangladesh Office, presented the perspectives and plans of Bangladesh as a hub for regional connectivity. He noted that his presentation was from the JICA point of view but reflected views from Government of Bangladesh counterparts. He began by addressing features and a vision for regional connectivity. Challenges are a result of the region including four least developed countries and three landlocked regions; the countries are asymmetric (in terms of political power, trade balance, and interests) and there are ongoing disputes (regarding land boundaries, water sharing, transit). In addition, he discussed how Bangladesh can contribute as a regional hub for mutual benefit, e.g., by providing access to the Bay of Bengal for landlocked regions; by providing diversified, efficient routes between SAARC and ASEAN. He also discussed the perspectives and plans of Bangladesh, e.g., by addressing bottlenecks in the transport sector and prioritizing major projects such as the Padma Bridge, a potential deep seaport, and special economic zones. He further discussed "wisdom for connectivity" (e.g., the need for consistent political leadership, friendship building among people(s)). He then addressed the road and railway (sub)sectors, noting the shift in priority to rail in the National Integrated Multimodal Transport Policy. He concluded by stating that JICA is happy to work as a honest broker for the region, by providing hardware, software, and wisdom.

17. Mr. Kunzang Wangdi, Officiating Director, Department of Roads, and Mr. Dophu Dukpa, Senior Regional Transport Officer, Road Safety and Transport Authority, stated that: (i) road corridors RO7 and RO 9 are important for regional integration, and (ii) the construction of the Maokhola Bridge on the Southern East-West Highway is important. Mr. Motomura, JICA Survey Team, replied that based on the multi-criteria selection process, each proposed project

was evaluated from the viewpoint of regional connectivity. He stated that the JICA Survey Team would revisit this evaluation but could not guarantee the result.

18. In response to a question from Mr. Muivah, Transport and Public Works Department, Manipur, Dr. Bhattacharya, UNESCAP South and South-West Asia Office, clarified that UNESCAP is not a funding organization but rather it extends technical assistance, conducts research, and provides a forum for discussions among governments.

19. Mr. Tsukada, Embassy of Japan in India, found the argument of connectivity-induced production networks put forward by Dr. De, RIS, to be “intriguing”, but he observed that connectivity is a necessary rather than sufficient condition for production. Mr. Tsukada asked whether there was not a need for a considered industrial policy by the host government for production networks to develop. Dr. De concurred and noted that RIS is now conducting a study on the role of connectivity and domestic industrial policy.

IV. Session III: Panel Discussion on Road and Railway Infrastructure in and around the North East Region

20. Mr. Tomohide Ichiguchi, Senior Representative, JICA India Office, facilitated the panel discussion.

21. Dr. Chiaki Kuranami, Deputy Team Leader/Regional Transport Infrastructure Facility Planner, JICA Survey Team, made a brief presentation on transport infrastructure in North East India. He noted that while the North East Region is strategically important with many opportunities, there are a number of issues restricting connectivity and delaying project implementation (e.g., varied and difficult terrain, landslides). He explained the Special Accelerated Road Development Programme in North East (SARDP-NE). He also mentioned that the National Highway Authority of India has a number of improvement schemes in the North East, and that ADB and the World Bank are assisting a number of road development projects in the region. He explained the engagement process of the JICA Survey Team, as well as the two-stage evaluation process employed to identify potential projects for JICA assistance/further investigation. He then discussed shortlisted regional road railway corridors and projects in North East India, providing summaries of specific projects and noting that it is not envisaged that JICA will provide assistance for all these projects, but having completed the evaluation process and sifted out lower-performing projects it provides the basis to guide the next steps for JICA. Finally, he jump-started the panel discussion with the following topics: (i) What are the opportunities and constraints in implementing the seven priority projects identified in this survey? (ii) What potential innovative measures can be used to address implementation constraints in the North East Region? Mr. Ichiguchi confirmed that JICA is seriously considering funding certain of the projects mentioned by Dr. Kuranami.

22. Mr. Sudip Chaudhury, Superintending Engineer, Ministry of Road Transport and Highways, Regional Office-Guwahati, presented on road development in the North East Region, by state and by program (e.g., the SARDP-NE). He identified a number of specific issues requiring the attention of state governments (e.g., poor project preparation, the need for state support for advance land acquisition, the need for expedited forest and environmental clearances, delays due to poor performance of contracting agencies). Mr. Ichiguchi observed that funding road development in the region is a key challenge.

23. Mr. M.K. Saha, Director, IWAI, Ministry of Shipping, introduced the Indo-Bangladesh Protocol on Inland Water Transit and Trade, which was agreed pursuant to Article VIII of the trade agreement between the two governments. He observed that the protocol provides alternative connectivity avoiding rail/road connectivity through the already congested chicken's

neck link to the North East; also, it is the only option for the movement of over-dimensional cargo (i.e., cargo too big for a standard container size) to the North East, and is an economical and pollution-free mode of transport for bulk cargo. A problem is that the protocol is renewed or extended only for short periods, and therefore operators and shippers are hesitant to commit to the mode. He also discussed the land customs station at Agartala, reporting that even as an upgraded integrated check post, it is insufficient to serve expected cargo. Mr. Ichiguchi observed that Mr. Saha provided a good introduction to the potential and challenges of regional waterways, a topic not covered by other speakers.

24. Mr. A.S. Garud, Chief Administrative Officer-I (Construction), Northeast Frontier Railway, Office of the General Manager (Construction), Ministry of Railways, presented on railways as a catalyst for development of the North East States. He highlighted services and facilities commissioned in the last ten years, infrastructure projects in progress and planned, and issues of concern and assistance required from the GOI and state governments. Mr. Ichiguchi observed that railway transport is especially important for long-distance, freight transport.

25. Mr. Sagar Krishna Chakraborty, General Manager and Project Director, Bangladesh Railway (BR), thanked PADECO for incorporating its comments; the major points are covered. He stated that BR's financial position is much improved. He reported that ADB is studying seven regional rail projects. Since ADB cannot fund all of these projects, JICA should consider funding some. Dr. Kuranami responded that the JICA Survey Team included three packages of railway projects in the shortlist (two of which cover the seven ADB regional rail projects mentioned by Mr. Chakraborty), but it is up to JICA to proceed from there and further discussions with ADB will be required. Mr. Ichiguchi stated that Mr. Toyama will discuss the matter with BR after returning to Bangladesh.

26. Professor Amar Yumnam, Department of Economics, Manipur University, stated that any project in the North East must earn the trust of the people that it will be implemented sincerely. Mr. Ichiguchi concurred, stating that projects should be owned by the people.

27. Mr. Y. Joykumar, Public Works Department, Manipur, observed that detailed projects reports are not properly prepared and that project sizes are too small. Mr. Chaudhury, MORTH, stated that while there have been some minor improvements, progress is slow. Environmental clearances and land acquisition processes are more difficult in India than in neighboring countries; ideally pre-construction activities would be completed before construction is commenced, but in reality only 30-40% is completed.

28. Mr. Md. Jamal Uddin Ahmed, Joint Secretary Roads Division, Ministry of Communications, Bangladesh Secretariat, noted that the JICA Survey Team prepared a shortlist of 11 road corridors and RO1, RO3, and RO7 were considered priorities. While a number of priority projects are included on the shortlist, he considered that some were not and could be considered for inclusion (e.g., the RO2 missing link). Mr. Ichiguchi stated that the JICA Survey Team's findings should be considered as recommendations, and the Government of Bangladesh can continue discussions with the JICA Bangladesh Office to identify the precise projects that require JICA funding.

V. Closing Remarks

29. Mr. Shinya Ejima, Chief Representative, JICA India Office, made the closing remarks. He expressed gratitude for the collective efforts of all who attended the Seminar, from neighboring countries, from New Delhi, from the North East Region, and from Japan. It was held in Guwahati, a keystone city in the heart of the region; it was not an internal seminar but a regional one involving neighboring countries. The Seminar was practical and results oriented.

JICA stands ready to start financing as soon as possible when projects are ready for implementation; in India, MORTH has already evaluated selected road projects and sent them to the Department of Economic Affairs, Ministry of Finance, for consideration. He observed that the Seminar was “historic” and “epoch making”, since it will be seen as kick starting the enhancement of connectivity among neighboring countries and the North East Region. As many panelists pointed out, the potential of the region is huge; he concluded that there is a need to work on the ground and make sure that benefits of these connectivity projects accrue to the people in the region.

Appendix 1: Seminar Program

Time	Subject	Speakers
9:30–10:00	Registration	
10:00–11:00	Session 1 Venue: TAI Hall	
	Opening Remarks	Mr. Tamaki Tsukada Minister (Economic and Development), Embassy of Japan in India
	Address by	Mr. Pyare Lal Additional Chief Secretary, Government of Assam
	Address by	Mr. M. P. Bezbaruah Hon'ble Member, North Eastern Council, Government of India
	Address by	Mr. V. L. Patankar Director General (Road Development) and Special Secretary, Ministry of Road Transport and Highways, Government of India
	Address by	Mr. Yusuke Murakami Director, Planning Division, South Asia Department, JICA
11:00–11:10	Coffee Break	
11:10–13:50	Session 2	
11:10–11:40	Presentation on JICA Survey Findings on Transport Infrastructure Development for Regional Connectivity in and around the North Eastern Region of India	Mr. Yuichiro Motomura Head of JICA Survey Team
11:40–11:55	Presentation on Experiences of Cross Border Initiatives in and around the North Eastern Region of India	Ms. Kavita Iyengar Economist, India Resident Mission, Asian Development Bank
11:55–12:10	Presentation on Experiences of Cross Border Initiatives in and around the North Eastern Region of India	Dr. Manas Bhattacharya Senior Consultant, ESCAP South and South- West Asia Office
12:10–12:25	Presentation on Experiences of Cross Border Initiatives in and around the North Eastern Region of India	Dr. Prabir De Senior Fellow, Research and Information System for Developing Countries (RIS)
12:25–12:40	Presentation on Experiences of Cross Border Initiatives in and around the North Eastern Region of India	Mr. Kei Toyama Senior Representative, JICA Bangladesh Office
12:40–12:50	Coffee Break	
12:50–13:50	Panel Discussions on Transport Infrastructure in and around North Eastern Region	Mr. Chiaki Kuranami JICA Survey Team Mr. Sudip Chaudhury Superintending Engineer, Ministry of Road Transport and Highways, Regional Office- Guwahati Mr. M.K. Saha Director, Traffic, Inland Waterways Authority of India, New Delhi Mr. A.S.Garud Chief Administrative Officer NF Railways
	Open Discussions	Facilitated by Mr. Tomohide Ichiguchi Senior Representative, JICA India Office
13:50–13:55	Closing Remarks	Mr. Shinya Ejima Chief Representative, JICA India Office
13:55–14:55	Lunch	

Appendix 2: List of Participants

GOVERNMENT OF INDIA

Mr. V.L. Patankar
Director General (Roads) & Special Secretary
Ministry of Road Transport and Highways

Mr. Sudip Chowdhury
Superintending Engineer (SE)
Ministry of Road Transport and Highways

Mr. Rajnish Kapur
Superintending Engineer (SE)
Ministry of Road Transport and Highways

Mr. M.P. Bezbaruah
Hon'ble Member
North Eastern Council

Mr. Arun Roy
Director
Inland Water Authority of India

Mr. M.K. Saha
Director
Inland Water Authority of India

Mr. P.K.H. Singh
BRES
Advisor (Transport and Communication)

GOVERNMENT OF BANGLADESH

Mr. Sagar Krishna Chakraborty
General Manager
Project Director, Regional Connectivity and
Integration (Rail Component) Project
Bangladesh Railway

Mr. Abdul Jalil
Senior Assistant Secretary
Ministry of Railways

Mr. Md. Jamal Uddin Ahmed
Joint Secretary
Ministry of Communication, Bangladesh
Secretariat

Mr. Shishir Kanti Routh
Executive Engineer
Roads and Highways Department

GOVERNMENT OF BUHTAN

Mr. Kunzang Wangdi
Officiating Director
Department of Roads
Ministry of Works and Human Settlement

Mr. Dophu Dukpa
Senior Regional Transport Officer
Ministry of Information and Communications

Mr. Chunjur Tshering
Deputy Collector
Department of Revenue and Customs

GOVERNMENT OF NEPAL

Mr. Rabindra Nath Shrestha
Joint Secretary
Ministry of Physical Infrastructure and Transport

GOVERNMENT OF THAILAND

Ms. Motana Kobkul
Director of Planning Bureau
Ministry of Transport

Ms. Sakuntha Supakoonsrisak
Policy and Planning Analyst
Ministry of Transport

GOVERNMENT OF ASSAM

Ajay Barman
Executive Engineer (EE)
Public Works Department

J. Thakuria
Assistant Engineer (AE)
Public Works Department

GOVERNMENT OF NAGALAND

Mr. T. Puro
Superintending Engineer (SE)
Public Works Department

Mr. Imnajungba
Executive Engineer (EE)
Public Works Department

Mr. Hozeto
Executive Engineer (EE)
Public Works Department

Mr. Vikhipu
Engineer, Sub-Divisional Officer (SDO)
Public Works Department

Mr. Chingkato
Engineer, Sub-Divisional Officer (SDO)
Public Works Department

GOVERNMENT OF MANIPUR

Mr. Ram Muivah
Principal Secretary
Transport and Public Works Department

Mr. Y. Joykumar
Project Director
Public Works Department

GOVERNMENT OF MIZORAM

Mr. C. Lalchhuana
Joint Secretary
Public Works Department

Mr. R. Vanlalutluanga
Engineer in Chief
Public Works Department

Mr. R.L. Alrinuanga
Superintending Engineer (SE)
Public Works Department

GOVERNMENT OF MEGHALAYA

Mr. Bruce Marak
Superintending Engineer (SE)
Public Works Department

Mr. Megh Tura
Superintending Engineer (SE)
Public Works Department

NORTHEAST FRONTIER RAILWAY

Mr. A.S. Garud
Chief Administrative Officer

Mr. Harpal Singh
Chief Engineer

Mr. Ravi Amrahi
Deputy Chief Engineer

GUWAHATI JAL BOARD

Mr. A. Amit Sahai
Managing Director (MD)

Mr. C.K. Bhuyan
Assistant Deputy Director (ADD)

ASIAN DEVELOPMENT BANK, INDIA RESIDENT MISSION

Ms. Kavita S. Iyengar
Economist

**UNITED NATIONS ECONOMICS AND SOCIAL COMMISSION FOR ASIA AND THE
PACIFIC**

Mr. Manas Bhattacharya
Senior Consultant

RESEARCH AND INFORMATION SYSTEM FOR DEVELOPING COUNTRIES

Mr. Prabir De
Senior Fellow

BANGLADESH INSTITUTE OF DEVELOPMENT STUDIES

Mr. Mohammad Yunus

Senior Research Fellow

EMBASSY OF JAPAN IN INDIA

Mr. Tamaki Tsukada

Minister (Economic and Development)

Mr. Shoichiro Yuyama

First Secretary (Economic and Finance)

JAPAN INTERNATIONAL COOPERATION AGENCY

Mr. Yusuke Murakami

Director

South Asia Department

Ms. Arisa Watanabe

Regional Officer

South Asia Department

Mr. Yuichiro Sano

Assistant Director

South Asia Department

JICA INDIA OFFICE

Mr. Shinya Ejima

Chief Representative

Mr. Tomohide Ichiguchi

Senior Representative

Ms. Yui Nakamura

Project Formulation Advisor

Mr. Anurag Sinha

Senior Development Specialist

Ms. Miho Yoshikawa

Representative

Mr. Mihir Sorti

Senior Development Specialist

JICA EXPERTS

Mr. Keita Nakasu

Chief Advisor for Highway/Expressway Policy,
MORTH

Mr. Tatsuo Takano

National Highway Authority of India

JICA BANGLADESH OFFICE

Mr. Kei Toyama

Senior Representative

Mr. Suman Gupta

Senior Project Manager

JICA BHUTAN OFFICE

Ms. Yumiko Ochi

Chief Representative

Mr. Krishna Subba

Administrative Officer

JICA MEDIA CONSULTANT

Mr. Yasser Alvi

MANIPUR UNIVERSITY

Mr. Amr Yunam

Professor

Mr. Ratan Meetei

GREAT EASTERN ROAD CARRIERS

Mr. Ajay Gupta

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Mr. V.K. Tiwari

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Director

JICA SURVEY TEAM

Mr. Yuichiro Motomura

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Mr. Chiaki Kuranami

Deputy Team Leader/
Regional Transport Infrastructure Planner

Mr. Bruce Winston

Cross-Border Transport Network Specialist

Mr. Toshiaki Nagaya

Cross-Border Infrastructure Development Planner
(Border Facilities and Dry Ports)/Regional
Freight Transport Specialist I

Mr. Takayuki Urade

Industrial Development and Trade Promotion
Specialist I

Mr. Shinichi Kimura

Project Coordinator/Transport Planning Assistant

付録3 地域における主要な国境通過地点の評価

The following table assesses major border crossing points in the region in terms of traffic, delay time (i.e., border efficiency), and corridor priority. An overall priority for border crossing point is then suggested. Current status, possible project elements, and other possible development partners are then set out.

Assessment of Border Crossings in the Region

Border Crossing	Traffic	Delay Time	Priority of Corridor	Overall Preliminary (Notional) Priority Score	Current Status	Development Partners
<i>Bangladesh-India</i>						
Benapole-Petrapole	H (3)	H (3)	H (3)	9	Petrapole is planned as a Phase 1 Indian ICP (there are significant space limitations there). Benapole is managed by BLPA; it serves traffic in both directions and is the main land gateway between the two countries (serving about 70% of the total trade in terms of value, although only about 23% in terms of tonnage); the Benapole land port covers 7.1 ha, including 42,000 m ² of warehousing allocated to exports (as well as a truck yard with capacity for 700 trucks) and 18,000 m ² for imports (including a truck yard with capacity for 150 trucks) with a storage capacity of 2,000 tons. An additional 12 ha is to be acquired. ADB will assist border post improvements at Benapole as part of the Bangladesh SASEC Road Connectivity Project. While trade is expected to grow at other BCPs, Benapole is expected to remain Bangladesh's main gateway.	ADB
Bhomra-Ghojadhaga	H (3)	H (3)	H (3)	9	Bhomra is Bangladesh's second largest road border crossing connecting with Kolkata and operates in parallel, rather than in competition with, Benapole (farther north); the potential of this BCP is limited by restrictions on the products that can be handled; Bhomra was originally a simple land customs station but was declared a land port in 2001; current facilities at Bhomra are basic and have limited potential to adapt to modern business and logistical	

Border Crossing	Traffic	Delay Time	Priority of Corridor	Overall Preliminary (Notional) Priority Score	Current Status	Development Partners
					processes; the immediate access road (3 km) is in poor condition; BLPA has acquired 4.7 ha for improvement of this facility, which is required because Benapole is congested; Bhomra is located shorter to Kolkata by at least 15 km compared to Benapole and will be closer to Dhaka than will Benapole after construction of the Padma Bridge.	
Akhaura–Agartala	H (3)	H (3)	H (3)	9	Agartala is a Phase I Indian ICP (opened in November 2013) and India is to assist development of an ICP at Akhaura on the Bangladeshi side; the border offers significant potential since it has direct road and rail links with Chittagong Port; development of the border is a priority of the Government of India.	India
Sona Masjid–Mahdipur	H (3)	H (3)	M (2)	8	Although Sona Masjid has been operational since 1998, no infrastructure or port facilities have been developed by BLPA or Bangladesh Customs; rather the existing infrastructure has been provided by about 50 private sector operators; there are open yards for temporary storage of stone, boulders, and coal, and warehouses for chemicals, agricultural commodities, and seeds; due to the limited inspection facilities, some import items are restricted, as at Burimari below; cold storage facilities have been recommended; infrastructure on the Indian side is limited.	
Burimari–Chengrabandha	M (2)	H (2)	M (2)	6	Chengrabandha is planned as a Phase II Indian ICP (infrastructure is limited at present); this BCP connects Bhutan with Bangladesh via the “chicken’s neck”, the Indian corridor between Bangladesh and Bhutan; despite restrictions on traffic, the BCP is expanding, although serving mainly low-value traffic (e.g., stone); ADB will assist BCP improvements at Burimari as part of the	ADB

Border Crossing	Traffic	Delay Time	Priority of Corridor	Overall Preliminary (Notional) Priority Score	Current Status	Development Partners
					Bangladesh SASEC Road Connectivity Project.	
Hili-Hili	M (2)	H (2)	L (1)	5	Hili serves border trade between Bangladesh and India, including boulders/stone, pulses, fruits, and food grains to Bangladesh and fruit juice, garments, and molasses to India; Hili is planned as a Phase II Indian ICP and has been operated as a BOT concession on the Bangladeshi side since 2005; there are over 50 privately managed warehouses and open yards; Hili suffers from imposition of a restricted list of exports; no major public investment is envisaged here for the foreseeable future.	
Tamabil-Dawki	M (2)	H (2)	H (3)	7	Dawki is a Phase 1 Indian ICP (although infrastructure is limited at present); BLPA has been considering inviting private investors to operate a BOT land port at Tamabil; traffic includes coal, limestone, boulders, and oranges from Bhutan (in season); the overall border operation is well run and no large investment projects are envisaged.	
Banglabandha-Phulbari	L (1)	H (3)	H (3)	7	This BCP mainly serves transit between Nepal and Bangladesh; traffic with India is local and is unstable depending on various administrative issues. BLPA constructed a building at Banglabandha with some associated facilities (offices, warehouse, barracks, parking yard, and boundary wall, on 5 ha). It has been suggested that BLPA should construct a cold storage facility at Banglabandha.	
<i>Bangladesh-Myanmar</i>						
Teknaf-Mongdu	M (2)	M (2)	H (3)	7	Traffic is mainly from Myanmar to Bangladesh, with the main commodities including lentils, paddy, bamboo, spices, fish, and electric goods; a concession was granted in 2006 for the (successful) construction of jetties and warehouses.	

