Thirteenth Meeting of the GMS Subregional Transport Forum
Siem Reap, Cambodia
27-28 October 2009

SUMMARY OF PROCEEDINGS

Introduction

1. The Thirteenth Meeting of the Subregional Transport Forum (STF-13) was held in Siem Reap, Cambodia on 27-28 October 2009. The Meeting was jointly organized by the Ministry of Public Works and Transport of Cambodia and the Asian Development Bank (ADB). The objectives of the Meeting were: (i) to review the first draft report on the GMS Railway Strategy Study, outlining a proposed strategy and plan for the development of an integrated railway network that enhances connectivity within the GMS and with neighboring subregions; (ii) to review the progress of the transport projects contained in the Vientiane Plan of Action for GMS Development (2008-2012); and (iii) to further review and prioritize key GMS transport projects along the GMS transport corridors. (The Meeting Program and Agenda is attached as **Appendix 1**.)

2. The Meeting participants included delegations from the Kingdom of Cambodia, the People's Republic of China (PRC), the Lao People's Democratic Republic (Lao PDR), the Union of Myanmar, the Kingdom of Thailand, the Socialist Republic of Viet Nam, and ADB. Representatives from various development partner organizations also attended the Meeting. (The list of participants is attached as **Appendix 2**.)

3. The Meeting was chaired by H.E. Mr. Tauch Chankosal, Deputy Minister, Ministry of Public Works and Transport, Cambodia and co-chaired by Mr. James P. Lynch, Director, Transport and Urban Development Division, Southeast Asia Department, ADB.

Day 1 Proceedings: 27 October 2009

I. Opening Session

4. H.E. Mr. Tram Iv Tek, Minister of Public Works and Transport of Cambodia, welcomed the participants and formally opened the meeting. In his statement he noted the dramatic changes that has been taking place in the subregion, such as the many kilometers of roads and other infrastructure that have been built and the increasing integration of the subregion under the GMS Economic Cooperation Program. He reiterated Cambodia's commitment to participate and cooperate in regional cooperation initiatives. The Royal Government, recognizing the advantages that a railway system presents in terms of long haul transport costs and potential contribution to regional cooperation, will continue to accord high priority to the maintenance, rehabilitation and reconstruction of national road network and the other modes of transport infrastructure. It will make every effort to privatize the operations of Royal Cambodian Railway, and will encourage private sector participation in the rehabilitation of infrastructure and in transportation services.

5. H.E. Mr. Chankosal, Chair, in his opening remarks, noted that the STF plays an important role in the efforts toward the closer economic integration of the subregion and the achievement of the three C's – connectivity, competitiveness, and community. He also referred to the current global economic downturn, from which the GMS has not been spared. Transport cooperation and the establishment of an efficient and integrated subregional transport system will play a crucial role in ensuring that the GMS can build its competitiveness and take

advantage of the economic upturn when it takes place. He expressed appreciation for ADB's support and pivotal role in GMS cooperation.

6. Mr. James Lynch, Co-Chair, in his opening statement, explained the purpose of the meeting and its expected outputs. Noting the transport sector's central role in the efforts translate the subregion's increased connectivity into expanded markets, enhanced competitiveness, improved access to social services, and greater environmental sustainability, which was the focus of the Third GMS Summit held in Vientiane, Lao PDR im March 2008, the meeting will be briefed on updates on the transport projects in the Vientiane Plan of Action, which was adopted in the Summit. It will also try to identify any outstanding issues regarding these projects and the action plan. The meeting will also look at the emerging network of transport corridors in the subregion, reviewing the status of the corridor segments in each of the GMS countries, with the aim of determining what further work and reconfigurations need to be done to ensure that effective and efficient connectivity is achieved through the corridor network. The central focus of the meeting is the review of the first draft report of the GMS Railway Strategy Study, which is being undertaken with an ADB technical assistance, in line with the thrust toward the development of a subregional railway network in support of multimodalism, energy efficiency, and a sustainable, low-carbon development path.

II. Session 1. Country Status Reports on the Transport Projects in the Vientiane Plan of Action

7. The GMS delegations presented their respective country reports, which provided updates on the priority transport projects in their countries included in the Vientiane Plan of Action as well as other significant developments in their respective transport sectors. Presentations were made by the following participants: (i) Mr. Vasim Sorya, Director of Planning Department, Ministry of Public Works and Transport, Cambodia (general transport infrastructure) and Mr. Nhek Thivuth, Director of Planning of the Royal Railway of Cambodia (railway infrastructure); (ii) Ms. Lu Juan, Director, Department of International Cooperation, Ministry of Transport, PRC; (iii) Mr. Bouaphet Sayasane, Deputy Director General, Ministry of Public Works and Transport, Lao PDR; (iv) U Thant Sin Maung, General Manager (Administration and Planning) of Myanma Railways; (v) Mr. Sunant Gliengpradit, Director, Bureau of International Cooperation, Department of Highways, Thailand; and (vi) Ms. Nguyen Nguyet Nga, Senior Expert, International Cooperation Department, Ministry of Transport, Viet Nam. (The country delegations' respective reports are in **Appendices 3.1-3.6**).

III. Session 2. Plans for the Development of Domestic and International Railway Traffic in Cambodia

8. Mr. Timothy Leake of Toll Holdings Limited, concessionaire of the new Cambodian Railway, gave a presentation on the plans for the development of railway traffic in Cambodia.(A copy of his presentation is in **Appendix 4.**) He first gave a profile of his company's profile and experience. He noted that the Cambodian railways' operation is quite interesting as it involves two railway lines, two countries (Cambodia and Thailand), three markets, and three gateways. He then proceeded to describe the two lines, the Northern Line (Phnom Penh-Pursat-Battambang-Sisophon-Poipet/Aranyaprathet border with Thailand) and the Southern Line (Phnom Penh-Takeo-Kampot-Sihanoukville), identfying their potentials in terms of freight business and industries that could be served. He gave particular attention to mining, noting the potential two-way catalytic and synergistic relationship between mining and railway operation and development. He also presented certain models/options for possible integrated railway-logistics operations and potential links with agricultural and industrial markets.

IV. Session 3. Restructuring the Cambodian Railway: Process and Lessons Learned

9. Mr. Sok Naty of the Concession Management Committee of the Cambodian Railway, briefed the meeting on the activities and programs that have been and are being undertaken to modernize the Royal Railways of Cambodia (RRC). (A copy of his presentation is in **Appendix 5**.) He gave a brief background on the current efforts to restructure the railway in Cambodia, with assistance from ADB under regional TA No. 4645. The Royal Government of Cambodia also signed a $55 million loan agreement with ADB to restore the railway's infrastructure by rehabilitating its existing track and re-establishing Cambodia's rail connection with Thailand. An international competitive bidding process to select a concessionaire was conducted, and Toll Holdings Ltd. (