Border Crossing	Traffic	Delay Time	Priority of Corridor	Overall Preliminary (Notional) Priority Score	Current Status	Development Partners
<i>Bhutan-India</i>						
Phuentsholing-Jaigaon	H (3)	M (2)	H (3)	8	This BCP serves over 85% of Bhutan's import trade by value and volume and 65% of its export trade by value and volume; traffic is transshipped to smaller Bhutanese trucks (two axles carrying ten tons) en route to Thimphu or the Pasakha industrial estate; with ADB assistance, a mini dry port is to be constructed along with a new border gate to alleviate congestion in the city, as well as a new road connecting the industrial estate directly with India. Jaigaon is planned as a Phase II Indian ICP.	ADB
Gomtu-Makrapara	L (1)	L (2)	L (1)	4	Gomtu is one of a series of BCPs between West Bengal and Samtse in Bhutan; most of the traffic serves cement factories.	
Samdrup Jongkhar-Daranga	M (2)	L (1)	H (3)	6	Samdrup Jongkhar is the main gateway to eastern Bhutan; it includes Samdrup Jongkhar gate itself and Matnaga/Phuntshok Rabtenling gate; export traffic consisting mainly of gypsum passes the former gate, while the latter gate is used for the export ferro silicon and coal; an industrial park is planned in Samdrup Jongkhar, which will lead to increased traffic.	
<i>Myanmar-India</i>						
Tamu-Moreh	M (2)	M (2)	H (3)	7	Moreh is a Phase 1 Indian ICP; there is only border trade of an agreed list of commodities at this BCP.	
<i>Myanmar-Thailand</i>						
Myawaddy-Mae Sot	M (2)	L (1)	NA	NA	A second Thailand-Myanmar Friendship Bridge is under construction; the Greater Mekong Subregion Cross-Border Transport Agreement has not yet been implemented at this BCP.	
<i>Nepal-India</i>						
Birgunj-Raxual	H (3)	M (2)	M (2)	7	Raxual in the Indian state of Bihar is a Phase 1 Indian ICP (the first India-Nepal ICP to be constructed, with completion scheduled by the end of 2014) and India is to assist development of an ICP at Birgunj; the BCP is the main	World Bank

Border Crossing	Traffic	Delay Time	Priority of Corridor	Overall Preliminary (Notional) Priority Score	Current Status	Development Partners
					gateway for Nepal of consumer goods from India and third countries; Birgunj now includes a rail-based ICD and a road-based customs terminal; customs inspection is undertaken in a 2.6 ha yard adjacent to the border; all cargo from third countries is unloaded for customs inspection and reloaded onto Nepalese trucks; the World Bank has prepared a loan to Nepal for a Nepal-India Trade and Transport Facilitation Project, which among other things, will improve the infrastructure at Birgunj (and Bhairahawa) ICD, as well as SPS laboratories.	
Biratnagar-Jogbani	H (3)	M (2)	H (3)	8	Jogbani is a Phase 1 Indian ICP and India is to assist development of an ICP at Biratnagar.	
Belahiya-Sunauli (Bhairahawa)	H (3)	M (2)	H (3)	7	The Belahiya-SunauliNautanawa BCP is about 8 km from Bhairahawa; Sunauli is planned as a Phase 2 Indian ICP, and India is to assist development of an ICP on the Nepalese side. Heavy rains and use have caused severe damage to the surface of the ICP pavement. This is one of busiest BCPs for bilateral trade and passengers due to the proximity of Lumbini, the birthplace of Lord Gautam Buddha. The World Bank has prepared a loan to Nepal for a Nepal-India Trade and Transport Facilitation Project, which among other things, will improve the infrastructure at Bhairahawa (and Birgunj) ICD, and for the improvement of SPS laboratories.	
Kakarbhitta-Panitanki	M (2)	L (3)	H (3)	8	Panitanki is planned as a Phase 3 India ICP. Located in Nepal's eastern development region, the BCP has strategic importance since it can serve not only traffic from India, but also provide access to Bangladesh and Bhutan. A new ICD was completed at Kakarbhitta in 2010 with ADB assistance, with operation by	ADB

Border Crossing	Traffic	Delay Time	Priority of Corridor	Overall Preliminary (Notional) Priority Score	Current Status	Development Partners
					the Nepal Intermodal Transport Development Board. Trade with Bangladesh has been limited due to restrictions on Nepalese trucks entering Bangladesh to unload.	
Nepalgunj–Rupaidiha	M (2)	M (2)	M (2)	6	This BCP is located in the far western Terai region of Nepal. Nepal Customs recently commenced work on a facility at the border to replace a facility located 1 km from the border.	

Abbreviations: ADB = Asian Development Bank, BCP = border crossing point, BLPA = Bangladesh Land Port Authority, BOT = build-operate-transfer, ICD= inland clearance depot, ICP = integrated check post

Notes: (i) Border crossings within a country pair listed in approximate order of cross -border traffic. (ii) Traffic (2012): below 100,000 tons = low (L), 100,000–800,000 tons = medium (M), and over 800,000 tons = high (H). (iii) Delay time: less than 1 day (L), 1–2 days = medium (M), and more than 2 days = high (H). (iv) Corridor priority: unlisted (U), longlisted (only) (L), and shortlisted (S). (v) Overall priority at this stage notionally assessed by (a) assigning 3 points for high traffic, 2 points for medium traffic, and 1 point for low traffic; (b) assigning 3 points for high (long) delay time, 2 points for medium low time, and 1 point for low delay time; (c) assigning 3 points for border crossing points on shortlisted corridors, 2 points for border crossing points on longlisted corridors (only), and 1 point for border crossing points on unlisted corridors.

Source(s): JICA Survey Team [drawing on various sources, e.g., (i) PADECO Co., Ltd., *TA No. 6435-REG: Preparing the South Asia Subregional Cooperation. Transport Logistics and Trade Facilitation Project (Cross-Border Regime Component), Final Report*, November 2011; (ii) Egis International with Egis India, *ADB TA-7650 (REG): Regional Transport Development in South Asia, Draft Final Report*, June 2013, pp. 29–32, 40 (iii) Prabir De, Abdur Rob Khan, and Sachin Chaturvedi, *Transit and Trade Barriers in Eastern South Asia: A Review of the Transit Regime*, 2008; and (iv) Prabir De, *Performance of Strategic Border-Crossings*, Asia-Pacific Research and Training Network on Trade Working Paper Series, No. 56, 2008, pp. 35–40.]

付録 4 直通輸送実施による輸送コストの削減結果

In this appendix the benefits of through transport including transport cost reductions for Bhutan, India, and Nepal from developing functional corridors for transit traffic through Bangladesh and the gains of Bangladesh from transport business opportunities have been estimated assuming the implementation of through transport arrangements. This exercise has been undertaken based on the unit transport cost per distance by mode by country and current transport volume by route developed in ADB TA-7650: Regional Transport Development in South Asia (Draft Final Report, June 2013). The transport routes considered in this estimation are basically the same as those considered in the ADB TA. On the other hand, some assumptions in this appendix on transport cost by route are different from those made by the ADB TA. For example, although transshipment time at some borders is assumed to be 24 hours by the ADB TA, it was assumed to be zero in this estimation because realization of the optimal situation regarding through transport was assumed. Information on transport distance by country by mode by route was also compiled from various sources because such data were not shown clearly in the ADB TA report. Transport volume by route after the development (i.e., with realization of through transport in the region) was estimated in this study and this differs from the transport volume by route in the ADB TA, which applied different assumptions.

The subject transport routes and transport cost¹ and generalized transport cost² by route are shown in Tables A4.1, A4.2, and A4.3. For calculation of generalized transport costs consisting of transport cost and cargo time cost, the cargo time value of USD 6.69/hour/truck calculated described in the ADB TA was applied along with an assumed average cargo load of 14 tons per truck. Transport speed was assumed to be 30 kph for road, 20 kph for railway, and 10 kph for inland waterway on average including dwell time and time for rest.

Considering the transport cost and generalized cost by route, transport volume after development by origin and destination pair was estimated. If the route of the lowest transport cost and that of the lowest generalized cost are the same for one origin and destination pair, it was assumed that 100% of the traffic between that origin and destination pair would take that route. On the other hand, if the route of the lowest transport cost and that of the lowest generalized cost are different, it was assumed that some percentage of the total traffic between that origin and destination pair would take the route of the lowest transport cost and the rest would take the one of the lowest generalized cost. For example, in the case of traffic between Phuentsholing and Mongla Port, it was estimated that 70% of traffic would pass take BH-RO2 (a road route), which has the lowest generalized cost, while 30% would go take BH-RA2 (a railway route), which has the lowest transport cost. For traffic between Birgunj and Mongla Port, it was assumed that 40% would take NE-RO1 (a road route) and 60% would take NE-RA2 (a railway route). In the case of transport between Biratnagar and Mongla Port, it was estimated that 20% would go by NE-RO3 (a road route) while 80% would pass through NE-RA4 (a railway route).

The calculation of the benefits from reduction in transport cost and generalized cost by route estimated from traffic volume by route above and cost per route per ton is shown in Table A4.4.

¹ Transport cost was defined as the sum of out-of-pocket cost for land transport and port charges.

² Generalized cost was defined as the sum of transport cost and cargo time cost. Cargo time cost was assumed proportional to transport time and weight.

Table A4.1: Road Corridors Considered for Estimation of Gains

	Mode	Corridor			
		Corridor ID	Origin/Destination	Route	
Before development	Road	BH-RO1	Phuentsholing	Kolkata Port	via Jaigaon, Jalpaiguri, Siliguri, Kishanganj, Raidani, Maldah, Baharampur, Krishnanagar, Barasat
	Road	BH-RO4(1) Before	Sandup Jongkhar	Kolkata Port Kolkata City	via Daranga, Rangia, Bongaiqaon, Jalpaiguri, Siliguri, Kishanganj, Maldah, Baharampur, Krishnanagar, Barasat (same as above)
	Road	BH-RO4(2) Before	India NE States (Guwahati)	Kolkata Port Kolkata City	(same as above) (same as above)
	Road	NE-RO1	Birguni	Kolkata Port	via Raxaul, Motihari, Muzaffarpur, Bihat, Bihar Sharif, Nawada, Barhi, Bardhaman, Howrah
	Road	NE-RO2	Biratnagar	Kolkata Port	via Jogbani, Forbesganj, Purnia, Dalkhola, Maldah, Baharampur, Krishnanagar, Barasat
After development	Road	BH-RO1 (same)	Phuentsholing	Kolkata Port	via Jaigaon, Jalpaiguri, Siliguri, Kishanganj, Raidani, Maldah, Baharampur, Krishnanagar, Barasat
	Road	BH-RO2	Phuentsholing	Mongla Port	via Jaigaon, Burimari, Changrabandha, Bogra, Nator, Kushtia, Jessore, Khulna
	Road	BH-RO3	Phuentsholing	Chittagong Port	via Jaigaon, Burimari, Changrabandha, Bogra, Siragani, Tangail, Dhaka, Comilla, Feni
	Rail	BH-RA2	Phuentsholing	Mongla Port	via Jaigaon, Siliguri, Haldibari, Nilphamari, Jaypurhat, Jessore, Khulna
	Inland Waterway	BH-IW-1b	Phuentsholing	Chittagong Port	Road to Jogjhopa via Jaigaon. The Jamuna River to Baghabari. Then, the Padma River, the Meghna River and Sandwip Channel.
	Road	BH-RO4(1) After	Sandup Jongkhar	Kolkata Port Kolkata City	via Shillong, Sylhet, Dhaka (same as above)
	Road	BH-RO4(2) After	India NE States (Guwahati)	Kolkata Port	(same as above)
	Road	BH-RO5(1)	Sandup Jongkhar	Chittagong Port	via Daranga, Guwahati, Shillong, Silchar, Comilla, Feni
	Road	BH-RO5(2)	India NE States (Guwahati)	Chittagong Port	via Shillong, Silchar, Comilla, Feni
	Road	NE-RO1 (same)	Birguni	Kolkata Port	via Raxaul, Motihari, Muzaffarpur, Bihat, Bihar Sharif, Nawada, Barhi, Bardhaman, Howrah
	Inland Waterway	BH-IW-3b	Sandup Jongkhar	Chittagong Port	Road to Guwahati via Daranga. The Jamuna River to Jogjhopa, Dhubri and Baghabari. Then, the Padma River, the Meghna River and Sandwip Channel.
	Rail	NE-RA2	Birguni	Mongla Port	via Raxaul, Muzaffarpur, Bihat, Hathida, Asansol, Bardhaman, Howrah
	Inland Waterway	NE-IW-1	Birguni	Kolkata Port	Road to Patna via Raxaul. River to Kolkata via Ganga, Bhagirathi and Hoodhley.
	Road	NE-RO2 (same)	Biratnagar	Kolkata Port	via Jogbani, Forbesganj, Purnia, Dalkhola, Maldah, Baharampur, Krishnanagar, Barasat
	Road	NE-RO3	Biratnagar	Mongla Port	via Jogbani, Forbesganj, Purnia, Dalkhola, Maldah, Sonamasjid, Rajshahi, Natore, Jessore, Kalna
Rail	NE-RA4	Biratnagar	Mongla Port	via Joghani, Forbesganj, Purnia, Katihar, Maldah, Singhabad, Rohanpur, Rajshahi, Darsana, Jessore, Khulna	

Source: Based on Egis International in association with Egis India, *ADB TA-7650 (REG): Regional Transport Development in South Asia, Draft Final Report*, June 2013

Table A4.2: Calculation of Transport Cost by Route

	Mode	Route		Distance (km)						Transport cost by country				Transport cost by route (US\$/ton)			Port charge (US\$/ton)	Total transport cost (US\$/ton)		
		Corridor ID	Origin/Destination	(Road)			(Rail/ Waterway)			Total	(Road)		(Rail/ Waterway)		Bangla	India			Total	
				Bangla	India	total	Bangla	India	total		Bangla	India	Bangla	India						
Before development	Road	BH-RO1	Phuentsholing	Kolkata Port	0	768	768	0	0	0	768	0.037	0.051	0	0	0.00	39.17	39.17	5.63	44.80
	Road	BH-RO4(1) Before	Sandup Jongkhar	Kolkata Port	0	1,118	1,118	0	0	0	1,118	0.037	0.051	0	0	0.00	57.02	57.02	5.63	62.65
				Kolkata City	0	1,118	1,118	0	0	0	1,118	0.037	0.051	0	0	0.00	57.02	57.02	0.00	57.02
	Road	BH-RO4(2) Before	India NE States (Guwahati)	Kolkata Port	0	1,040	1,040	0	0	0	1,040	0.037	0.051	0	0	0.00	53.04	53.04	5.63	58.67
				Kolkata City	0	1,040	1,040	0	0	0	1,040	0.037	0.051	0	0	0.00	53.04	53.04	0.00	53.04
Road	NE-RO1	Birgunj	Kolkata Port	0	849	849	0	0	0	849	0.037	0.051	0	0	0.00	43.30	43.30	5.63	48.93	
Road	NE-RO2	Biratnagar	Kolkata Port	0	607	607	0	0	0	607	0.037	0.051	0	0	0.00	30.96	30.96	5.63	36.59	
After development	Road	BH-RO1 (same)	Phuentsholing	Kolkata Port	0	768	768	0	0	0	768	0.037	0.051	0	0	0.00	39.17	39.17	5.63	44.80
	Road	BH-RO2	Phuentsholing	Mongla Port	598	110	708	0	0	0	708	0.037	0.051	0	0	22.13	5.61	27.74	4.61	32.35
	Road	BH-RO3	Phuentsholing	Chittagong Port	684	110	794	0	0	0	794	0.037	0.051	0	0	25.31	5.61	30.92	9.13	40.05
	Rail	BH-RA2	Phuentsholing	Mongla Port	0	160	160	0	560	560	720	0.037	0.051	0.040	0.040	0.00	30.56	30.56	4.61	35.17
	Inland Waterway	BH-W-1b	Phuentsholing	Chittagong Port	0	150	150	780	0	780	930	0.037	0.051	0.015	0.023	11.70	7.65	19.35	9.13	44.90
	Road	BH-RO4(1) After	Sandup Jongkhar	Kolkata Port	543	363	906	0	0	0	906	0.037	0.051	0	0	20.09	18.51	38.60	5.63	44.23
				Kolkata City	543	363	906	0	0	0	906	0.037	0.051	0	0	20.09	18.51	38.60	0.00	38.60
	Road	BH-RO4(2) After	India NE States (Guwahati)	Kolkata Port	543	282	825	0	0	0	825	0.037	0.051	0	0	20.09	14.38	34.47	5.63	40.10
				Kolkata City	543	282	825	0	0	0	825	0.037	0.051	0	0	20.09	14.38	34.47	0.00	34.47
	Road	BH-RO5(1)	Sandup Jongkhar	Chittagong Port	457	268	725	0	0	0	725	0.037	0.051	0	0	16.91	13.67	30.58	9.13	39.71
	Road	BH-RO5(2)	India NE States (Guwahati)	Chittagong Port	457	187	644	0	0	0	644	0.037	0.051	0	0	16.91	9.54	26.45	9.13	35.58
	Road	NE-RO1 (same)	Birgunj	Kolkata Port	0	849	849	0	0	0	849	0.037	0.051	0	0	0.00	43.30	43.30	5.63	48.93
	Inland Waterway	BH-W-3b	Sandup Jongkhar	Chittagong Port	0	81	81	700	260	960	1,041	0.037	0.051	0.015	0.023	10.50	10.11	20.61	9.13	29.74
	Rail	NE-RA2	Birgunj	Mongla Port	0	0	0	0	941	941	941	0.037	0.051	0.040	0.040	0.00	37.64	37.64	4.61	42.25
	Inland Waterway	NE-W-1	Birgunj	Kolkata Port	0	202	202	0	905	905	1,107	0.037	0.051	0.015	0.023	0.00	31.12	31.12	5.63	48.54
Road	NE-RO2 (same)	Biratnagar	Kolkata Port	0	607	607	0	0	0	607	0.037	0.051	0	0	0.00	30.96	30.96	5.63	36.59	
Road	NE-RO3	Biratnagar	Mongla Port	413	271	684	0	0	0	684	0.037	0.051	0	0	15.28	13.82	29.10	4.61	33.71	
Rail	NE-RA4	Biratnagar	Mongla Port	0	0	0	0	626	626	626	0.037	0.051	0.040	0.040	0.00	25.04	25.04	4.61	29.65	

Note: Unit transport cost per distance and port charges were based on Egis International in association with Egis India, *ADB TA-7650 (REG): Regional Transport Development in South Asia, Draft Final Report*, June 2013.

Source: This Survey

Table A4.3: Calculation of Generalized Cost by Route

	Mode	Route			Transport time (hour)					Cargo time cost per route (US\$/ton)	Generalized cost (US\$/ton)
		Route ID	Origin/Destination		(Road)	(Rail/Waterway)	Transshipment/waiting	Border-crossing	Total		
Before development	Road	BH-RO1	Phuentsholing	Kolkata Port	25.60	0.00	0.00	0.00	25.60	12.29	57.09
	Road	BH-RO4(1) Before	Sandup Jongkhar	Kolkata Port	37.27	0.00	0.00	0.00	37.27	17.89	80.54
				Kolkata City	37.27	0.00	0.00	0.00	37.27	17.89	74.91
	Road	BH-RO4(2) Before	India NE States	Kolkata Port	34.67	0.00	0.00	0.00	34.67	16.64	75.31
				Kolkata City	34.67	0.00	0.00	0.00	34.67	16.64	69.68
	Road	NE-RO1	Birgunj	Kolkata Port	28.30	0.00	0.00	0.00	28.30	13.58	62.51
Road	NE-RO2	Biratnagar	Kolkata Port	20.23	0.00	0.00	0.00	20.23	9.71	46.30	
After development	Road	BH-RO1 (same)	Phuentsholing	Kolkata Port	25.60	0.00	0.00	0.00	25.60	12.29	57.09
	Road	BH-RO2	Phuentsholing	Mongla Port	23.60	0.00	0.00	0.00	23.60	11.33	43.67
	Road	BH-RO3	Phuentsholing	Chittagong Port	26.47	0.00	0.00	0.00	26.47	12.70	52.75
	Rail	BH-RA2	Phuentsholing	Mongla Port	5.33	36.00	0.00	0.00	41.33	19.84	55.01
	Inland Waterway	BH-IW-1b	Phuentsholing	Chittagong Port	5.00	78.00	0.00	0.00	83.00	39.84	84.74
	Road	BH-RO4(1) After	Sandup Jongkhar	Kolkata Port	30.20	0.00	0.00	0.00	30.20	14.50	58.73
				Kolkata City	30.20	0.00	0.00	0.00	30.20	14.50	53.10
	Road	BH-RO4(2) After	India NE States	Kolkata Port	27.50	0.00	0.00	0.00	27.50	13.20	53.30
				Kolkata City	27.50	0.00	0.00	0.00	27.50	13.20	47.67
	Road	BH-RO5(1)	Sandup Jongkhar	Chittagong Port	24.17	0.00	0.00	0.00	24.17	11.60	51.31
	Road	BH-RO5(2)	India NE States	Chittagong Port	21.47	0.00	0.00	0.00	21.47	10.30	45.88
	Road	NE-RO1 (same)	Birgunj	Kolkata Port	28.30	0.00	0.00	0.00	28.30	13.58	62.51
	Inland Waterway	BH-IW-3b	Sandup Jongkhar	Chittagong Port	2.70	96.00	0.00	0.00	98.70	47.38	77.12
	Rail	NE-RA2	Birgunj	Mongla Port	0.00	47.05	0.00	0.00	47.05	22.58	64.83
	Inland Waterway	NE-IW-1	Birgunj	Kolkata Port	6.73	90.50	0.00	0.00	97.23	46.67	95.21
	Road	NE-RO2 (same)	Biratnagar	Kolkata Port	20.23	0.00	0.00	0.00	20.23	9.71	46.30
Road	NE-RO3	Biratnagar	Mongla Port	22.80	0.00	0.00	0.00	22.80	10.94	44.66	
Rail	NE-RA4	Biratnagar	Mongla Port	0.00	31.30	0.00	0.00	31.30	15.02	44.67	

Note: Unit cargo time cost per distance is based on Egis International in association with Egis India, *ADB TA-7650 (REG): Regional Transport Development in South Asia, Draft Final Report*, June 2013.

Source: This Survey

Table A4.4: Calculation of Benefits from a Reduction in Transport Cost and Generalized Cost Reduction by Route (Assuming Traffic Volumes of 2011)

Beneficiary (country)	Origin/Destination		Current Situation				Situation after Development				Cost Reduction per ton		Annual transport volume estimated (ton, 2011)	Total Cost Reduction	
			Current Route	Mode	Current Cost (US\$/ton)	Generalized cost (US\$/ton)	Route after development	Mode	Cost after development (US\$/ton)	Generalized cost after development (US\$/ton)	Transport Cost Reduction (US\$/ton)	Generalized cost reduction (US\$/ton)		Annual transport cost reduction (US\$, 2011)	Annual generalized cost reduction (US\$, 2011)
Bhutan	Phuentsholing	Mongla Port	BH-RO1	Road	44.80	57.09	BH-RO2	Road	32.35	43.67	12.45	13.42	94,862	1,181,031	1,273,047
Bhutan	Phuentsholing	Mongla Port	BH-RO1	Road	44.80	57.09	BH-RA2	Rail	30.77	55.01	14.03	2.08	40,655	570,391	84,563
Bhutan	Sandup Jongkhar	Kolkata City	BH-RO4(1) Before	Road	57.02	74.91	BH-RO4(1) After	Road	38.60	53.10	18.42	21.81	832	15,316	18,135
India	India NE States	Kolkata City	BH-RO4(2) Before	Road	53.04	69.68	BH-RO4(2) After	Road	34.47	47.67	18.57	22.01	539,677	10,021,804	11,878,293
Bhutan	Sandup Jongkhar	Chittagong Port	BH-RO4(1) Before	Road	62.65	80.54	BH-RO5(1)	Road	39.71	51.31	22.94	29.23	7,484	171,671	218,743
India	India NE States	Chittagong Port	BH-RO4(2) Before	Road	58.67	75.31	BH-RO5(2)	Road	35.58	45.88	23.09	29.43	4,857,094	112,150,298	142,944,273
Nepal	Birgunj	Mongla Port	NE-RO1	Road	48.93	62.51	NE-RO1	Road	48.93	62.51	0.00	0.00	211,721	0	0
Nepal	Birgunj	Mongla Port	NE-RO1	Road	48.93	62.51	NE-RA2	Rail	42.25	64.83	6.68	-2.32	317,582	2,121,446	-736,790
Nepal	Biratnagar	Mongla Port	NE-RO2	Road	36.59	46.30	NE-RO3	Road	33.71	44.66	2.88	1.64	119,445	344,003	195,890
Nepal	Biratnagar	Mongla Port	NE-RO2	Road	36.59	46.30	NE-RA4	Rail	29.65	44.67	6.94	1.63	477,782	3,315,804	778,784

Source: This Survey

Based on the calculation of benefits from transport cost and generalized cost by route shown in Table A4.4, the total (annual) benefits of each country were calculated as shown in Table A4.5.

Table A4.5: Estimated Benefits from Transport Cost and Generalized Cost Reduction by Country (Assuming 2011 Traffic Volumes)

Country	Benefits from Transport Cost Reduction (USD)	Benefits from Generalized Cost Reduction (USD)
Bhutan	1,938,409	1,594,487
India	122,172,102	154,822,566
Nepal	5,781,253	237,885
Total	129,891,765	156,654,938

Source: This Survey

Also, the gains of Bangladesh were calculated as a sum of: (i) income from port charges from cargo from/to Bhutan, India, and Nepal; and (ii) income from land transport enterprises of Bangladesh for traffic from/to Bhutan, India and, Nepal. It was assumed that opportunities for land transport business for transporters in Bangladesh will be proportional to the transport distance in Bangladesh within the total transport distance. Under this assumption, the (annual) income for land transport enterprises in Bangladesh for traffic from/to Bhutan, India, and Nepal was estimated as USD 95.2 million. In addition, the (annual) income of Bangladesh from port charges was estimated as USD 50.2 million as shown in Table A4.6. Thus, the total (annual) gains to Bangladesh were estimated as USD 145.4 million.

Table A4.6: Estimated Income of Bangladesh from Port Charges (Assuming 2011 Traffic Volumes)

	Port Charge (USD/ton)	Transport volume	Gain (USD)
Chittagong Port	9.13	4,864,577	44,413,592
Mongla Port	4.61	1,262,047	5,818,037
Total	–	6,126,624	50,231,628

Source: This Study

The results calculated in this appendix should be considered indicative rather than definitive.

付録5 ショートリストプロジェクトの自然および社会環境に対する影響評価

Country (BAN/BHU/IND/NEP)	Project Reference	Project Type (r: road, rw: railway, b: bridge)	A+/-: Significant positive (+) /negative (-) impact is expected. B+/-: Positive (+) /negative (-) impact is expected to some extent. C+/-: Extent of positive/negative impact is unknown. (A further examination is needed to clarify the impact.). D: No impact is expected																	
			Natural Environmental Factors										Social Environmental Factors							
			Overall Natural Impacts	Air Quality	Water Quality	Waste	Noise and Vibration	Protected Areas	Ecosystem	Hydrology	Topography and Geology	Impacts during Construction	Overall Social Impacts	Resettlement	Living and Livelihood	Heritage	Landscape	Ethnic Minorities and Indigenous Peoples	Working Conditions	Impacts during Construction
Bangladesh	RA1-a	rw	C-	D	C-	D	C-	C-	C-	D	D	C+	C+	C-	A+	D	D	D	C+	C+
	RA9-a	rw	D	D	C-	D	C-	D	D	D	D	C+	D	C-	C+	D	D	D	C+	C+
	RO1-a	r	C-	C-	C-	D	C-	C-	C-	D	D	C+	D	C-	C+	D	D	D	C+	C+
	RO17-a	b	D	D	C-	D	D	D	D	D	D	C+	C+	C-	C+	D	C+	D	C+	C+
	RO17-b	r	C-	C-	C-	D	C-	C-	C-	D	D	C+	D	C-	C+	D	D	D	C+	C+
	RO2-a	r	D	C-	C-	D	C-	D	D	D	D	C+	C-	C-	C-	D	D	D	C+	C+
	RO2-b	r	D	C-	C-	D	C-	D	D	D	D	C+	C-	C-	C-	D	D	D	C+	C+
	RO2-c	b	D	D	C-	D	D	D	D	D	D	C+	C+	C-	A+	D	C+	D	C+	C+
	RO3-a	r	D	C-	C-	D	C-	D	D	D	D	C+	D	C-	C-	D	D	D	C+	C+
	RO3-b	r	D	C-	C-	D	C-	D	D	D	D	C+	D	C-	C-	D	D	D	C+	C+
RO3-c	r	D	C-	C-	D	C-	D	D	D	D	C+	D	C-	C-	D	D	D	C+	C+	
Bhutan	RO7-a	r	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	A+	D	D	C-	C+	C+
	RO7-b	r/b	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	A+	D	C+	C-	C+	C+
	RO7-c	r	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	A+	D	D	C-	C+	C+
India	RO15-a	r/b	D	C-	C-	D	C-	D	C-	D	C-	C+	D	C-	A+	D	C+	C-	C+	C+
	RO16-a	r	D	C-	C-	D	C-	D	C-	D	C-	C+	C+	C-	C+	D	D	C-	C+	C+
	RO2-d	r	C-	C-	C-	D	C-	D	C-	D	A-	C+	C+	C-	C+	D	D	C-	C+	C+
	RO9-a	r	D	C-	C-	D	C-	D	C-	D	C-	C+	D	C-	C+	D	D	C-	C+	C+
	RO9-c	r/b	C-	C-	C-	D	C-	D	C-	D	C-	C+	C+	C-	A+	D	C+	C-	C+	C+
	RO9-d	r/b	C-	C-	C-	D	C-	D	C-	D	C-	C+	C+	C-	A+	D	C+	C-	C+	C+
	RO17-e	r	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	C+	D	D	C-	C+	C+
	RO2-f	r	D	C-	C-	D	C-	D	D	D	D	C+	C-	C-	C-	D	D	D	C+	C+
	RO2-g	r	D	C-	C-	D	C-	D	D	D	D	C+	C-	C-	C-	D	D	D	C+	C+
RO2-h	r	D	C-	C-	D	C-	D	D	D	D	C+	C-	C-	C-	D	D	D	C+	C+	
Nepal	RO3-f	r	C-	C-	C-	D	C-	D	C-	D	A-	C+	C+	C-	C+	D	C+	C-	C+	C+
	RO3-g	r	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	C+	D	D	C-	C+	C+
	RO3-i	r	D	C-	C-	D	C-	D	D	D	D	C+	C+	C-	C+	D	D	C-	C+	C+
	RO3-j	r	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	C+	D	D	C-	C+	C+
	RO3-k	r	C-	C-	C-	D	C-	C-	C-	D	A-	C+	C+	C-	C+	D	D	C-	C+	C+

Source: This Survey

付録6 地域経済回廊（道路・鉄道）の評価サマリー

A6.1 Regional Road Corridor Evaluation Summary Table

Regional Economic Corridors (Road)			Strategy Document Review / References					Qualitative corridor evaluation					Shortlist	
Countries	Ref	Route	SAARC 10 Priority Corridors 2006 (SAARC Corridor No.)	SASEC 6 Priority Corridors 2004 (SASEC Corridor No.)	BCIM Middle (M) or, Southern route (S)*	BIM-STE Key routes for Develop-ment 2008	Asian Highway As per AH mapping, 2010	Connectivity Number of Countries Served	Strategy/Plans Linkages to Regional Strategy and Plans	Economics Synergies with Potential, Planned, or Completed Development Partner Projects	Deliverability Industrial Growth Potential	Ease of Implement- ation (use of existing infrastructure)		Total score
Bangladesh-(Myanmar)-(Thailand)	RO1	Chittagong-Cox's Bazar-[Teknaf]-(Myanmar)-(Thailand)	No	No	Yes (S)	No	Part	2	1	2	2	1	8	Y
Bangladesh-India-(Myanmar)-(Thailand)	RO2	Kolkata-[Petrapole/ Benapole]-Dhaka-Sylhet-[Sutarkhandi/Sheola]- Imphal-[Moreh]-(Myanmar)	No	No	Yes (M)	Part	Part	2	2	2	2	1	9	Y
Bangladesh-India-Nepal	RO3	Chittagong/ Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarvitta]-Kathmandu	Yes (4)	Yes (9)	Part (S)	Part	Yes	2	2	2	1	2	9	Y
Bangladesh-India	RO4	Jamuna Bridge-Shibganj-[Sona Masjid]-Maldha	Yes (9)	No	No	No	Part	1	2	0	0	1	4	N
	RO5	Chittagong-[Akhaura]-[Agartala]	Yes (6)	Part (5a)	Part (S)	Part	Part	1	2	1	1	2	7	Y
	RO6	Kolkata-[Petrapole/ Benapole]-Jessore-Dhaka-branches to Mongla and Chittagong Ports	No	Yes (5a)	Part (S)	Part	Part	1	2	2	2	1	8	N*
Bangladesh	RO19	Spur of RO2 from Faridpur to potential port at Kalapara	No	No	No	No	No	1	0	0	2	1	4	N
Bangladesh-India-Bhutan	RO7	Chittagong/ Mongla-[Birimari]-Chengrabandha-Jaigon-[Phuentsholing]-Thimphu	Yes (8)	Part (5a)	Part (S)	Part	Part	2	2	1	1	1	7	Y
Bhutan-India	RO8	Thimphu-[Phuentsholing]-Jaigon-Kolkata	Yes (3)	Yes (3a)	No	Part	Part	1	2	0	1	1	5	N
Bhutan-India-Bangladesh-India	RO9	[Samdrup Jongkhar]-Guwahati-[Tamabil]-Shillong-Sylhet-Dhaka onward to India via other corridors	Yes (5)	Part (5a)	Part (M)	Part	Part	2	2	2	1	1	8	Y
Bhutan-India-Nepal	Combination of RO8 and RO3													
India-(Myanmar)-(Thailand)	RO14	North East Region-Mizoram-[Myanmar]-[Thailand]	No	No	No	No	No	2	0	2	2	1	7	Y
	RO2	Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Tamabil]-Imphal-[Moreh]-(Myanmar)	No	No	Yes (M)	Part	Part	2	2	2	2	1	9	Y
	RO15	North East Region's East-West Corridor-Moreh-[Myanmar]-[Thailand]	No	No	Part (M)	No	Part	2	1	2	1	1	7	Y
	RO16	Guwahati-Dimapur-Kohima-Imphal-[Moreh]-(Myanmar)	No	No	Part (M)	No	Part	2	1	2	1	1	7	Y
India-Bangladesh-(Myanmar)-(Thailand)	Combination of See RO61 and RO16													
	RO17	Chittagong-Ramgarh-Sabroom-Agartala-North Eastern Region	No	No	No	No	Part	1	1	2	2	1	7	Y
India-Bangladesh-India-(Myanmar)-(Thailand)	RO2	Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Tamabil]-Imphal-[Moreh]-(Mandalay)	No	No	Yes (M)	Part	Part	2	2	2	2	1	9	Y
	RO10	(Delhi)-Kolkata-[Petrapole/Benapole]-Dhaka-[Akhaura]/[Agartala]-connections through North East region of India	Yes (1)	Part (5a)	Part (M)	Part	Yes	1	2	2	2	1	8	N*
India-Bhutan	RO7	Chittagong/Mongla-[Birimari]-Chengrabandha-Jaigon-[Phuentsholing]-Thimphu	Yes (8)	Part (5a)	Part (S)	Part	Part	2	2	1	1	1	7	Y
	RO8	Thimphu-[Phuentsholing]-Jaigon-Kolkata	Yes (3)	Yes (3a)	No	Part	Part	1	2	0	1	1	5	N
India-Nepal	RO11	Kolkata/Haldia-[Raxaul]-[Birgunj]-Kathmandu	Yes (2)	Yes (1a)	No	Yes	Part	1	2	0	1	2	6	N
	RO12	New Delhi-[Nepalganj]-Kathmandu	Yes (7)	No	No	No	Part	1	2	0	0	2	5	N
	RO13	Lucknow-Sunauli-[Bhairahawa]-Kathmandu	Yes (10)	No	No	No	Part	1	2	0	0	2	5	N
	RO18	Kathmandu-AH2-Delhi	No	No	No	No	Yes	1	1	2	1	1	6	N
Nepal-India	See corridors 3, 11, 12, 13, and 18 as described above													
Nepal-India-Bangladesh	RO3	Chittagong/Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarvitta]-Kathmandu	Yes (4)	Yes (9)	Part (S)	Part	Yes	2	2	2	1	2	9	Y
Nepal-India-Bangladesh-(Myanmar)-(Thailand)	Combination of RO3 and RO1													
Nepal-India-(Myanmar)-(Thailand)	Combination of RO3, RO8 then RO15													

*Whilst corridors RO6 and RO10 scored 7 or above in the evaluation, they are both not shortlisted because they are covered in full by other corridors

Abbreviations: ADB = Asian Development Bank, AH = Asian Highway, BCIM = Bangladesh-China-India-Myanmar, DD = detailed design, FS = feasibility study, JICA = Japan International Cooperation Agency, N = no, NH = National Highway, SARDP-NE = Special Accelerated Road Development Programme in the North East, Y = yes

Note: The "Southern Route" has been included for now, but indications are that BCIM may solely focus on the "Middle Route".

Source: This Survey

A6.2 Regional Rail Corridor Evaluation Summary Table

Regional Economic Corridors (Rail)			Strategy Document Review / References					Qualitative corridor evaluation					Total Score	Shortlist	
Countries	Ref	Route	SAARC 5 Priority Corridors 2006 (SAARC Corridor No.)	SASEC 6 Priority Corridors 2004 (SASEC Corridor No.)	Draft SAARC Agree- ment (SAARC Ref)	Trans Asian Railway (TAR) (as per TAR mapping, 2011)	UNESCAP Rail Corridors	Connectivity Number of Countries Served	Strategy/Plans Linkages to Regional Strategy and Plans	Synergies with Potential, Planned, or Completed Development Partner Projects	Economics Industrial Growth Potential	Deliverability Ease of Implemen- tation (use of existing infrastructure)			
Bangladesh-Myanmar-(Thailand)	RA1	Chittagong-Cox's Bazar-[Teknaf]-[Myanmar]	No	No	No	Part	No	2	1	1	2	1	7	Y	
Bangladesh-India-(Myanmar)-(Thailand)	RA2	Delhi-Kolkata-Gede/Petrapole-Darshana/Benapol-Dhaka-Shahbazpur-Maishashan-Imphal-Moreh-(Myanmar)	Yes (1)	No	Yes (2.i)	Yes	Part	2	2	1	2	1	8	Y	
Combination of RA8 and RA10															
Bangladesh-India-Nepal	RA3	Birgunji-Raxaul-Singhabad-Rohanpur-Mongla/Chittagong Ports	Yes (4)	No	Yes (5.i)	Part	Part	2	2	0	1	1	6	N	
	RA4	Biratnagar-Jogbani-Radhikapur-Birol-Khulna-Mongla Port	Part (4)	No	Yes (5.ii)	Part	No	2	2	1	2	0	7	Y	
	RA5	Bardibas-Inarwa-Jaynagar-Radhikapur-[Birol]-Khulna-Mongla	No	No	Yes (5.iii)	Part	No	2	2	1	2	0	7	Y	
	RA6	Kakarbhitta-Phulbari (India) / Kakarbhitta-Panachagarh (Bangladesh)	No	No	No	No	No	2	0	2	2	1	7	Y	
	RA7	Nepal TAR East-West Corridor and connections to India	No	No	No	Yes	No	1	1	1	2	0	5	N	
Bangladesh-India	RA3	Birgunji-Raxaul-Singhabad-Rohanpur-Mongla/Chittagong Ports	Yes (4)	No	Yes (5.i)	Part	Part	2	2	0	1	1	6	N	
	RA4	Biratnagar-Jogbani-Radhikapur-Birol-Khulna-Mongla Ports	Part (4)	No	Yes (5.ii)	Part	No	2	2	1	2	0	7	Y	
	RA5	Bardibas-Inarwa-Jaynagar-Radhikapur-[Birol]-Khulna-Mongla	No	No	Yes (5.iii)	Part	No	2	2	1	2	0	7	Y	
	RA8	Imphal-Agartala-Akhaura/Gangasagar-Chittagong Port	No	No	Yes (3)	No	No	1	2	1	1	1	6	N	
	RA9	Kolkata-Gedes/Darsana-Padma River crossing-Dhaka-Chittagong	Yes (1,3,4)	Yes (5b)	No	Yes	Part	1	2	1	2	1	7	Y	
	RA2	Delhi-Kolkata-Gede/Petrapole-Darshana/Benapol-Dhaka-Shahbazpur-Maishashan-Imphal-Moreh-(Myanmar)	Yes (1)	No	Yes (2.i)	Yes	Part	2	2	1	2	1	8	Y	
	RA10	Delhi-Kolkata-Gede/Petrapole-Darshana/Benapol-Dhaka-Akhaura/Gagasagar-Agartala-(North East India)	Part (1,4)	No	Yes (2.ii)	Yes	Part	1	2	1	1	1	6	N	
	RA11	Birgunji-Raxaul-Kolkata Port/Haldia	Yes (3)	No	Yes (4)	Yes	Yes	1	2	1	1	1	6	N	
Bangladesh-India-Bhutan	RA6	Kakarbhitta-Phulbari (India) /Kakarbhitta-Panachagarh (Bangladesh)	No	No	No	No	No	2	0	2	2	1	7	Y	
	RA12	Mongla/Chittagong-Chilahati-Haldibari-Hasimara-(Bhutan)	No	No	Yes (7)	Part	No	2	2	0	1	1	6	N	
Bhutan-India	RA12	Mongla/Chittagong-Chilahati-Haldibari-Hasimara-(Bhutan)	No	No	Yes (7)	Part	No	2	2	0	1	1	6	N	
	RA13	Kolkata-Hasimara-Phuentsholing	No	No	No	No	No	1	0	0	1	0	2	N	
India-Bangladesh-India	RA2	Delhi-Kolkata-Gede/Petrapole-Darshana/Benapol-Dhaka-Shahbazpur-Maishashan-Imphal-Moreh-(Myanmar)	Yes (1)	No	Yes (2.i)	Yes	Part	2	2	1	2	1	8	Y	
	RA10	Delhi-Kolkata-Gede/Petrapole-Darshana/Benapol-Dhaka-Akhaura/Gagasagar-Agartala-(North East India)	Part (1,4)	No	Yes (2.ii)	Yes	Part	1	2	1	1	1	6	N	
India-Nepal	RA11	Birgunji-Raxaul-Kolkata Port/ Haldia	Yes (3)	No	Yes (4)	Yes	Yes	1	2	1	1	1	6	N	
	RA4	Biratnagar-Jogbani-Radhikapur-Birol-Khulna-Mongla Port	Part (4)	No	Yes (5.ii)	Part	No	2	2	1	2	0	7	Y	
	RA5	Bardibas-Inarwa-Jaynagar-Radhikapur-[Birol]-Khulna-Mongla	No	No	Yes (5.iii)	Part	No	2	2	1	2	0	7	Y	
	RA14	Extension to connect to Vishakhapatnam Port	No	No	No	No	No	0	0	0	2	1	3	N	
	RA6	Kakarbhitta-Phulbari (India) /Kakarbhitta-Panachagarh (Bangladesh)	No	No	No	No	No	2	0	2	2	1	7	Y	
India-Bangladesh-(Myanmar)-(Thailand)	RA7	Nepal Trans-Asian Railway East-West Corridor and connections to India	No	No	No	Yes	No	1	1	1	2	0	5	N	
	RA2	Delhi-Kolkata-Gede/Petrapole-Darshana/Benapol-Dhaka-Shahbazpur-Maishashan-Imphal-Moreh-(Myanmar)	Yes (1)	No	Yes (2.i)	Yes	Part	2	2	1	2	1	8	Y	
Combination of RA8 and RA10															
India-(Myanmar)-(Thailand)			See RA2 as reviewed above See RA8 as reviewed above												
India-Bhutan	RA12	Mongla/Chittagong-Chilahati-Haldibari-Hasimara-Bhutan	No	No	Yes (7)	Part	No	1	2	1	1	1	6	N	
	RA13	Kolkata-Hasimara-Phuentsholing	No	No	No	No	No	1	0	0	1	0	2	N	
Nepal-India			See RA4, RA5, RA6, RA11, RA14 as reviewed above												
Nepal-India-Bangladesh			See RA3, RA4, RA5, RA6 as reviewed above												
Nepal-India-Bangladesh-(Myanmar)-(Thailand)			Combination of Nepal-India-Bangladesh corridors as described above plus RA1												

付録7 JICA 支援候補案件評価 (道路・鉄道)

Country	Project Type	Project Ref	Project Name	CONNECTIVITY / FREIGHT & LOGISTICS		STRATEGY/PLANS			ECONOMIC / INDUSTRY			ENVIRONMENT / SOCIAL		SOFT COMPONENT	DELIVERABILITY		TOTAL SCORE <small>Based on weighting factors</small>	PRIORITY FOR JICA ASSISTANCE*	
				Potential Freight Time Savings	Facilitates connectivity to port(s) for landlocked countries	Strategic Importance	Alignment with JICA strategy	Expected synergies with potential/ planned Development Partner projects	Estimated level of future traffic	Economic growth potential	Importance of project for industry	Social Environment (see environmental chapter for more details)	Natural Environment (see environmental chapter for more details)	Transit facilitation potential	Project Readiness	Ease of Infrastructure implementation (e.g. major constraints)			
Bangladesh	Road	RO1-a	AH-41 Chittagong to Cox's Bazar	1	1	1	1	2	1	2	0	1	1	0	2	1	2.6	Medium	
Bangladesh	Road	RO1-b	AH-41 Cox's Bazar to Teknaf	1	0	1	1	1	0	2	0	2	0	0	1	0	1.6	Low	
Bangladesh	Road	RO2-a	AH-1 Benapole to Jessore	1	0	2	1	2	2	2	2	0	1	0	1	2	3.1	High	
Bangladesh	Road	RO2-b	AH-1 Jessore to Bhatipara	0	1	2	1	2	2	2	2	0	1	0	1	0	2.7	High	
Bangladesh	Road	RO2-c	Padma Bridge	0	0	2	2	2	2	2	2	2	1	0	2	0	3.1	High	
Bangladesh	Road	RO3-a	AH-2 Rangpur to Beldanga	2	2	2	1	2	0	2	0	1	1	1	0	0	2.5	Medium	
Bangladesh	Road	RO3-b	AH-2 Beldanga to Panchagarh	2	2	2	1	2	0	2	0	1	1	1	0	0	2.5	Medium	
Bangladesh	Road	RO3-c	AH-2 Panchagarh to Banglabandha	1	2	1	0	0	0	1	0	1	1	1	0	1	1.5	Low	
Bangladesh	Road	RO17-a	Feni River Bridge Ramgarh (Sabroom)	2	0	1	2	0	0	1	0	2	1	1	0	1	1.8	Medium	
Bangladesh	Road	RO17-b	Chittagong to Ramgarh (Sabroom) alt 1: via NH-1 (AH-41), R151 then R152	2	1	1	2	0	1	1	0	1	1	1	0	2	2.3	Medium	
Bangladesh	Road	RO17-c	Chittagong to Ramgarh (Sabroom) alt 2: via R160, R151 then R152	1	0	0	2	0	0	1	0	0	1	1	0	0	1	Low	
Bangladesh	Rail	RA1-a	Regional Transport Hub: Dohazari to Cox's Bazar (ADB RCI subproject 4: Construction of single line metre gauge from Dohazari to Cox's Bazar via Ramu and Ramu to Gundum)	1	1	1	1	2	1	2	0	2	0	0	2	0	2.4	Medium	
Bangladesh	Rail	RA1-b	Regional Transport Hub: Long term sub-projects connecting Sonadia I) Comilla-Chittagong-Sonadia; II) Comilla-Chord Line-Fatullah-ICD-Dhaka; III) ICD (Dhaka South)-Jessore-Benapole-India); IV) Dhaka-Akhaura-India	Various long term projects requiring separate review at a later stage														n/a	Low
Bangladesh	Rail	RA1-c	Other ADB RCI Projects - in addition to Dohazari to Cox's Bazar there are 6 other sub-projects (ADB have not noted these for JICA assistance yet)	Various projects requiring further discussions between JICA and ADB														n/a	Medium
Bangladesh	Rail	RA9-a	Loan Assistance for the Dhaka-Chittagong Railway Development Project	2	2	2	2	0	1	2	1	1	1	1	2	1	3.3	High	
Bhutan	Road	RO7-a	Bridge on the ADB SASEC Northern Bypass of Phuentsholing	2	2	2	2	2	0	1	1	2	1	2	1	0	3.1	High	
Bhutan	Road	RO7-b	ADB SASEC Northern Bypass of Phuentsholing (including road section and bridge)	2	2	2	1	2	0	1	1	2	1	2	1	0	2.9	High	
Bhutan	Road	RO7-c	Mao-khola Bridge on Southern East-West Highway Corridor (SEWH)	0	1	0	1	1	0	1	1	2	1	2	0	0	1.5	Low	
Bhutan	Road	RO7-d	Sections of Southern East-West Highway (SEWH)	1	1	0	1	1	0	1	1	2	0	2	0	0	1.6	Low	
Bhutan	Rail	RO7-e	Potential Rail connection Thimphu-Airport-Phuentsholing	1	2	1	0	0	0	1	0	2	0	2	0	0	1.4	Low	
India (Assam)	Road	RO15-a	2-laning of alternative route Barak Valley (Silchar) - Guwahati Road via Harangajao-Turuk Plus Tezpur Bridge	0	1	1	2	0	0	1	0	1	1	1	1	1	1.7	Medium	
India (Manipur)	Road	RO16-a	NH-2 (old NH-39) Imphal to Kohima	0	0	1	2	1	0	1	0	2	1	1	1	1	1.8	Medium	
India (Manipur)	Road	RO2-e	State road between Imphal and Kakching	0	0	0	2	0	1	2	0	1	0	1	0	0	1.2	Low	
India (Manipur/Assam)	Road	RO2-d	NH-37 (old NH-53) Imphal to Jiribam (plus bridge in Silchar Assam)	1	0	2	2	1	1	2	0	2	0	1	0	0	2.1	Medium	
India (Meghalaya)	Road	RO9-a	NH62: between Dudhanai and Dalu and extension NH-51 between Tura and Dalu	0	0	0	2	1	2	2	1	1	1	1	0	1	2.1	Medium	
India (Meghalaya)	Road	RO9-b	2 laning of Williamnagar to Nengkra	0	0	0	0	0	0	2	1	1	1	1	0	0	0.9	Low	
India (Meghalaya)	Road	RO9-c	Dawki to Shillong NH-40 and construction of Dawki bridge	0	2	2	2	0	2	2	1	2	0	1	0	0	2.5	Medium	
India (Meghalaya/Assam)	Road	RO9-d	NH-44 NHAI scheme from Jowai to Assam border plus the NH-44 Badarpurghat Bridge	0	1	1	2	0	2	2	1	2	1	1	0	0	2.2	Medium	
India (Mizoram)	Road	RO14-a	NH-54 2 laning from Aizawl to Tuipang	0	0	1	2	2	1	1	0	2	0	0	1	0	1.8	Medium	
India (Nagaland)	Road	RO16-b	NH-150 2 laning from Kohima to Nagaland/Manipur border	0	0	0	2	1	0	1	0	2	0	1	0	0	1.1	Low	
India (Nagaland)	Road	RO16-c	NH-155 2 laning of Mokochung to Jessami	0	0	0	2	1	0	1	0	1	0	1	1	0	1.2	Low	
India (Nagaland)	Road	RO16-d	NH-61 2 laning from Wokha (km 70) to Tuli (km 220)	0	0	0	2	0	0	1	0	1	1	1	1	0	1.1	Low	
India (Tripura)	Road	RO17-d	Improvement of State road from Kukital southbound towards Sabroom (top section)	2	0	0	0	0	1	2	0	2	0	1	1	0	1.5	Low	
India (Tripura)	Road	RO17-e	NH-44a 2 laning/ realignment from Manu to Tripura/Mizoram Border	2	0	0	2	0	0	2	0	2	0	1	1	1	1.9	Medium	
India (West Bengal)	Road	RO2-f	Haldia-Raichak-Kukrahati-east of NH-117-bypass Barasat and joins NH-34	0	1	1	1	1	2	2	1	0	1	0	0	0	1.9	Medium	
India (West Bengal)	Road	RO2-g	Crossing of Proposed RO17-d project and Kolkata Basanti Road up to Basanti-Canning-Gosaba	0	1	1	1	1	2	2	1	0	1	0	0	0	1.9	Medium	
India (West Bengal)	Road	RO2-h	Chakdah on NH34 to Bongaon (additional improvements to the previous ADB 2 laning)	0	1	1	1	1	2	2	1	0	1	0	1	1	2.1	Medium	
Nepal	Road	RO3-d	ADB road section spur: Leguwaghat-Tumlingtar	0	0	0	0	2	0	1	0	2	0	1	2	0	1.3	Low	
Nepal	Road	RO3-e	ADB road section spur: Thankot-Mlekhu tunnel (3km) - SEE PROJECT RO3-F	n/a see RO3-f														n/a see RO3-f	
Nepal	Road	RO3-f	Thankot-Nagdhunga-Naubise Tunnel	2	2	1	2	0	0	2	0	2	0	1	1	0	2.3	Medium	
Nepal	Road	RO3-g	ADB road section spur Ghinaghat-Biratchowk	1	1	1	0	1	0	2	0	1	0	1	2	0	1.8	Medium	
Nepal	Road	RO3-h	ADB road section spur Bhedetar-Rabi-Ranke.	0	0	0	0	2	0	2	0	1	0	1	1	0	1.2	Low	
Nepal	Road	RO3-i	Nepal-India road section via Kakarbhitta	2	2	2	0	0	0	2	0	1	1	1	1	1	2.3	Medium	
Nepal	Road	RO3-j	Project for the Improvement of Surabinayak - Dhulikei Road	1	1	1	2	0	0	2	0	2	0	1	1	2	2.3	Medium	
Nepal	Road	RO3-k	Kathmandu - Terai Fast Track Project	1	1	1	0	0	0	2	0	2	0	1	1	0	1.5	Low	
Nepal	Rail	RA6-a	Nepal-India rail via Kakarbhitta	2	2	0	0	0	0	1	0	2	0	1	0	0	1.3	Low	

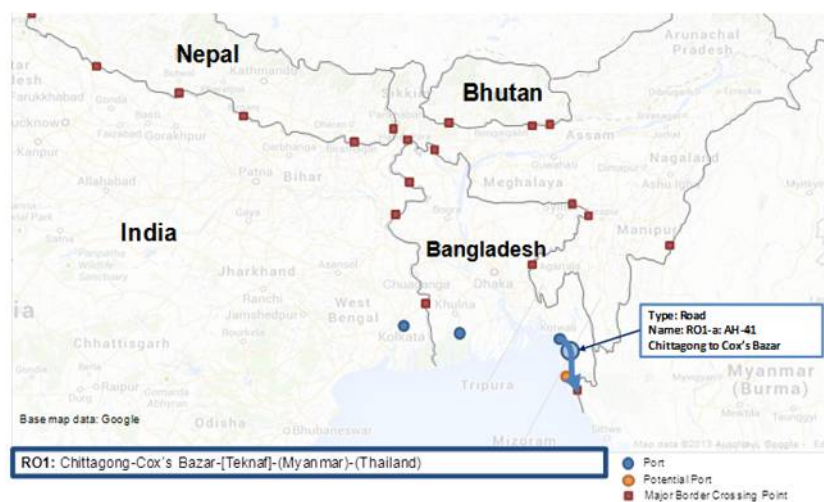
Note: Since the multi-criteria analysis and review process was undertaken, two additional road section projects have been proposed by stakeholders on corridors RO15/16, although further work and information is required to develop these proposals. *High (projects scoring 2.7 or higher), Medium (projects scoring between 2.6 and 1.7), Low (projects scoring 1.6 or lower).

付録 8 支援候補案件のプロジェクトシート

A8.1 道路・鉄道インフラ案件候補

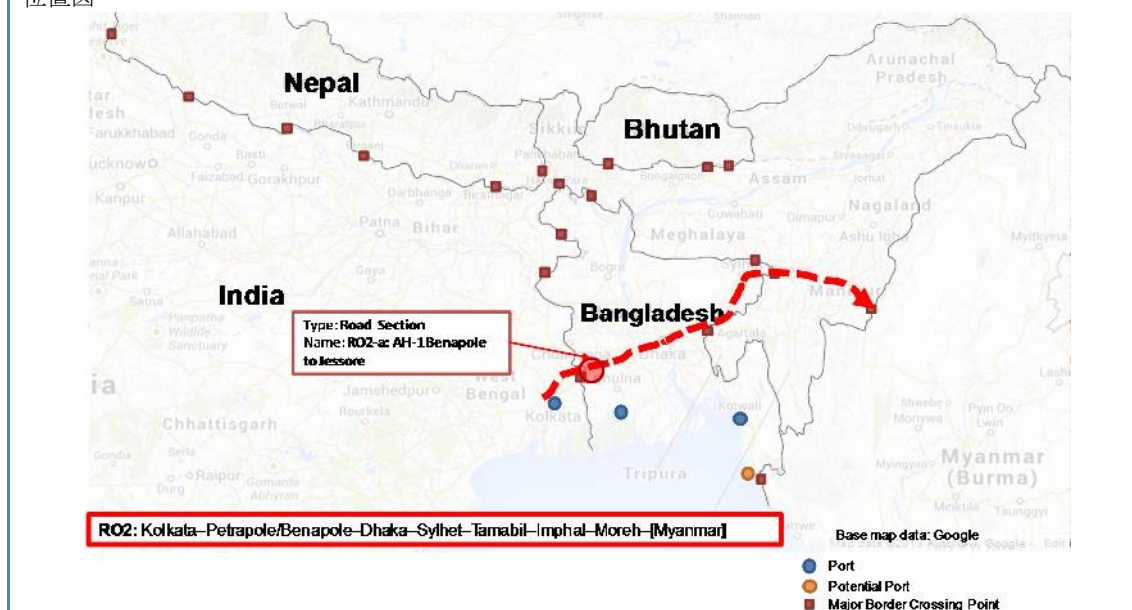
案件番号：RO1-a 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： AH-41 チッタゴン～コックスバザール間	優先度： 中
対象回廊	RO1： Chittagong-Cox's Bazaar-[Teknaf]-[Myanmar]-[Thailand]	
案件詳細	チッタゴン～コックスバザール間のアジアハイウェイ 41 号線（国道 1 号線）の 135 km を改良する。これは、バングラデシュとミャンマーを Gundum で結ぶ、より広域的な回廊の一部である。チッタゴン～コックスバザール間の 133 km の区間は、現在、2 車線で、平坦または緩起伏の地形を通り、多くの町とバザールを経由している。	
現状	フィージビリティ・スタディは、2013 年に完了する予定であり、詳細設計と契約図書は、2014 年 10 月までに作成される。事前資格審査、入札、評価、および契約裁定は、2015 年 7 月までに完了する。	
社会・自然環境への影響	社会への影響：C 自然環境への影響：C	
経済・財務面	この案件により、チッタゴンおよび新たな海港への連結性が強化され、経済効果が期待できる。 事業費概算：2013 年 7 月の運輸省道路局国道部の発表によれば、チッタゴン～コックスバザール間の改修に係る事業費概算は 430,000,000 ドルである。	
カウンターパート機関	運輸省道路局国道部	
留意事項	<ul style="list-style-type: none"> インド北東地域を含むミャンマーへの地域連結性の優先度と進捗 ADB との協調融資の可能性 ソナディア港の発展 コックスバザールから先のテクナフへの接続については、地形が険しく、テクナフ付近の区間がとくに困難であるため、本プロジェクトには含まれていない。 	

位置図



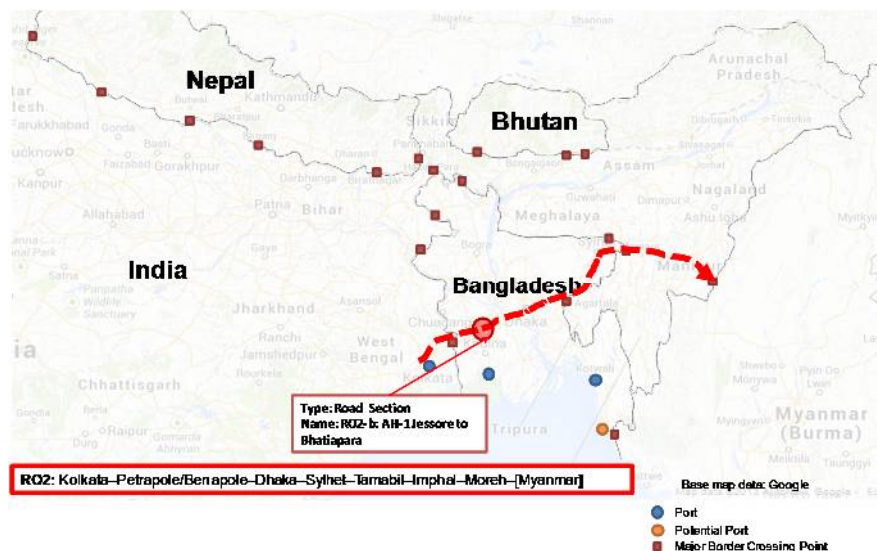
案件番号：RO2-a 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： AH-1 Benapole－Jessore	優先度： 高
対象回廊	RO2：Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Sutarkhandi/Sheola]-Imphal-[Moreh]-[Myanmar]	
案件詳細	Benapole（インドとの国境上）に至る AH 1 の 38 km を改良する。Benapole は、最も重要かつ繁華なバングラデシュ国境通過地点である。本ルートは、戦略的に重要であり、SAARC 回廊 1 や BCIM 中部回廊といった主要回廊の一部をなしている。	
現状	ADB のバングラデシュ駐在事務所との協議では、本ルートに関し、同行が技術協力を行っているとのことであったが、JICA 支援の可能性は残っている。さらに、2007 年に UNESCAP は、代替 2 ルートのプレフィージビリティ・スタディを完了した。	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C-	
経済・財務面	道路改良によって、ダッカからの広域輸送の走行時間が短縮され、GDP にプラスの影響をもたらすと見込まれる。 事業費概算：前述の UNESCAP のプレフィージビリティ・スタディでは、代替 1 ルートは 34,210,000 ドル、代替ルート 2 とされた。期間は 3 年を想定された。現在、ADB がさらにフィージビリティ・スタディを進めている。	
カウンターパート機関	運輸省道路局国道部	
留意事項	<ul style="list-style-type: none"> 戦略的なスコアは高いが、現時点の通行量では大規模な改良工事が妥当とは判断されないため、開発中の回廊（Padma 橋梁の整備、BCIM による活性化など）に左右される。 フィージビリティ・スタディ/詳細設計の実施 ADB によるこの区間の調査が進んでいるが、JICA 支援の可能性もある。 	

位置図



案件番号：RO2-b 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： AH-1 Jessore－Bhatiapara	優先度： 高
対象回廊	RO2：Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Sutarkhandi/Sheola]-Imphal-[Moreh]-[Myanmar]	
案件詳細	アジアハイウェイ 1 号線の 59 km (Bhatiapara-Kalna 間 3 km、Kalna-Narail 間 24 km、Narail-Jessore 間 32 km) を改良する。これは、Padma 橋梁が建設された後に主要回廊計画の一部となる区間を含んでいるため、今後戦略的に重要なルートである。一部の区間は、AH クラス II および AH クラス III 以下である。	
現状	ADB のバングラデシュ駐在事務所との協議では、本ルートに関し、技術協力を行っているとのことであったが、JICA 支援の可能性は残っている。フィージビリティ・スタディおよび詳細設計は実施されていない。	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C-	
経済・財務面	道路改修によって、ダッカ発着の広域輸送の走行時間が短縮され、GDP にプラスの影響をもたらすと見込まれる。 事業費概算：フィージビリティ・スタディは実施されていないが、現時点では約 224,000,000 ドルと予想される。 ¹	
カウンターパート機関	運輸省道路局国道部	
留意事項	<ul style="list-style-type: none"> 戦略的なスコアは高いが、現時点の通行量では大規模な改良工事が妥当とは判断されないため、開発中の回廊 (Padma 橋梁の整備、BCIM による活性化など) に左右される。 フィージビリティスタディ／詳細設計の実施 ADB によるこの区間の調査が進んでいるが、JICA 支援の可能性もある。 	

位置図



¹ 3,800,000 ドル/km として、AH-Class-1 を 59 キロメートル 4 車線化で計算。悪条件による追加費用およびその他土地収用などで、RHD の RO1-a/b プロジェクトより増額する見込み。

案件番号：RO2-c 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： パドマ橋	優先度： 高
対象回廊	RO2：Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Sutarkhandi/Sheola]-Imphal-[Moreh]-[Myanmar]	
案件詳細	戦略的に重要なこの架橋プロジェクトは、以前、JICAの資金協力計画に含まれていたが、先方政府のガバナンスの事情により棚上げにされた。 Padma 多目的橋梁は、完成後には、バングラデシュで2番目に大きな固定橋梁となり、同国の南西部と他の地域とを結ぶ。橋は、国内2カ所の主要港湾を直結し、AH1およびTARネットワーク・システムの主要部分となる。ダッカから南西地域のほぼすべての主要目的地までの距離は、100 km以上短縮され、その結果、輸送時間が短縮される。(World Bank Project Appraisal Document, January 2011)	
現状	かつては実施の準備が整っていたが、政府が要件を満たせるまで現在は検討対象外である。	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C+	
経済・財務面	南西部ならびに国全体のGDPが上がり、多くの雇用を生む。 事業費概算：国際開発協会クレジット（12億米ドル）、ADBクレジット（7600万米ドル）、ADBローン（5億3900万米ドル）、JICAクレジット（4億米ドル）、イスラム開発銀行ローン（1億4000万米ドル）、バングラデシュ政府基金（5億6000万米ドル） 総工費は29億1500万米ドル（19.5%の税込：約5億4910万米ドル）	
カウンターパート機関	運輸省道路局国道部	
留意事項	<ul style="list-style-type: none"> 政府が要件を満たせるまで現在は検討対象外 戦略的なスコアは高いが、開発中の回廊に左右される。 	

位置図



案件番号：RO2-d 対象国：インド 分野：道路 案件タイプ：円借款	案件名： NH-37 (旧 NH-53) Imphal-Jiribam (およびアッサムの Silchar 地域の橋梁)	優先度： 中
対象回廊	RO2：Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Sutarkhandi/Sheola]-Imphal-[Moreh]-[Myanmar]	
案件詳細	インパール Jiribam 間の NH-37 (旧 NH-53) (および Silchar 地域で Barak 川を渡る Sadarghat 橋梁) の改良とともに、既存の橋梁の修復と新たな橋梁を建設する。インパール-Jiribam 区間は、主要な長期戦略ルートの一部をなす (BCIM)。インパール寄りには良好な区間があるが、ルート上の地形は全体的に険しい。	
現状	国境道路機構 (BRO) から MoRTH への譲渡が予定され、MoRTH は、JICA に本プロジェクトの支援を求めている。 実現可能性と地形的制約を検討する上で必要な詳細プロジェクト報告書 (DPR) は、まだ作成されていない。	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：C+	
経済・財務面	接続する地域回廊より経済効果が期待できる。 事業費概算：フィージビリティ・スタディは実施されていないが、現時点では約 774,000,000 ドルと予想される。 ²	
カウンターパート機関	道路交通省 (国境道路機構から譲渡された場合)	
留意事項	<ul style="list-style-type: none"> ● 国境道路機構から道路交通省への譲渡 ● 詳細プロジェクト報告書の作成、実現可能性と地形的制約の把握 ● インド、バングラデシュ、ミャンマーを繋ぐ回廊の発展 ● 道路交通省と NH-53 上の Sadarghat 橋に係る協議 	

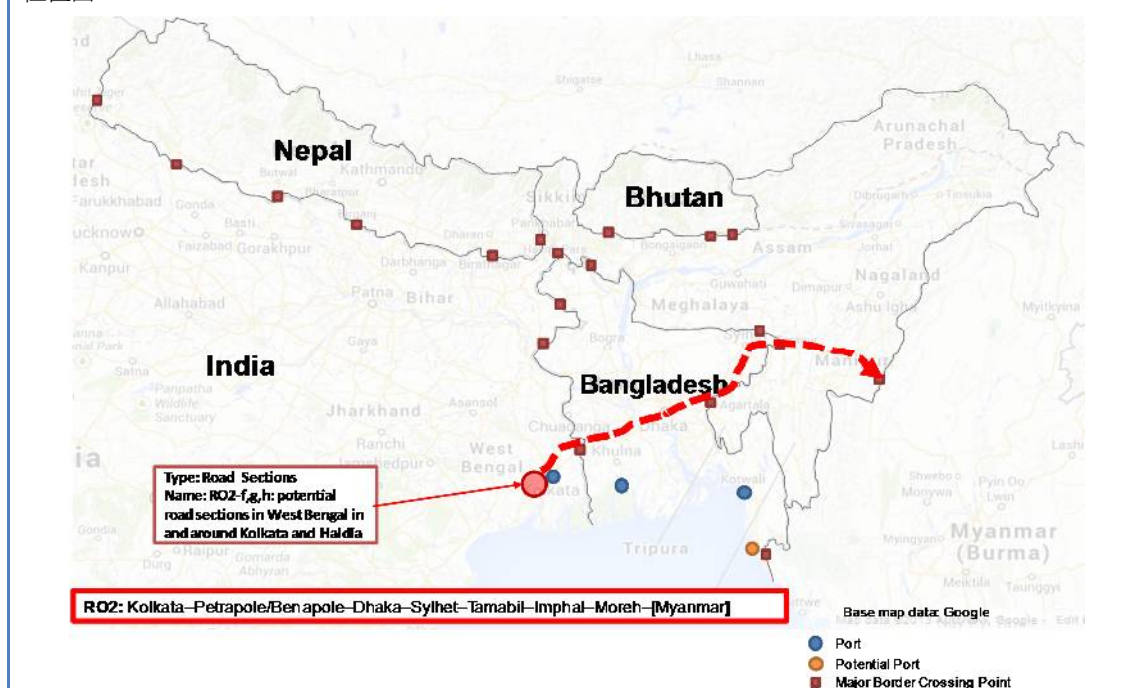
位置図



² 3,600,000 ドル/km として、インド北東地域 215 キロメートルの拡張を計算。他のインド北東地域道路案件や 2010 年のグジャラート海洋局レートを使用した。(2 laning = 2 laning x 1 = USD 1.2 million / km, bridges = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 3,000 / m² = USD 1.8 million / km, and Others = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 1,000 / m² = USD 0.6 million / km 土地収用に係る費用は含めていない。)

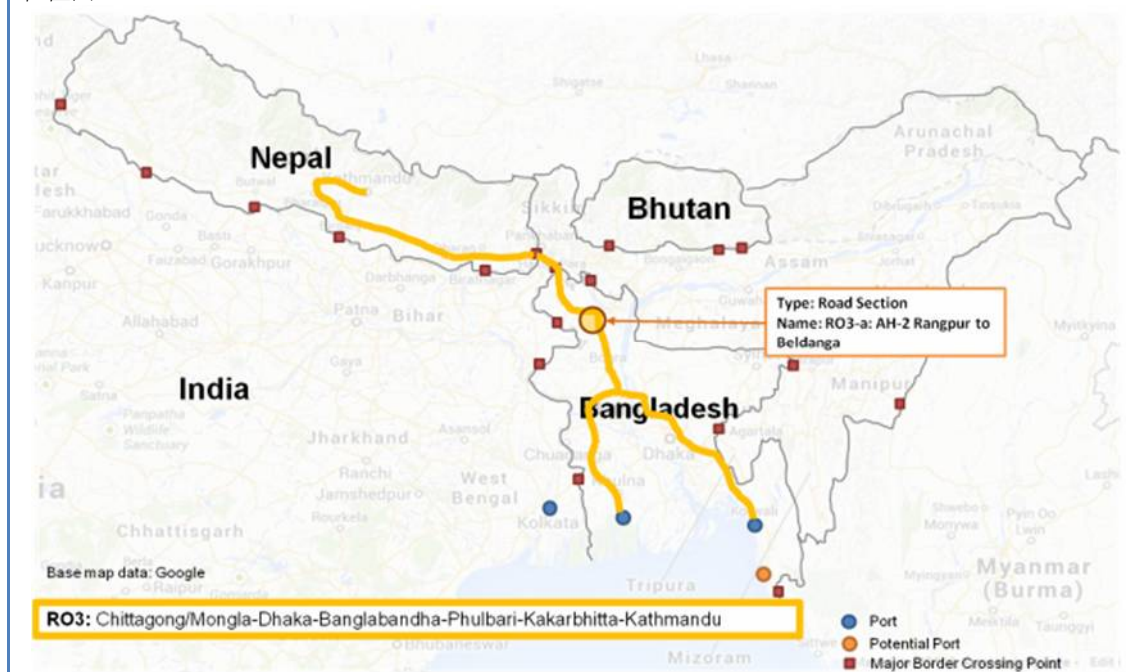
<p>案件番号：RO2-f,g,h 対象国：インド 分野：道路 案件タイプ：円借款</p>	<p>案件名： 1. RO17-d プロジェクトと Basanti-Canning-Gosaba に繋がる Kolkata Basanti 道路の交差 2. NH117 バイパス Haldia-Raichak-Kukrahati west を Barasat を経由して NH34 との接続 3. NH34 Chakdah-Bongaon</p>	<p>優先度： 中</p>
<p>対象回廊</p>	<p>RO2：Kolkata-[Petrapole/Benapole]-Dhaka-Sylhet-[Sutarkhandi/Sheola]-Imphal-[Moreh]-[Myanmar]</p>	
<p>案件詳細</p>	<p>コルカターHaldia 港の道路網の利便性を向上させる取り組みがこれまで行われており、複数のプロジェクトが進行している。西ベンガル州道路部は、最近、改良プロジェクトを見直すため、西ベンガルの州道に関するネットワーク優先整備研究を開始した（研究は 2014 年 3 月に完了する予定）。構想プロジェクトは、以下の通りである。(i) 提案された RO17-d プロジェクトとコルカタ Basanti 道路を交差させ Basanti-Ganning-Gosaba に到達させる。(ii) NH-117 バイパスの Haldia-Raichak-Kukrahati 東を Barasat で NH34 と結ぶ。(iii) NH-34 上の Chakdah から Bongaon まで（以前の ADB による 2 車線化への追加的改良）。</p>	
<p>現状</p>	<p>これらプロジェクトはウェストベンガル州公共事業局（PWD）およびウェストベンガル高速道路開発公社（WBHDCL）による提案である。しかし、まだ構想段階であり、2014 年 3 月終了予定の調査（担当 RITES）で検討される予定。</p>	
<p>社会・自然環境への影響</p>	<p>社会への影響：D 自然環境への影響：C-</p>	
<p>経済・財務面</p>	<p>コルカタのハルディア港への接続が向上することで経済効果が期待できる。 事業費概算：構想段階だが、PWD の調査により概算が行われる予定。</p>	
<p>カウンターパート機関</p>	<p>ウェストベンガル州公共事業局（PWD）およびウェストベンガル高速道路開発公社（WBHDCL）</p>	
<p>留意事項</p>	<p>構想段階のプロジェクトのため、組織や土地収用に関する調査が必要。</p>	

位置図



案件番号：RO3-a 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： AH-2 Rangpur-Beldanga	優先度： 中
対象回廊	RO3：Chittagong/Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarbhitta]-Kathmandu	
案件詳細	Rangpur と Beldanga、Beldanga と Panchagarh の間の AH 2 区間 (67 km) を改良する。内陸のネパールからバングラデシュの港湾へのアクセスを可能にする SAARC ハイウェイ回廊 4 の一部である。現在の道路状態は劣悪である。Panchagarh-Banglabandha 間の AH-2 区間を ADB が改良したが、本プロジェクトは、それを基にさらなる改良を行う。	
現状	Since there has not been any study or program yet, further work including feasibility studies are required.	
社会・自然環境への影響	社会への影響：D 自然環境への影響：D	
経済・財務面	内陸国ネパールからバングラデシュの海港へのアクセスにより経済効果が期待できる。 事業費概算：現時点では 214,000,000 ドルと想定される。 ³	
カウンターパート機関	運輸省道路局国道部	
留意事項	戦略的にスコアは高いが、現時点の通行量では大規模な改良工事が妥当とは判断されないため、開発中のネパール-インド-バングラデシュ回廊（関連するソフト・インフラの改良を含む）によって評価は左右される。 <ul style="list-style-type: none"> • フィージビリティ・スタディおよび詳細設計の実施 	

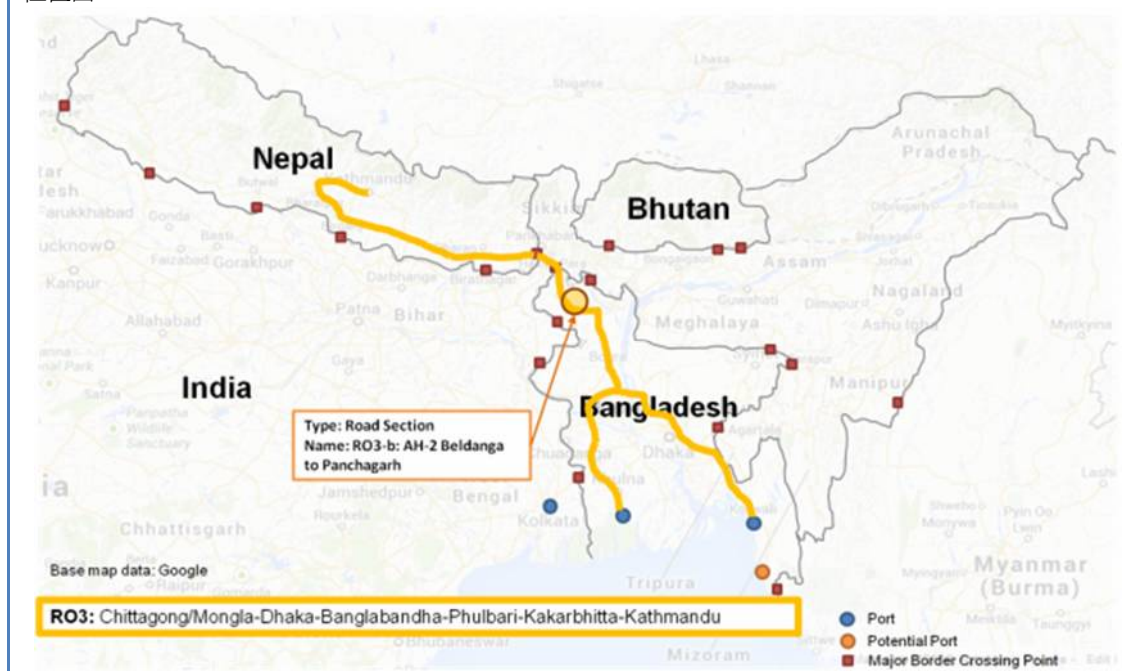
位置図



³ 3,200,000 ドル/km として、AH-Class-1 を 67 キロメートル 4 車線化で計算。土地収用などの費用は含まれない。

案件番号：RO3-b 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： AH-2 Beldanga-Panchagarh	優先度： 中
対象回廊	RO3：Chittagong/Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarbhitta]-Kathmandu	
案件詳細	Beldanga－Panchagarh 間の AH2 区間 (76 km) を改良する。これは、内陸のネパールからバングラデシュの港湾へのアクセスを可能にする SAARC ハイウェイ回廊 4 の一部である。現在の道路状態は劣悪である。Panchagarh－Banglabandha 間の AH-2 区間を ADB が改良したが、本プロジェクトは、それを基にさらなる改良を行う。	
現状	現時点では調査やプログラムが行われておらず、今後作業とフィージビリティ・スタディが必要である。	
社会・自然環境への影響	社会への影響：D 自然環境への影響：D	
経済・財務面	内陸国ネパールからバングラデシュの海港へのアクセスにより経済効果が期待できる。 事業費概算：フィージビリティ・スタディは実施されていないが、現時点では 243,000,000 ドルと想定される。 ⁴	
カウンターパート機関	運輸省道路局国道部	
留意事項	本プロジェクトのスコアは高いが、現時点の通行量では大規模な改良工事が妥当とは判断されないため、開発中のネパールーインドーバングラデシュ回廊（関連するソフト改良を含む）によって評価は左右される。 <ul style="list-style-type: none"> フィージビリティ・スタディおよび詳細設計の実施 	

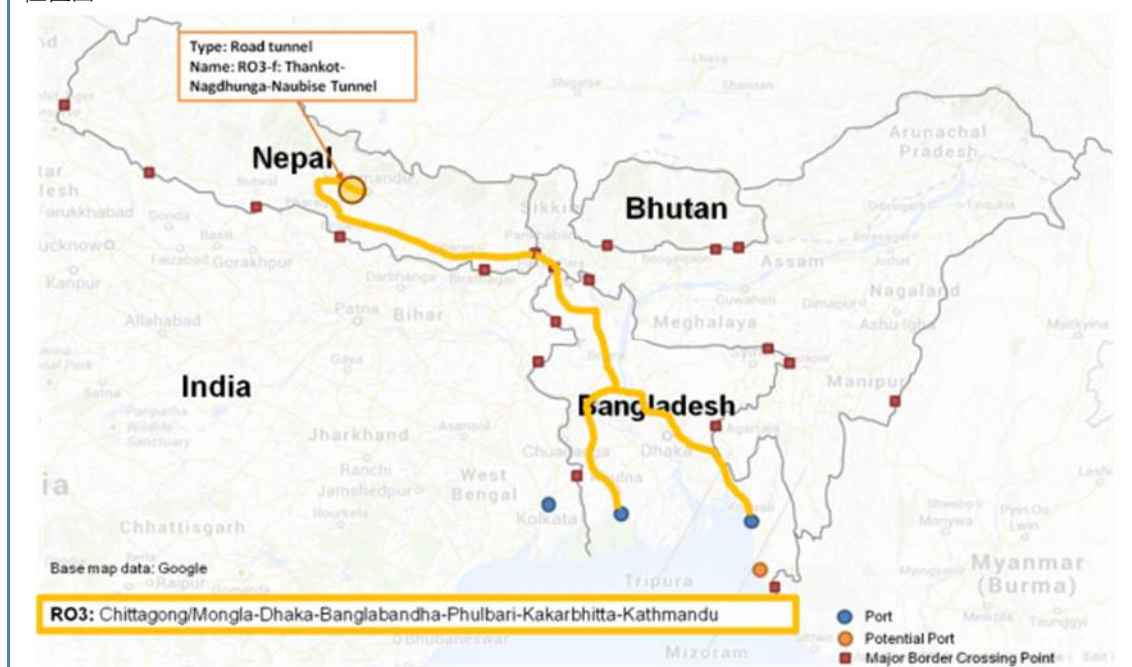
位置図



⁴ 3,200,000 ドル/km として、AH-Class-1 を 76 キロメートル 4 車線化で計算。土地収用などの費用は含まれない。

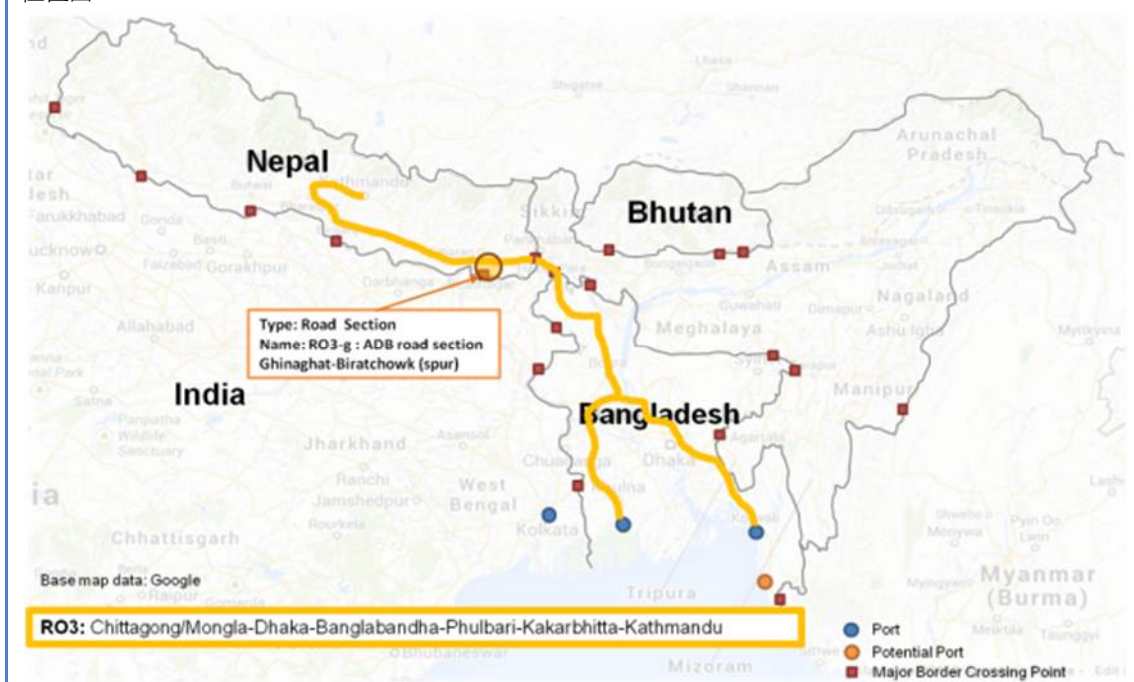
案件番号：RO3-f 対象国：ネパール 分野：道路 案件タイプ：円借款	案件名： Thankot-Nagdhunga-Naubise トンネル	優先度： 中
対象回廊	RO3：Chittagong/Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarbhitta]-Kathmandu	
案件詳細	ネパール-インド間の道路は重要であることから、Thankot-Nagdhunga-Naubise ルートには交通渋滞が生じているが、この地点の地理的制約が主な原因となっている。ネパール政府は、円滑で安全な道路交通を維持すべく、Nagdhunga-Naubise 間に 2.5~3.0 km のトンネルを建設する計画を策定した。さらに JICA の在外道路専門家が実施した 2013 年の JICA ネパール輸送部門プロジェクトは、本計画を JICA の支援検討対象として推奨した。これを受けて日本政府は既に協力準備調査開始を予定している。	
現状	2013 年 2 月、Ministry of Physical Infrastructure and Transport 道路部が Nagdhunga-Naubise 間のトンネルにおけるフィージビリティ・スタディを実施した。	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：C+	
経済・財務面	道路部の 2013 年のフィージビリティ・スタディは 19.65%の経済的內部収益率、1.38%の経済効果と試算した。 事業費概算：Imakhel-Sisne Khola トンネル道路（全長 2.3 キロメートル）の総工費を 4,977,537.10 インドルピー（約 43,000,000 ドル）としたが、JICA は全区間を対象にフィージビリティ・スタディを行う予定。	
カウンターパート機関	Department of Roads, Ministry of Physical Infrastructure and Transport	
留意事項	JICA によるフィージビリティ・スタディと詳細設計の実施	

位置図



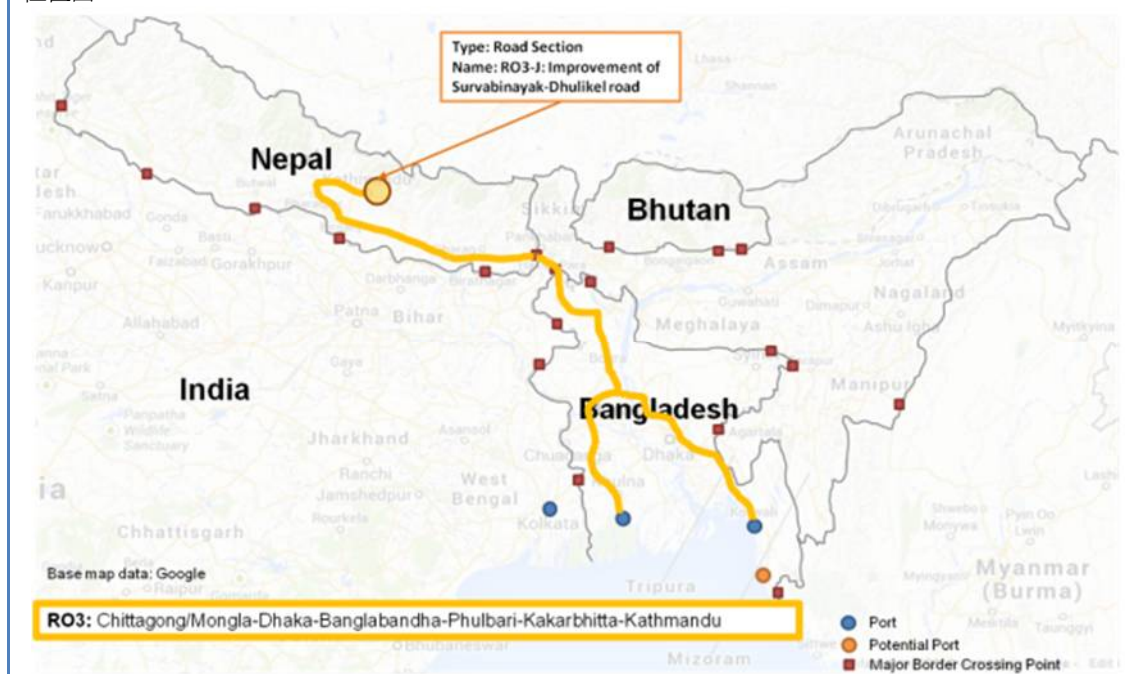
案件番号：RO3-g 対象国：ネパール 分野：道路 案件タイプ：円借款	案件名： ADB による Ghinaghat–Biratchowk 間の分岐道路区 間	優先度： 中
対象回廊	RO3：Chittagong/Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarbhitta]-Kathmandu	
案件詳細	RO3 回廊 (SAARC 回廊 4) からインド国境に向かう、22 km の分岐道路区間に関するものである。これは、ADB ネパール輸送プロジェクト準備制度の一環として選特定され、調査が行われた。本プロジェクトについて ADB は、JICA 支援の可能性に言及した。さらなる情報と ADB との協議が必要である。	
現状	ADB による詳細調査は間もなく終了	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：D	
経済・財務面	RO3 のみ関連するため、地域連結性による経済効果は小さい。 事業費概算：詳細設計調査を基に ADB が試算予定。	
カウンターパート機関	Department of Roads, Ministry of Physical Infrastructure and Transport	
留意事項	ADB による追加情報	

位置図



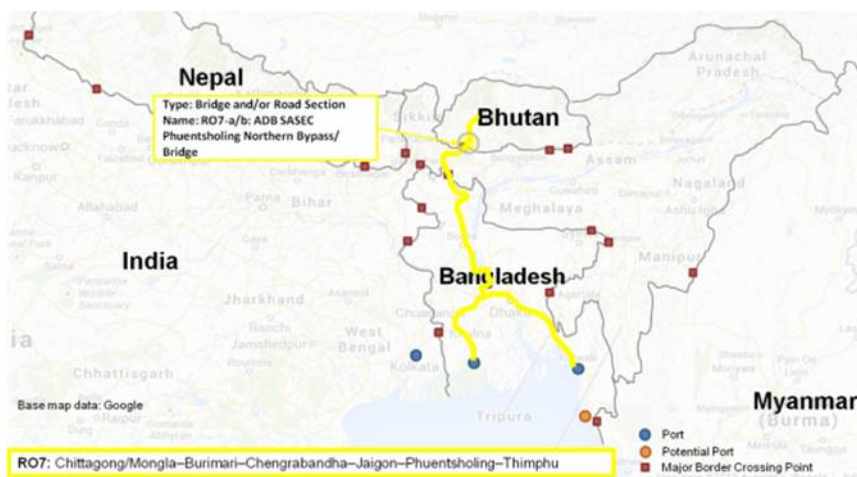
案件番号：RO3-j 対象国：ネパール 分野：道路 案件タイプ：円借款	案件名： Survabinayak-Dhulikel 道路改良プロジェクト	優先度： 中
対象回廊	RO3：Chittagong/Mongla-Dhaka-[Banglabandha]-Phulbari-[Kakarbhitta]-Kathmandu	
案件詳細	本プロジェクトは、カトマンズにある主要放射状ルート of の片側 2 車線道路 16 km を改良する。この道路は、ネパール東部への重要な通路であり、RO3 回廊 (SAARC 回廊 4) の分岐を形成している。さらに、JICA の在外道路専門家が実施した 2013 年の JICA ネパール輸送部門プロジェクトは、本プロジェクトを JICA の支援検討対象として提案した。これを受けて日本政府は既に協力準備調査開始を予定している。本プロジェクトの出発点は、日本政府の無償資金協力によって昨今完成したカトマンズ - Bhaktapur 道路の終点であり、その先は Dhulikel へと続いている。ここでは、同じく日本政府の無償資金協力による拡幅が行われた、Sindhuli 道路プロジェクトの終点である。	
現状	追加情報が必要	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：C+	
経済・財務面	RO3 回廊の分岐区間に留まるため、広域連結による経済的影響は少ないと思われる。 事業費概算：全長 16 キロメートルの概算は 57,600,000 ドルとなり、施工監理は 5,700,000 ドルとなる。(JICA, 2013)	
カウンターパート機関	Department of Roads, Ministry of Physical Infrastructure and Transport	
留意事項	評価には更なる情報が必要。	

位置図



案件番号：RO7-a, b 対象国：ブータン 分野：道路 案件タイプ：円借款	案件名： 1. Phuentsholing の ADB SASEC 北バイパスの橋梁 2. Phuentsholing の RO7-b ADB SASEC 北バイパス (道路区間と橋梁を含む)	優先度： 高
対象回廊	RO7： Chittagong/Mongla-[Burimari]-Chengrabandha-Jaigon-[Phuentsholing]-Thimphu	
案件詳細	第3の橋梁を含む延長 2.7 km の 4 車線バイパス道路を建設する。本プロジェクトは、ブータン以遠からインドへの連絡路を整備するも、戦略的重要性は大きい。この区間は、SAARC ハイウェイ回廊 3 および 8 の一部である。ADB が、本プロジェクトを計画しており、支援を要する可能性がある。	
現状	ADBによる調査は完了した。第3の橋梁については、高架交差道案を含む2通りの案が提出された。	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C+	
経済・財務面	ブータンとインドの連結性ならびにパサカ工業団地へのアクセス向上により、経済効果が期待される。 事業費概算：代替案を橋とした場合は324,000,000ブータンニュルタム (約5,900,000ドル)、代替案を高架交差道案とした場合は353,000,000ブータンニュルタム (約6,400,000ドル) となった。	
カウンターパート機関	Department of Roads, Ministry of Works and Human Settlement	
留意事項	<ul style="list-style-type: none"> ADB が支援を必要とするかどうか、また、協力する場合、道路区間全体、あるいは橋梁のみのいずれかについて、実施を判断しなくてはならない。 高架交差道案は、Tashi グループ⁵が所有する民有地の上を通過することになる。 バイパス道路については、土地取得と住民移転のリスクが多数発生する可能性がある。主な影響が見込まれる場所は、既存の橋梁付近のバス停に隣接する青果市場である。 ADB SASEC が同地域で実施する他案件次第である。 	

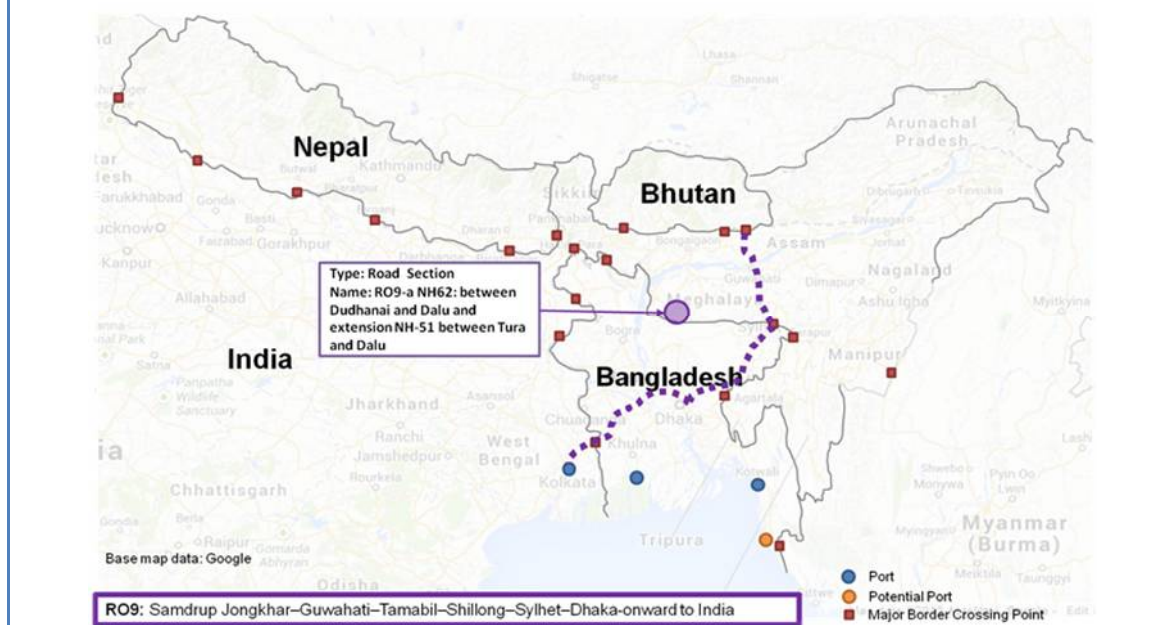
位置図



⁵ ブータンの財閥。

案件番号：RO9-a 対象国：インド 分野：道路 案件タイプ：円借款	案件名： NH-62： Dudhanai－Dalu 間および Tura－Dalu 間の NH-51 延長区間	優先度： 中
対象回廊	RO9： [Samdrup Jongkhar]－Guwahati－[Tamabil]－Shillong－Sylhet－Dhaka-onward to India via other corridors	
案件詳細	いずれもメガラヤ州の道路プロジェクトである、Dudhanai－Dalu 間の NH-62 と、Tura－Dalu 間の NH-51 延長区間に関するものである。これには、SARDP-NE フェーズ B 区間プロジェクト (アッサム/メガラヤ州境から Baghmara を経て Dalu まで 161 km の 2 車線化) が含まれる。MoRTH は、JICA に対し、ODA 借款を要請すると見込まれる。本プロジェクトは、実施上の制約に関し詳細を検討する調査と DPR 作成を行わなければならない。ADB は、本計画を NH-51 に接続する Dalu から Garonadha まで (93.4 km) の道路プロジェクトに着手した。ADB プロジェクトは、SARDP-NE フェーズ B プロジェクトと接続するものであるが、ADB プロジェクトは SARDP 自体の一部ではなく、北東部道路投資プロジェクト (NESRIP) の一環である。	
現状	詳細プロジェクト報告書は未作成	
社会・自然環境への影響	社会への影響：D 自然環境への影響：D	
経済・財務面	SAARC の第 5 回廊から離れており、地域連結性による効果は少ない。しかし、環境問題を引き起こす可能性もあるがバングラデシュへの石炭輸出には重要な地域である。 事業費概算：フィージビリティ・スタディは実施されていないが、763,000,000 ドルと想定される。 ⁶	
カウンターパート機関	メガラヤ州公共事業局と道路交通省	
留意事項	実施上の制約に関する調査ならびに詳細プロジェクト報告書の結果次第である。	

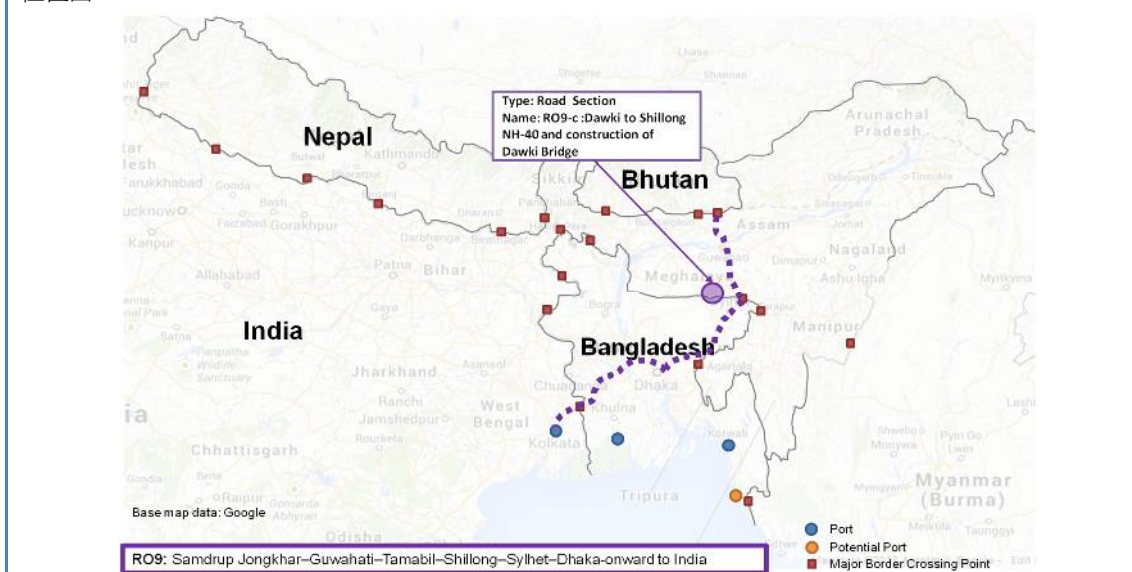
位置図



⁶ 3,600,000 ドル/KM として、212 キロメートルの拡張を計算。他のインド北東地域道路案件や 2010 年のグジャラート海洋局レートを使用した。(2 laning = 2 laning x 1 = USD 1.2 million/km, bridges = 5%/km = 50 m x 6 m x 2 laning = 600 m² x USD 3,000/ m² = USD 1.8 million / km, and Others = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 1,000 / m² = USD 0.6 million / km 土地収用に係る費用は含めていない。)

案件番号：RO9-c 対象国：インド 分野：道路 案件タイプ：円借款	案件名： Dawki-Shillong 間の NH-4 と Dawki 橋梁の建設	優先度： 中
対象回廊	RO9：[Samdrup Jongkhar]-Guwahati-[Tamabil]-Shillong-Sylhet-Dhaka-onward to India via other corridors	
案件詳細	Dawki-Shillong 間の NH-40 と Dawki 橋梁の建設を含む、メガラヤ州内の道路プロジェクトである。MoRTH は、JICA に ODA 借款を要請すると見込まれる。しかし、現時点では、ほとんど情報がない。現状は 1 車線であり、Lukha 川に主要渡河点がある。現在の交通量では、大規模な改良工事が妥当とは判断されない。しかし、本プロジェクトは、Dawki で主要国境通過地点と連絡するものである。ADB は、Mawryngkneng-Jowai (NH-44 の 4 車線化) と Jowai-Dawki (NH-40E の 2 車線化) を検討している	
現状	詳細プロジェクト報告書は未作成	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：C+	
経済・財務面	主要国境である Dawki への接続が改善される。 事業費概算：フィージビリティ・スタディは実施されていないが、306,000,000 ドルとなる。 ⁷	
カウンターパート機関	メガラヤ州公共事業局と道路交通省	
留意事項	<ul style="list-style-type: none"> 渡河等、実施上の制約に関する調査ならびに詳細プロジェクト報告書の結果次第である。 広域回廊の交通量や、回廊沿線における他のプロジェクトの進捗に影響を受ける。 	

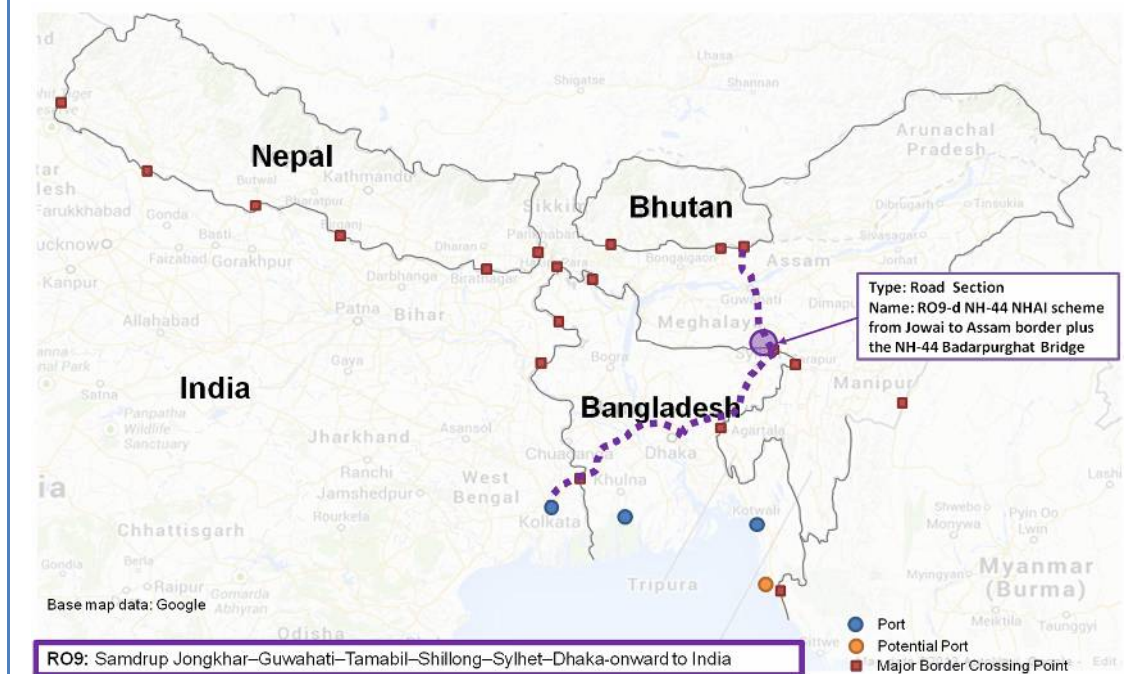
位置図



⁷ 3,600,000 ドル/KM として、85 キロメートルの 1 車線から 2 車線の拡張を計算。他のインド北東地域道路案件や 2010 年のグジャラート海洋局レポートを使用した。(2 laning = 2 laning x 1 = USD 1.2 million / km, bridges = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 3,000 / m² = USD 1.8 million / km, and Others = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 1,000 / m² = USD 0.6 million / km 土地収用に係る費用は含めていない。)

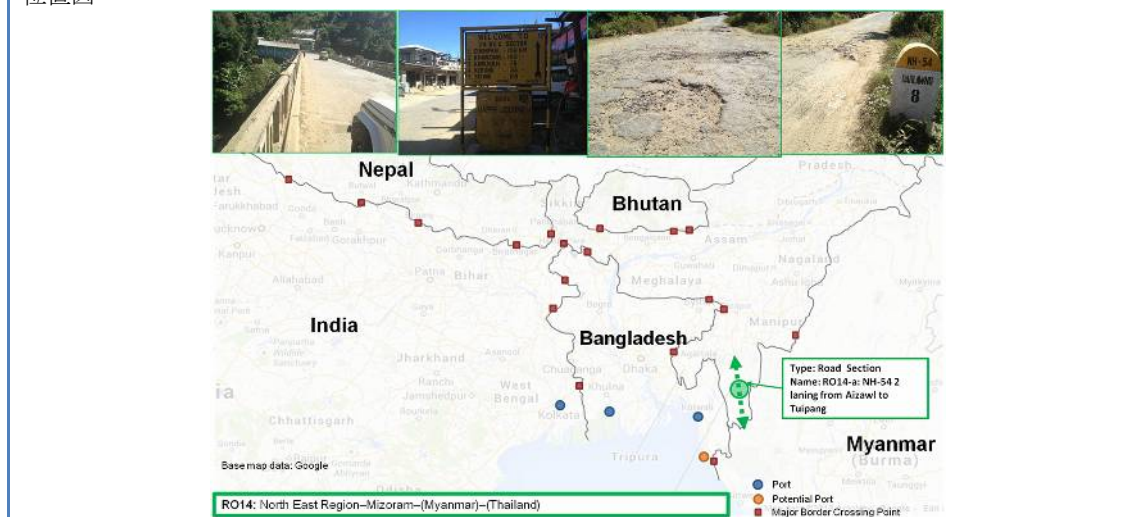
案件番号：RO9-d 対象国：インド 分野：道路 案件タイプ：円借款	案件名： Jowai からアッサム州境までの NH-44 NHAI 計画と NH-44 の Badarpurghat 橋梁	優先度： 中
対象回廊	RO9：[Samdrup Jongkhar]-Guwahati-[Tamabil]-Shillong-Sylhet-Dhaka-onward to India via other corridors	
案件詳細	メガラヤおよびアッサム州内の NH-44 を次のように改良する。(i) NH-44 沿いに Jowai からアッサム州境まで。これは、現在は NHAI の道路であるが、メガラヤ PWD によると、NHAI は資金が不足しているようである。現状は 2 車線だが、道路状態は非常に劣悪であり、ルートの南部は地滑りが起こりやすい。情報をさらに得るために NHAI および MoRTH との協議が進められている。(ii) Silchar (アッサム州) 付近の Badarpurghat で Barak 川を渡る Badarpurghat 橋梁。MoRTH は、JICA に ODA を要請するものと予想される。	
現状	詳細プロジェクト報告書は未作成	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C+	
経済・財務面	RO9 への接続改善による経済効果が期待できる。 事業費概算：詳細プロジェクト報告書は作成されていないため、現時点では試算不可。道路区間については、NHAI および MoRTH との協議が必要。	
カウンターパート機関	NHAI (国道庁)、道路交通省	
留意事項	<ul style="list-style-type: none"> 道路区間については、NHAI および MoRTH との協議が必要 実施上の制約に関し詳細を検討するための調査と DPR の作成が必要 Jowai バイパスなど、他のプロジェクトの進捗 	

位置図



案件番号：RO14-a 対象国：インド 分野：道路 案件タイプ：円借款	案件名： Aizawl-Tuipang 間 NH-54 の 2 車線化	優先度： 中
対象回廊	RO14：North East Region-Mizoram-(Myanmar)-(Thailand)	
案件詳細	ミゾラム州 Aizawl-Tuipang 間 NH-54 の 380 キロメートル区間の 2 車線化する SARDP-NE フェーズ B プロジェクトである。カラダン・マルチモーダル・プロジェクトでミゾラムに接続するため戦略的に重要であり、地域交通ネットワークを強化できる。ただし、山がちな地形のため費用が掛かる。また、主要な渡河地域でもある。	
現状	本プロジェクトは 3 つの詳細プロジェクト報告書に分割され、現在進行中または終了間近の段階である。ただし、JICA 調査団と共有できる段階ではない。	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：C+	
経済・財務面	カラダン・マルチモーダル・プロジェクトによるインド北東地域からミャンマーへの接続が向上し、経済効果が期待できる。 事業費概算：フィージビリティ・スタディは実施されていないが、現時点では 1,368,000,000 ドルと想定される。 ⁸	
カウンターパート機関	ミゾラム州公共事業局	
留意事項	<ul style="list-style-type: none"> ● 実現可能性や制約に関する詳細プロジェクト報告書の最終化が必要（非常に山がちな地形である）。 ● 道幅が非常に狭い区間がある。 ● 交通量では融資を正当化できない。 ● 公共事業局はフェーズ B プロジェクトにアイザウルから 68 キロメートル区間のバイパスルートも含ませたいが、これが案件最終化を遅らせる要因にもなり得る。 	

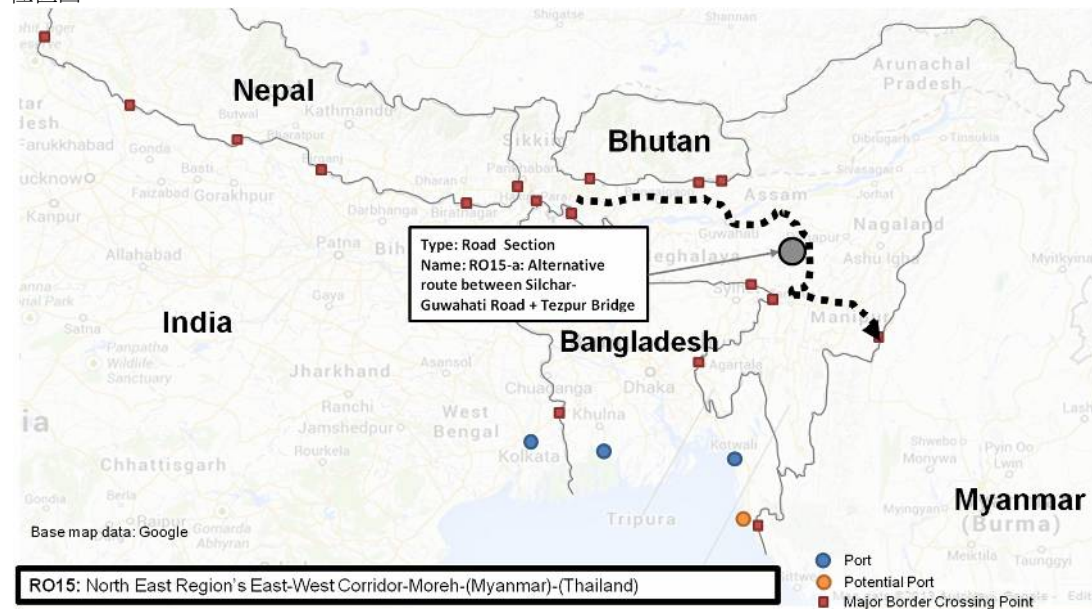
位置図



⁸ 3,600,000 ドル/KM として、380 キロメートルの 1 車線から 2 車線の拡張を計算。他のインド北東地域道路案件や 2010 年のグジャラート海洋局レポートを使用した。（2 laning = 2 laning x 1 = USD 1.2 million / km, bridges = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 3,000 / m² = USD 1.8 million / km, and Others = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 1,000 / m² = USD 0.6 million / km 土地収用に係る費用は含めていない。）

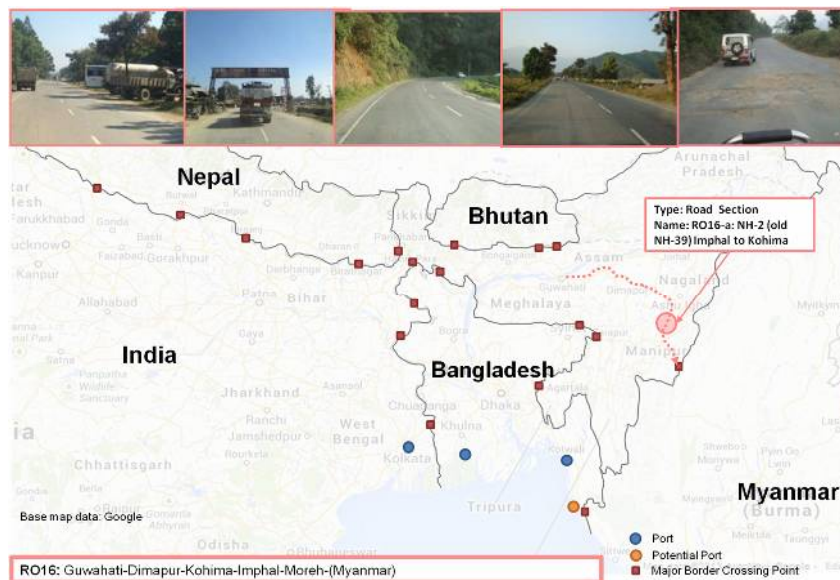
案件番号：RO15-a 対象国：インド 分野：道路 案件タイプ：円借款	案件名： Harangajao-Turuk 経由の代替ルート Barak 溪谷 (Silchar)-Guwahati 道路の 2 車 線化と Tezpur 橋梁	優先度： 中
対象回廊	RO15：North East Region's East-West Corridor-Moreh-(Myanmar)-(Thailand)	
案件詳細	SARDP-NE フェーズ B プロジェクトは、Harangajao-Turuk 経由で Barak 溪谷 (Silchar)-Guwahati 道路を結ぶ代替ルートの 2 車線化を行う。これは、東西回廊ルートに並行するルートを形成する。延長は Nelli-Harangajao 間の 234 km であり、5つの事業に分け、予定では 4~5カ所の主要橋梁を含む。現状は、一部の区間に中間車線を持つ 1 車線であり、125 km は丘陵地にある。この部分の土地取得は完了している。他の 99 km に関する土地取得は進行中である。DPR 草稿が作成され、提出されたが、承認には至っていない。Harangajao-Turuk と Tezpur 橋梁の実施上の制約に関し詳細を検討するには、DPR の最終版が必要となる。MoRTH は、JICA に ODA 借款を要請すると予想される。	
現状	SARDP-NE フェーズ B プロジェクト：詳細プロジェクト報告書案は提出されたが未承認	
社会・自然環境への影響	社会への影響：D 自然環境への影響：D	
経済・財務面	RO3 回廊の分岐区間に留まるため、広域連結による経済的影響は少ないと思われる。 事業費概算：アッサム州公共事業局は 200,000,000,000 インドルピーと試算したが、詳細プロジェクト報告書は近日中に最終化される予定。	
カウンターパート機関	アッサム州公共事業局、道路交通省	
留意事項	実施上の制約、交通量などに関し詳細を検討するには、詳細プロジェクト報告書最終版が必要	

位置図



案件番号：RO16-a 対象国：インド 分野：道路 案件タイプ：円借款	案件名： NH-2（旧 NH-39）インパールーコヒマ	優先度： 中
対象回廊	RO16：Guwahati-Dimapur-Kohima-Imphal-Moreh-(Myanmar)	
案件詳細	インパールーコヒマ間の NH-2（旧 NH-39）を改良する。MoRTH は、本線について、JICA の支援を要請している。本プロジェクトは、マニプル州とナガランド州を結び、インパールーMoreh 回廊につながる重要なルートを整備するものである。一部の区間は、非常に劣悪な状態である。本プロジェクトは、BRO から MoRTH へ譲渡される必要がある。公共事業局によると、過去にこの区間の 4 車線化で行われた MoRTH の建設－運営－譲渡方式は、失敗した。	
現状	管轄を国境道路機構から道路交通省に譲渡する必要がある。公共事業局によると、過去にこの区間の 4 車線化で行われた MoRTH の建設－運営－譲渡方式は、失敗した。	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C+	
経済・財務面	ナガランド州とマニプル州からミャンマーへの地域連結性が強化され、経済効果が期待される。 事業費概算：フィージビリティ・スタディは実施されていないが、現時点では 907,000,000 ドルと想定される。 ⁹	
カウンターパート機関	道路交通省（国境道路機構から譲渡された場合）	
留意事項	<ul style="list-style-type: none"> 国境道路機構から道路交通省への譲渡 実施上の制約に関し詳細を検討するための調査と詳細プロジェクト報告書の作成が必要 	

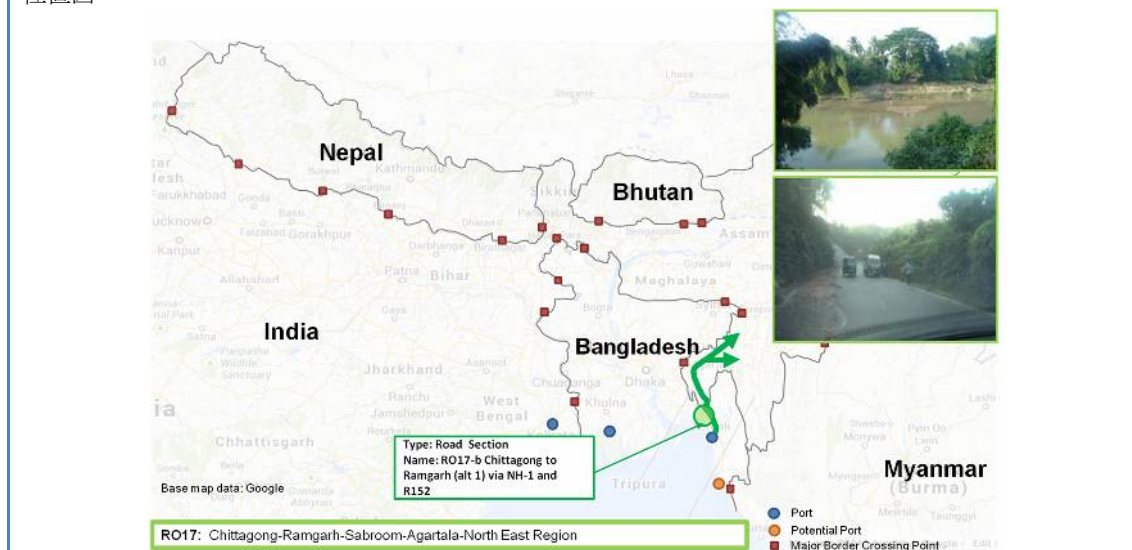
位置図



⁹ 6,480,000 ドル/KM として、140 キロメートルの 2 車線から 4 車線の拡張を計算。他のインド北東地域道路案件や 2010 年のグジャラート海洋局レポートを使用した。(4 laning = 2 laning x 2 x 0.7 = USD 1.2 million x 2 x 0.7 = USD 1.68 million / km, Bridges = 5% / km = 50 m x 6 m x 4 laning = 1,200 m² x USD 3,000 / m² = USD 3.6 million / km, Other = 5% / km = 50 m x 6 m x 4 laning = 1,200 m² x USD 1,000 / m² = USD 1.2 million / km 土地収用に係る費用は含めていない。)

案件番号：RO17-b 対象国：バングラデシュ 分野：道路 案件タイプ：円借款	案件名： RO17-b：チッタゴン-Ramgarh (Sabroom) 間、代替ルート1：NH-1 (AH-41)、R151、R152 経由	優先度： 中
対象回廊	RO17：Chittagong-Ramgarh-Sabroom-Agartala-(North East Region)	
案件詳細	チッタゴンから北へ向かってインド北東部のトリプラ州を経由し、さらに北東部ネットワークに進入するルートを利用することにより、バングラデシュ-インド回廊を開通させる。RO17-a は、現在進行中の国道改良を活用する	
現状	未調査	
社会・自然環境への影響	社会への影響：D 自然環境への影響：D (RO17-a)、C+ (RO17-b)	
経済・財務面	Potential economic benefits from providing better connectivity to Chittagong Port for North East India. Cost estimate：No feasibility studies have been undertaken to date, therefore purely as an assumption for indicative purposes whilst studies are developed, the initial rough cost could be estimated at US 85 million. インド北東地域からチッタゴン港への接続が良くなり、経済効果が期待される。 事業費概算：フィージビリティ・スタディは実施されていないが、85,000,000 ドルと想定される。 ¹⁰	
カウンターパート機関	運輸省道路局国道部	
留意事項	<ul style="list-style-type: none"> ● 詳細プロジェクト報告書で実現可能性を評価する。 ● バングラデシュ国内からインドへ向かう回廊は、チッタゴンから Akhaura を経てインド北東部に入るか、または Sabroom (トリプラ州) を経由するが、それぞれを整備するには問題がある。1つに、Akhaura に近い Brahmanbaria は、政治的な影響を受けやすい地域であり、結果的に Sabroom ルートが重視される可能性がある。 ● 鉄道候補案件もこれらルートにはある。 ● 国境問題 (インドとバングラデシュ国境に架かる橋であるため) 	

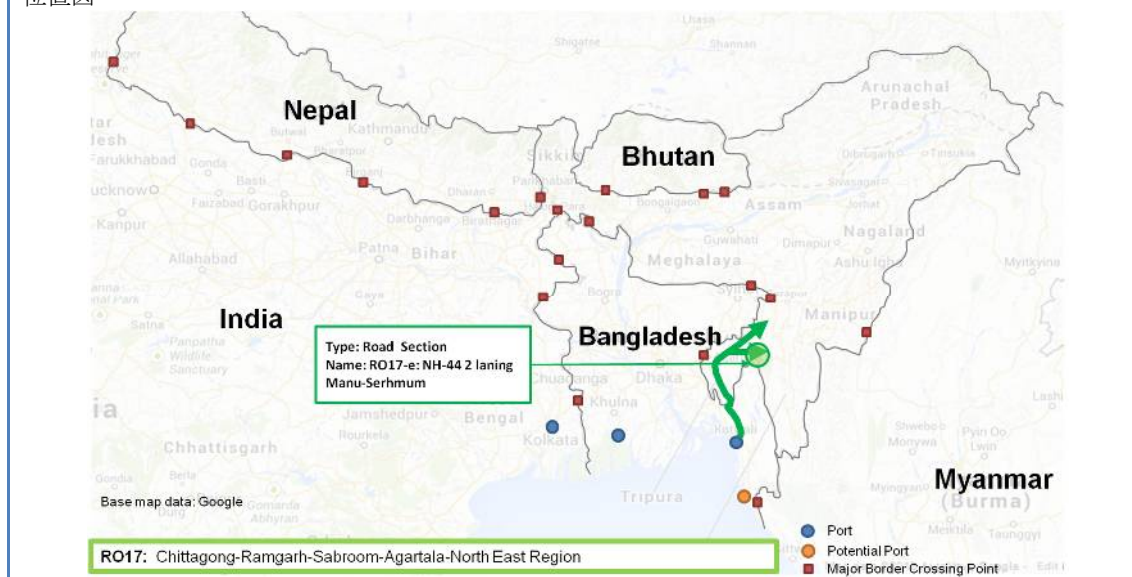
位置図



¹⁰ 2,400,000 ドル/KM として、38 キロメートルの拡張ならびに改修を計算。RO1-a/b における RHD の計算を基にしたが、質は高めず低コストとし、土地収用に係る費用は含めていない。NH-1 の案件概要は現行の計画に含まれているとした。

案件番号：RO17-e 対象国：インド 分野：道路 案件タイプ：円借款	案件名： NH-44a 2-Laning/Manu からトリプラ/ミゾラム 州境までの再配置	優先度 高
対象回廊	RO17：Chittagong-Ramgarh-Sabroom-Agartala-(North East Region)	
案件詳細	Manu からトリプラ/ミゾラム州境への 2 車線化/再配置を行う (86 km)。Ramgarh/Sabroom 回廊と Akhaura/Agartala の両者からトリプラ州を 通ってミゾラム州に入るルートを利用して、バングラデシュインド 北東部回廊を開通させる。これは、BRO から州 PWD への譲渡を前提と し、MoRTH が JICA に支援を申し出た SARDP-NE フェーズ B プロジェク トである。	
現状	未調査	
社会・自然環境への影響	社会への影響：D 自然環境への影響：C+	
経済・財務面	インド北東地域からチッタゴン港への接続が良くなり、経済効果が期待 される。ただし、主要な地域回廊からは距離があるため、地域連結性強 化による経済効果は小さい。 事業費概算：フィージビリティ・スタディは実施されていないが、 108,000,000 ドルと想定される。 ¹¹	
カウンターパート機関	道路交通省（国境道路機構とトリプラ州公共事業局から譲渡された場 合）	
留意事項	詳細プロジェクト報告書で投資を正当化するため実現可能性と交通需要 に関する詳細プロジェクト報告書が必要となる。	

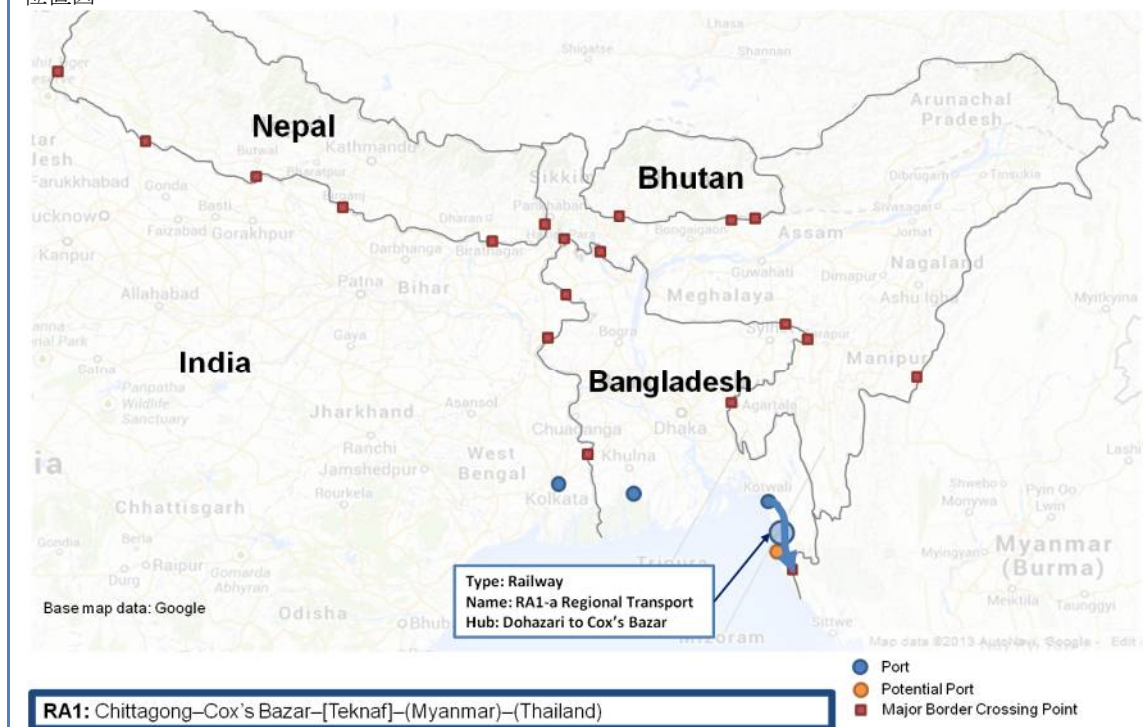
位置図



¹¹ 3,600,000 ドル/KM として、380 キロメートルの 1 車線から 2 車線の拡張を計算。他のインド北東地域
道路案件や 2010 年のグジャラート海洋局レートを使用した。(2 laning = 2 laning x 1 = USD 1.2 million /
km, bridges = 5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 3,000 / m² = USD 1.8 million / km, and Others =
5% / km = 50 m x 6 m x 2 laning = 600 m² x USD 1,000 / m² = USD 0.6 million / km 土地収用に係る費用は含
めていない。

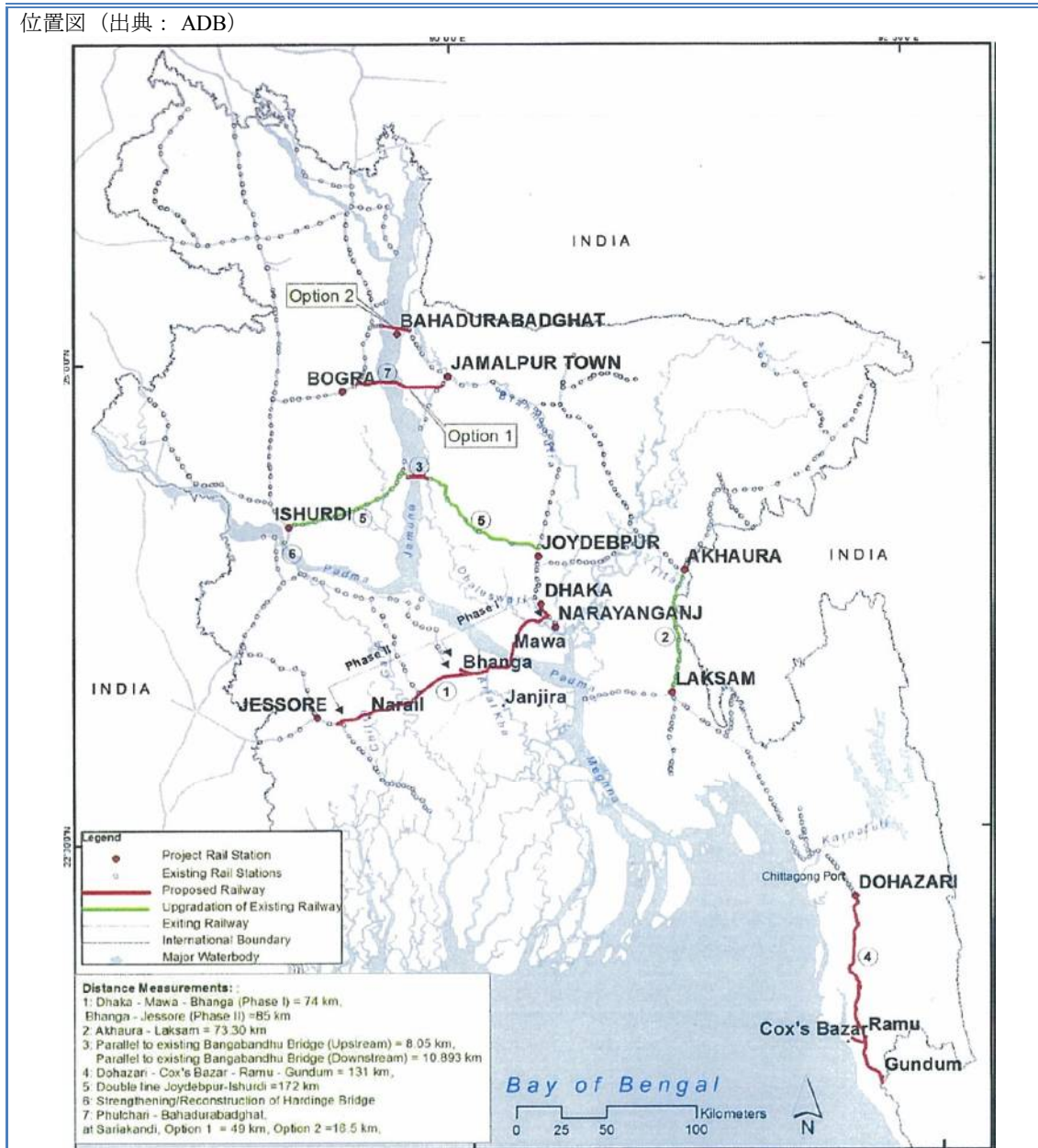
案件番号：RA1-a 対象国：バングラデシュ 分野：鉄道 案件タイプ：円借款	案件名： 広域輸送ハブ：Dohazari-コックスバザール間	PRIORITY： 中
対象回廊	RA1-a：Chittagong-Cox's Bazar-[Teknaf]-(Myanmar)-(Thailand)	
案件詳細	アジア横断鉄道 (TAR) の未整備区間となっている Dohazari からコックスバザールまで、メートル軌間の単線鉄道を建設する。これは、ADB の広域協力統合プロジェクトの一環で、Ramu を経由してミャンマーに至る接続、および Ramu から Gundum への接続を含む。幹線上で Dohazari の南方 37.5 km にある Harbang からコックスバザールまでを単線で結ぶ。本プロジェクトは、主として旅客輸送に利用されるが、バングラデシュ広域港が実現すれば、幹線は、ダッカ、Comilla、チッタゴンから深海港までとなり、コックスバザール以遠への支線が敷設される。	
現状	ADB は、本プロジェクトについて、JICA の関与の可能性を示唆している。フィージビリティ・スタディ (FS) はすでに完了し、詳細設計 (DD) は 48%完了し、入札は 5%完了している	
社会・自然環境への影響	社会への影響：C- 自然環境への影響：C+	
経済・財務面	チッタゴン港への接続向上とバングラデシュが海港における広域輸送ハブになる可能性から経済効果が期待される。 事業費概算：ADB によれば、Dohazari-Cox's Bazar-Ramu-Gundum の 128 キロメートル区間で 300,000,000 ドルとなっている。	
カウンターパート機関	バングラデシュ国鉄	
留意事項	<ul style="list-style-type: none"> 広域輸送ハブ、特に DSP プロポーザルにおいて Dohazari からコックスバザール間の鉄道は重要である。 ADB との共同融資の可能性 	

位置図



案件番号：RAI-c 対象国：バングラデシュ 分野：鉄道 案件タイプ：円借款	案件名： バングラデシュ鉄道網全体におけるその他の ADB RCI プロジェクト	優先度： 中
対象回廊	バングラデシュ国内鉄道回廊	
案件詳細	Dohazari－コックスバザール間に加えて、バングラデシュ全域で 6 つの RCI サブプロジェクトが実施されているが、ADB は、これらが、JICA の支援対象となるか現時点では言及していない。上記のプロジェクトを検討するため、ADB とのさらなる協議が必要である。 <ul style="list-style-type: none"> • ADB RCI サブプロジェクト 1－代替ルート：新 TAR の未整備区間である Padma 橋梁経由ダッカ－Bhanga－Jessore (FS 44%完了、DD 35%完了); • ADB RCI サブプロジェクト 2－Akhaura－Laksam の複線化と改良 (FS 100%完了、DD 48%完了、入札 17%完了); • ADB RCI サブプロジェクト 3－Bangabandhu 橋梁に並行して Jamuna 川を渡るデュアルケージの複線軌道を備えた鉄道橋の建設 (FS 95%); • ADB RCI サブプロジェクト 5－Joydebpur－Ishurdi 区間の複線化に関する FS (FS 28%); • ADB RCI サブプロジェクト 6－Hardinge 橋梁の直線化と改築に関する FS (FS 80%); • ADB RCI：サブプロジェクト 7：Phulchari 付近－Bahadurabad Ghat で Jamuna 川を渡る鉄道橋の建設 (FS 95%) 	
現状	上記サブプロジェクト毎の分類を参照	
社会・自然環境への影響	N/A	
経済・財務面	それぞれのプロジェクトを検討するため、ADB とのさらなる協議が必要である。	
カウンターパート機関	バングラデシュ国鉄	
留意事項	それぞれのプロジェクトを検討するため、ADB とのさらなる協議が必要である。	

位置図 (出典: ADB)

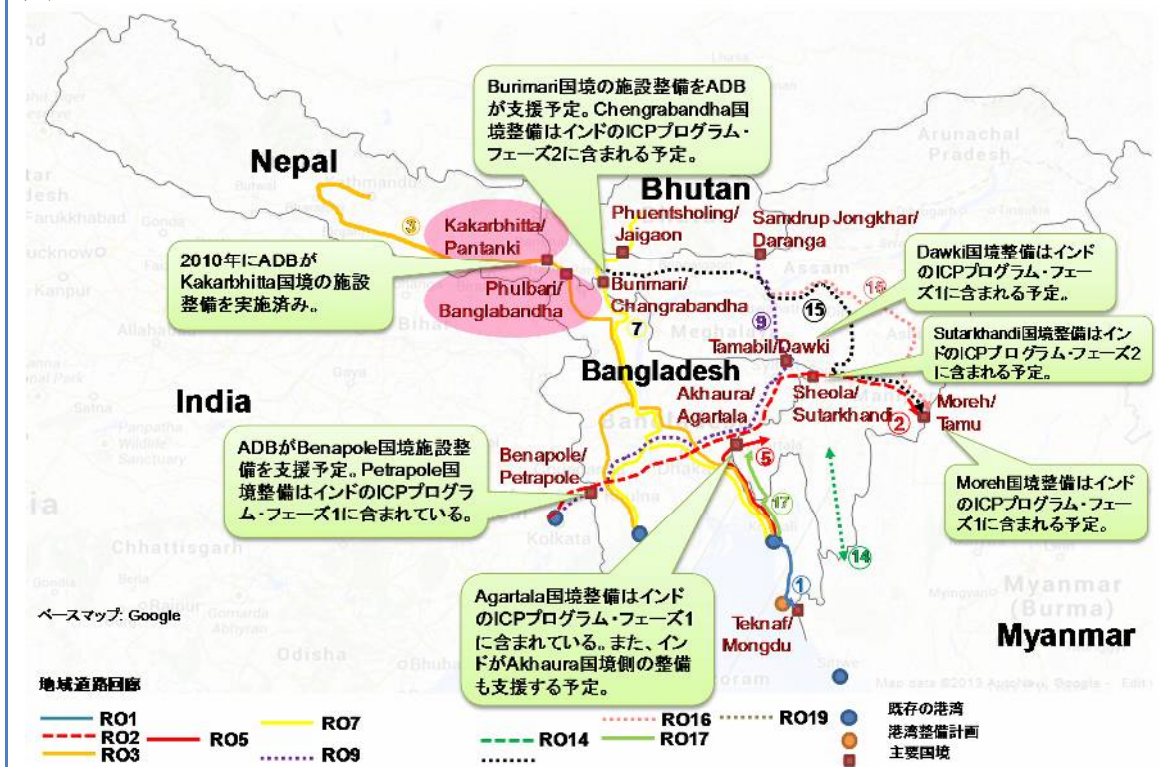


A8.2 ソフトインフラ整備案件候補

<p>案件番号：S1 対象国：バングラデシュ、インド、ネパール 分野：ソフトインフラ 案件タイプ：技術協力プロジェクト及び無償</p>	<p>案件名： 国境手続き円滑化のためのパイロット・プロジェクト</p>	<p>優先度： 高</p>
<p>対象回廊</p>	<p>RO3</p>	
<p>案件詳細</p>	<p>カカルビタ（ネパール）/パニタンキ（インド）国境及びブルバリ（インド）/バングラバンダ（バングラデシュ）国境を対象とした、国境手続き円滑化のためのパイロット・プロジェクトを実施する。</p> <p>カカルビタ（ネパール）/パニタンキ（インド）国境及びブルバリ（インド）/バングラバンダ（バングラデシュ）国境の選定理由は、以下のとおりである。</p> <ul style="list-style-type: none"> ▶ ネパールとバングラデシュを結ぶルートの直通輸送の制約は、他の南アジア対象国間を結ぶルートよりも大きい。 ▶ 改善の対象となるインド国境は、インド以外の国（ネパール及びブータン）がトランジットのために使用するものなので、開発パートナーによる支援がより適していると考えられる。 <p>(i) 貨物積替え及びトレーラーやコンテナ交換の効率化、(ii) 手続きを簡素化・円滑化する調整の取れた国境運営（Coordinated Border Management）などを目的とする。具体的な活動内容として、(i) 簡素化された各国境の手続きガイドラインを関係者の合意を得た上で策定することや、(ii) 関係者間の協議促進、(iii) 合理化された新たな国境手続き実現に必要なとされる機材の投入などを想定している。</p>	
<p>現状</p>	<p>近年の対象回廊沿線の国境施設整備案件として、2010年のADBによるカカルビタ国境へのICD整備が挙げられる。2014～2018年のSASEC貿易円滑化戦略では、越境手続きの簡素化・迅速化を主目的のひとつとして掲げている。</p> <p>世界の他の地域の事例として、アフリカ地域におけるワンストップ・ボーダーポスト（OSBPs）整備のためのJICA協力（施設整備、法的手続き、キャパシティ・ビルディング等）は、刺激的なモデルとなり得るかもしれない。</p>	
<p>社会・自然環境への影響</p>	<p>越境交通を円滑化することにより交通量が増加すれば、それに伴い排気ガス量も増加することが見込まれるが、それ以外には特に影響は想定されない。</p>	
<p>経済・財務面</p>	<p>技術協力プロジェクト：1.5～2.5億円程度を想定 無償：投入機材によるため未定（上記の技術協力案件の中で特定されることを想定）</p>	
<p>カウンターパート機関</p>	<p>対象国境を管轄する国（バングラデシュ、インド、ネパール）で越境手続きを主導している各国の税関局がカウンターパート機関となる。これに加え、バングラデシュ及びインドのランドポート局や、各国の出入管、国境警備隊、民間セクター等の関係機関も巻き込み案件を実施する必要がある。</p>	
<p>留意事項</p>	<p>調整の取れた国境運営（Coordinated Border Management）のために必要な組織変更を行うためには、政府高官の政策的な支持を得ることが必要である。具体的には、内閣総理大臣か、関係諸機関よりも上位の組織の類似の立場の高官による委任が必要となる。この委任に基づき、複数省庁を跨ぐ特別委員会により、必要な実務が実施される。しかしながら、国内法制度の法的側面からのレビューが必要になる可能性もあり、主導機関である税</p>	

関局などが必要な法的手続きを指示しなくてはならない。
 さらに、実施後に、改善後の国境手続きのパフォーマンスや効率性（費用削減効果や国境手続き時間削減効果など）をモニタリングするべきである。多様なステークホルダーとの対話やヒアリングも、利用者の満足度といった観点から、パフォーマンスの分析に含めることも一案である。

位置図



案件番号：S2 対象国：バングラデシュ、 インド、ネパール、ミャン マー 分野：ソフトインフラ 案件タイプ：開発調査及び 技術協力プロジェクト	案件名： 回廊輸送効率化に向けたパイロット・プロジ ェクト	優先度： 中
対象回廊	RO3	
案件詳細	近代的なトランジット管理を導入し、RFID/GPS トラッキング・システムを用いた貨物輸送管理を実施する。	
現状	2014～2018 年の SASEC 貿易円滑化戦略では、直通輸送のために隣国同士で交通円滑化の対策を行うことを、重要な目的のひとつとして掲げている。SASEC の戦略では、具体的な解決策・対策として、UNESCAP によって開発された「安全な越境交通モデル (the Secure Cross-Border Transport Model)」のような貨物・車輛追跡のための技術的開発法が示されている。また、世界には、他にも多様なトランジット輸送システムの例があり (68 カ国・機関が加盟している TIR 協定や、東アフリカの北部回廊トランジット輸送協定の例など)、これらを踏まえて調査を実施することが妥当である。	
社会・自然環境への影響	越境交通を円滑化することにより交通量が増加すれば、それに伴い排気ガス量も増加することが見込まれるが、それ以外には特に影響は想定されない。	
経済・財務面	開発調査：1～1.5 億円程度を想定 技術協力プロジェクト：未定 (上記の開発調査の中で特定されることを想定)	
カウンターパート機関	BIMSTEC 事務局 (2014 年 3 月に設立予定) もしくは各国の運輸関連の各省庁や税関局 (設立後の BIMSTEC のキャパシティ等による)。また、信頼できる第三者機関がサービス提供を申し出ている場合は、PPP 事業として官民連携で行うのもひとつのやり方である。	
留意事項	世界の他地域での貿易回廊運営システムの実施から得られた教訓として、以下の事項が挙げられる。 (i) 税関や港湾及び道路局の運営プロセスを支援するだけでなく、それらのプロセス上のガバナンスを強化しなくてはならない。 (ii) 運営は単純化・簡素化されるべきである。 (iii) 官側のステークホルダー (税関局・港湾局・道路局など) と民側のステークホルダー (荷主や物流事業者など) の両方が便益を享受できるシステムでなくてはならない。 (iv) 荷主が十分に余裕を持って支払える程度の料金のサービスでなくてはならない。 (v) 通関手続きを簡素化し遅延を削減することで荷主に便益を与える一方、貨物の出発地から到着地までをコントロールするという税関局の特殊なニーズにも対応したものでなくてはならない。	



<p>案件番号： S3 対象地域： BIMSTEC 分野： ソフトインフラ 案件タイプ： 複数フェーズ の開発調査</p>	<p>案件名： 積載荷重及び軸重基準の調和化</p>	<p>優先度： 中</p>
<p>対象回廊</p>	<p>なし（地域レベル案件）</p>	
<p>案件詳細</p>	<p>軸重に関して、基準の調和化に必要な主な業務は下記のとおりである。 (i) 道路設計基準及び軸重規制値別に、軸重と輸送費と建設・修繕・維持管理費用の関係を試算し、総費用が最小化される最適値を技術的根拠に基づき示す。 (ii) 総費用（輸送費と建設・修繕・維持管理費用の合計）を最小化する最適な域内の軸重規制値について、関係諸国間の継続的な協議を促進し、合意形成を図る。 また、長期的には、関連する運輸法制度の調和化に行きつくことも想定される（詳細は後述）。</p>	
<p>現状</p>	<p>南アジア地域では今日に至るまで、運輸関連法制度の調和化に対して、あまり取り組みがなされてこなかった。 世界の他の地域の事例として、東アフリカ共同体の過積載規制協定に対する JICA 支援案件（2011 年）は、刺激的なモデルとなり得るかもしれない。</p>	
<p>社会・自然環境への影響</p>	<p>越境交通を円滑化することにより交通量が増加すれば、それに伴い排気ガス量も増加することが見込まれるが、それ以外には特に影響は想定されない。</p>	
<p>経済・財務面</p>	<p>第 1 フェーズの開発調査： 1～1.5 億円程度を想定 第 2 フェーズ以降： 未定（上記の第 1 フェーズの調査の中で特定されることを想定）</p>	
<p>カウンターパート機関</p>	<p>BIMSTEC 事務局（2014 年 3 月に設立予定）もしくは各国の運輸関連の省庁</p>	
<p>留意事項</p>	<p>認証や検査を調和化するためには、各国の認証や検査に対する関係国間の相互信頼が必要な場合もある。ただし、関係国間の越境交通に係る法制度や手続き及び書類を全て調和化・統一することは不可能である。基準等の調和化に最低限必要とされるのは、関係諸国間における十分な信頼を築くことである。</p>	

<p>案件番号： S4 対象地域： BIMSTEC 分野： ソフトインフラ 案件タイプ： 開発調査/長期専門家派遣（いずれも、複数フェーズに渡り実施の可能性あり）</p>	<p>案件名： 域内における適切なトランジット料金レベルの特定</p>	<p>優先度： 高</p>
<p>対象回廊</p>	<p>なし（地域レベル案件）</p>	
<p>案件詳細</p>	<p>トランジット料金に関する世界のベスト・プラクティスを活用し、対象地域におけるトランジット料金を定義付けすることを目的とする。本調査でも初歩的な部分については概要を調査しているが、ここに記載した提案案件の中では特にトランジット料金に的を絞って、以下の業務を実施する。</p> <p>(i) トランジット・ルートでの輸送実施により生じる域内各国の経済・財務面での便益と費用を分析する。</p> <p>(ii) 諸国間の協議を促進し、トランジットの課金に対する原則（課金の対象など）について合意する。また、その内容に基づき、ルート及び車種別のトランジット料金の原案を策定する。</p> <p>(iii) ルート別の課金システムとトランジット料金体系について提案を行う。例えば、道路基準と各国の走行距離に応じたトランジット料金などが、提案要素として想定される。</p> <p>最終成果のひとつとして、トランジット・ルートと車種別の料金表が想定される。</p>	
<p>現状</p>	<p>南アジアにおいては、トランジット料金の考え方は比較的新しく、関係諸国内であまり協議されてこなかった。バングラデシュでは、トランジット料金として提案可能なレベルを検討するための非公開調査が実施されている。（バングラデシュの政府関係のトランジットに関する委員会により実施されている。）本調査でも、初歩的な内容については、分析を行っている。一方で、2014年1月16日の本調査の第1回セミナーにおいて BISS の Mohammed Mahfuz Kabir 博士も言及したように、外交的なイニシアチブが求められているのである。</p>	
<p>社会・自然環境への影響</p>	<p>越境交通を円滑化することにより交通量が増加すれば、それに伴い排気ガス量も増加することが見込まれるが、それ以外には特に影響は想定されない。</p>	
<p>経済・財務面</p>	<p>第1フェーズの開発調査：1.5～2億円程度を想定（複数国を跨ぐ委員会等の会合開催・招聘等に相応の費用を見込んでいる）。ただし、同時に BIMSTEC に長期専門家が派遣されて調査団と協力して業務を実施する想定である。</p> <p>第2フェーズ以降：未定（上記の第1フェーズの調査の中で特定されることを想定）</p>	
<p>カウンターパート機関</p>	<p>BIMSTEC 事務局（2014年3月に設立予定）もしくは各国の運輸関連の省庁</p>	

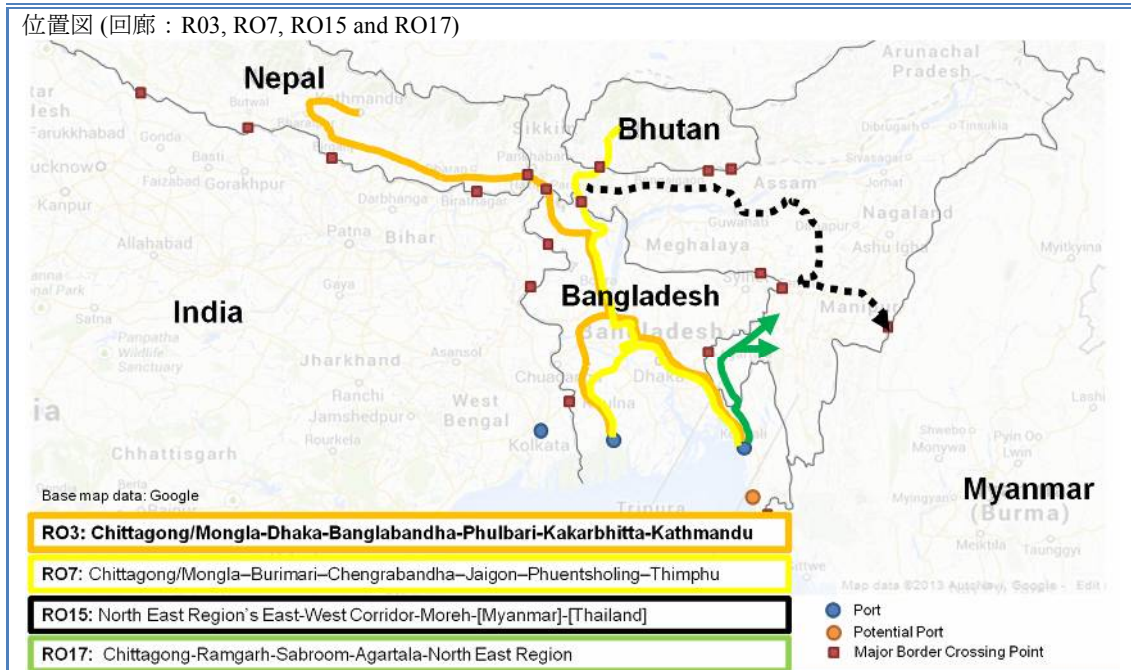
留意事項	<p>対象地域では、トランジット料金はセンシティブな課題であることを踏まえ、政府高官の政策的協力を得てプロジェクトを実施することが重要となる。</p> <p>なお、世界のトランジット料金に関する経験等に基づき、以下の点が指摘できる。</p> <p>(i) 通行料は、トランジット交通によって課される道路建設・修繕・維持管理の費用を賄うように設定すべきである。</p> <p>(ii) 上記に加えて、環境コストや他の外部費用についても、定量的に計算できる範囲において加えることも考えられる。</p> <p>(iii) それ以外の費用については、トランジット車輛と国内車輛の両方から平等に徴収されるべきであり、徴収した費用はトランジット輸送と国内輸送の両方に便益をもたらすように使われるべきである。</p> <p>(iv) 今後の方向性として、トランジット・ルートにおける車輛当たり距離当たりの道路建設・修繕・維持管理費用を試算する広域調査を実施し、およその通行料のレベルを提案し、トランジット・ルート整備による費用対効果を分析することも一案である。</p> <p>本調査の対象国であるバングラデシュ、ブータン、インド、ミャンマー、ネパール、タイは、BIMSTEC加盟7カ国のうち6カ国を占めているため、対象地域のトランジット料金を検討する上では、BIMSTECが最も適した対象機関になり得る。また、BIMSTECの事務局を、分野の経験と専門知識に富んだ常任の理事により構成することができれば、BIMSTECはSAARCのものより強力で、より自律的な地域協力機関になる可能性がある。</p>
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<p>案件番号： S5 対象地域： BIMSTEC 分野： ソフトインフラ 案件タイプ： 技術協力（複数フェーズの開発調査と専門家派遣等）</p>	<p>案件名： 包括的地域運輸協定策定支援</p>	<p>優先度： 中</p>
<p>対象回廊</p>	<p>なし（地域レベル案件）</p>	
<p>案件詳細</p>	<p>長期的には、越境道路及び鉄道を対象とする BIMSTEC 内の包括的広域運輸協定を策定・批准することを最終目標として、そのための技術協力案件を定期的実施する。最初の取り組みとして、BIMSTEC の広域運輸協定策定という目標に対するイニシアチブについて、加盟国の合意形成を図る。さらに、加盟国の関連する国内法制度を検証した上で、世界の他地域の地域運輸協定も参考に、具体的な協定案をドラフトし、加盟国の協議・合意形成を促進する。複数プロジェクトに跨るアプローチとすることを想定している。</p>	
<p>現状</p>	<p>SAARC では、域内の自動車車輛協定案と、鉄道協定案を策定し、加盟国間の協議・交渉を経て、案の修正を行っている。SAARC の域内運輸協定策定に関与している加盟国政府関係者たちの話によれば、これらの二つの協定案は最終案に近いところまで来ているとのことである。しかしながら、他国をトランジットする際の通行料等の詳細は現在の自動車車輛協定案には含まれておらず、協定を実現するためには詳細に関する議定書や付属書の策定が必要である。</p>	
<p>社会・自然環境への影響</p>	<p>越境交通を円滑化することにより交通量が増加すれば、それに伴い排気ガス量も増加することが見込まれるが、それ以外には特に影響は想定されない。</p>	
<p>経済・財務面</p>	<p>第 1 フェーズの開発調査： 2～3 億円程度を想定（複数国を跨ぐ委員会等の会合開催・招聘等に相応の費用を見込んでいる）。ただし、同時に BIMSTEC に長期専門家が派遣されて調査団と協力して業務を実施する想定である。 第 2 フェーズ以降： 未定（上記の第 1 フェーズの調査の中で特定されることを想定）</p>	
<p>カウンターパート機関</p>	<p>BIMSTEC 事務局（2014 年 3 月に設立予定）もしくは各国の運輸関連の省庁</p>	
<p>留意事項</p>	<p>関係国にとって、個別の輸送協定やトランジット協定を締結するのか、もしくは単一の枠組みを追求すべきなのかは、非常に重要な課題である。一般的に、多国間の「ビッグ・バン・アプローチ」は、域内の全ての対象国に対して同時に障害を取り除くことが出来るので、二国間協定よりもより好まれる傾向がある。また、ひとつの重要な要因として、トランジットは 3 カ国以上を跨ぐことが多いため、二国間協定では対処できないことも指摘できる。 現状では、南アジア諸国間の貨物と車輛の往来に対する自由度は、国と国の関係によって大きく異なるため、多国間のアプローチを適用することはチャレンジングかもしれない。しかしながら、二国間協定締結を選択する場合も、域内の共通の協定モデルに準拠した二国間協定とすることが推奨される。そうすることにより、将来的な地域協定の適用もやり易くなるのである。</p>	

A3 物流システム整備案件候補

案件番号：L1 対象国：インド 分野：物流 案件タイプ：無償	案件名： 内陸国へのバングラデシュからの輸送ルートにおける国境施設の改善	優先度： 高
対象回廊	RO3, RO7, RO15, RO17	
案件詳細	バングラデシュから内陸国（ネパール、ブータン）への物流ルートにおける国境施設の改善を行なう。具体的な施設としては、管理棟、税関、入国管理局、検疫などの業務施設、舗装、倉庫、車両計量器(ウェイブリッジ)などが必要な施設である。 パイロット事業が対象とする回廊はネパールのカカルビタ～インドのパニタンキ～インドのフルバリ～バングラデシュのバングラバンダである。 制度等ソフト面の改善も関連して必要となることが想定される。	
現状	国際援助機関は政府内の担当局（インドやバングラデシュのランドポート局（LPAI と BLPA）は協力して国境施設を総合的な業務管理施設（ICP）とすることを計画している。パイロット・プロジェクトの対象としているバングラデシュからネパールに至る回廊上にあるカカルビタには ADB の援助で 2010 年に ICP が新たに建設されたが、国境を隔てたインド側の町パニタンキの開発は、インド政府によると第 3 期の計画で実施時期などは未定である。その他フルバリとバングラバンダの国境施設はインドとバングラデシュのそれぞれの開発局が貿易円滑化の計画を立てている。	
社会・自然環境への影響	限定的である	
経済・財務面	経済・財務分析は実施していないが、経済・財務効果は十分存在すると予想できる。	
カウンターパート機関	インドランドポート局（LPAI）、やバングラデシュ・ランドポート局（BLPA）、ブータン税関、ネパール 税関	
留意事項	<ul style="list-style-type: none"> ● 実施前に各国境地点に対し FS/DD を実施する ● 多くの国境地点が ADB や世銀の援助リストに上がっているので、連絡を密にし、援助協調をすることが重要。 	

位置図 (回廊 : R03, R07, R015 and R017)



<p>案件番号： L2 対象国： インド 分野： 物流 案件タイプ： 有償援助、 技術協力（専門家派遣）</p>	<p>案件名： ユニットロード・システム パイロット・プロジェクト</p>	<p>優先度： 高</p>
<p>対象回廊</p>	<p>現在袋詰めなどの在来貨物にて輸送しているすべての回廊が対象となる。特にインド本土（デリーや西ベンガル州）から北東地域への輸送ルートが優先ルートとなる。</p>	
<p>案件詳細</p>	<p>ユニットロード・システムはその運用をサポートするため、デッキ付倉庫、フォークリフト、ヤードの舗装など、設備改善を同時に実施することにより、効果を発揮することができる。パイロット・プロジェクトとして、アミンガオン（グワハティ州）のコンテナデポ（ICD）に、2,000 個のコンテナと 1 万枚のパレットを初期投資として投入することが必要と想定される。具体的には、円借款でユニットロード・システム導入のための機器を用意し、無償援助による技術支援（TA）を組み合わせることになる。</p> <p>カウンターパートの鉄道省は、機器の所有者となり、コンテナ・コーポレーション（CONCOR）に機器と施設をリースする。また、マルチモーダル輸送のため、トラック運送会社に一部転貸して活用する。CONCOR からのリース料は、ローンの返済にあてられる。</p> <p>技術支援（TA）により 12 フィートコンテナの適切な導入のためのアドバイスを鉄道省と CONCOR におこなう。物流専門の専門家 3 人がそれぞれ計 30 ヶ月派遣され手支援することが想定される。</p> <p>インド政府が鉄道省内に、土地と資産管理のための組織を形成することが前提である。</p>	
<p>現状</p>	<p>パイロット・プロジェクトは、伝統的で非効率な荷役システムを改善し物流システムを改善する。この種の実証研究は、これまで実施されていたことがないが、トラック運送会社は、このシステムの重要性を認識しており、実施する意向がある。しかし鉄道やトラック会社の協力なしには投資できない。そのため、以下に述べるように、運送会社と荷主を含むすべての利害関係者が情報を共有することが重要である。</p>	
<p>社会・自然環境への影響</p>	<p>コンテナ化の進展は、環境への悪影響を減少させる。</p>	
<p>経済・財務面</p>	<p>円借款の推定コストは以下のとおり。 大型フォークリフト 4 台：150 万ドル、 デッキ付倉庫：300 万ドル、 ヤード舗装：200 万ドル、 追加フックなどシャーシの改善 50 万ドル 円借款合計約 700 万ドル、である。</p> <p>現在、推定 870 万トンがインド本土から北東地域に輸送され、600 万トンの貨物が逆方向に輸送されている。2030 年までにこれらの流れは、それぞれ、15.0 および 12.0 万トンに増加すると予測されている。</p> <p>当プロジェクトは、財務的に採算性があるだけでなく、経済的に良い影響が関連産業にもたらされる。コンテナ生産は、鉄鋼業界にプラスの波及効果をもたらし、雇用の創出と、インドはコンテナの主要生産国になる可能性がある。</p>	
<p>カウンターパート機関</p>	<p>インド鉄道省</p>	
<p>留意事項</p>	<ul style="list-style-type: none"> ● 実施の前に FS/DD が必要 ● トラック会社、鉄道運営会社フォワード、荷主などの意向と需要の確認が必要 ● ADB や世銀との援助協調の検討が必要 	

<p>案件番号： L3 対象国： インド（近隣諸国との接続地域） 分野： 物流 案件タイプ： 開発調査（調査結果としてのプロジェクト提案には無償・有償案件が含まれる）</p>	<p>案件名： インド北東地域への接続地域（チキンズネック） 交通・物流システム改善調査</p>	<p>優先度： 高</p>
<p>対象回廊</p>	<p>インド北東地域とネパール、ブータンとバングラデシュにはさまれた狭隘地域であり、この地域を通るすべての回廊が関係する。</p>	
<p>プロジェクト概要</p>	<p>インド北東地域への接続地域（通称チキンズネック）における物流を効率的にするため、西ベンガル州、アッサム州、シッキム州など州を越える交通と、バングラデシュとネパール、ブータンなどとの国際通過交通も考慮に入れ、物流システム、情報システムの向上を念頭に置いたインフラ整備の方向性を地域全体として確立し、改善策を提案する。</p> <ol style="list-style-type: none"> 1) 現在の物流動向調査と交通インフラのキャパシティ把握・分析 2) 交通量の将来動向・回廊別需要予測 3) 物流インフラ施設の提案 	
<p>プロジェクトの位置づけ</p>	<p>回廊単位で改善するプロジェクトはこの地域を含めて存在するものの、3つの州 3つの国を考慮に入れた上で、この地域全体を対象として開発戦略を策定する必要がある。インド国内として北東地域への物流ニーズは今後さらに高まるとともに、ネパールとブータンへの国際通過交通はこの地域を通る効率的な輸送手段への期待が高まっている。このため東西交通と南北交通が交差する地域として十分な開発戦略と計画を早急に検討する必要がある。</p>	
<p>社会・環境への影響</p>	<p>交通インフラの開発によるコネクティビティの改善のみならず、調和ある発展のための地域開発戦略の策定は、今後の環境改善のために重要である。</p>	
<p>経済・財務面の配慮</p>	<p>この地域の改善は州境・国境手続きも含め、輸送コストの軽減に役立つことが考えられる。</p>	
<p>カウンターパート</p>	<p>北東地域開発省（Ministry for Development of North Eastern Region） 道路交通省（Ministry of Road Transport and Highways） 鉄道交通省（Ministry of Railway Transport）</p>	
<p>成功のポイント</p>	<ul style="list-style-type: none"> ● 調査を迅速に完了させること ● 周辺諸国および周辺地域の利害を十分考慮すること 	

位置図



写真 (1/9)



Bangladesh – Akhaura Border Crossing Point



Bangladesh – Chittagong Port



Bangladesh – Chittagong Railway Station



Bangladesh – Kamalapur Inland Clearance Depot



Bangladesh – Road in Narayangunj (1)



Bangladesh – Road in Narayangunj (2)

写真(2/9)



Bangladesh – Road N1 (Chittagong–Baraiyarhat)



Bangladesh – Tamabil Border Crossing Point



Bangladesh – Tamabil Land Customs Facility



Bangladesh – Customs Clearance at Tamabil



Bhutan – Pasakha Industrial Area



Bhutan – Regional Revenue and Customs Office,
Phuentsholing

写真 (3/9)



Bhutan – Freight Forwarder’s Counter
in Phuentsholing



Bhutan – Road to Thimphu from Phuentsholing
(1)



Bhutan – Road to Thimphu from Phuentsholing
(2)



Bhutan – Road to Thimphu from Phuentsholing
(3)



Bhutan – Roadside along
Phuentsholing–Thimphu Road



Bhutan – Truck Terminal in Phuentsholing

写真(4/9)



India – Integrated Check Post in Agartala, Tripura



India – AH1 from Imphal to Kohima



India – Truck Terminal in Aizawl, Mizoram



India – Chengrabandha Border Facility



India – Bus Terminal in Guwahati, Assam



India – Border Crossing to Myanmar
in Moreh, Manipur (1)

写真(5/9)



India – Border Crossing to Myanmar in Moreh (2)



India – Border Crossing to Myanmar in Moreh (3)



India – Land Customs Station in Petrapole,
West Bengal



India – Road to Petrapole, West Bengal



India – R44 from Agartala to Joloaibari, Tripura



India – R53 from Imphal to Nungba, Manipur

写真 (6/9)



India – R53 from Imphal to Nungba, Manipur



India – R54 at Aizawl East, Mizoram



India – Railway in West Bengal



India – Road in Meghalaya



India – Road in Meghalaya



India – Road in Mizoram

写真 (7/9)



India – Road in West Bengal (1)



India – Road in West Bengal (2)



India – Road in West Bengal (3)



India – Road in West Bengal (4)



Nepal – Inland Clearance Depot at Birgunj



Nepal – Birgunj Border Post

写真 (8/9)



Nepal – Birgunj Customs



Nepal – Inland Clearance Depot at Birgunj



Nepal – Birgunj Border Crossing Point (1)



Nepal - Birgunj Border Crossing Point (2)



Nepal – Birgunj Border Crossing Point (3)



Nepal – Birgunj Customs Office

写真(9/9)



Nepal – Dry Port Customs Office in Birgunj



Nepal – Road from Kathmandu to Hetauda



First Seminar in New Delhi (1)



First Seminar in New Delhi (2)



Final Seminar in Guwahati, Assam (1)



Final Seminar in Guwahati, Assam (2)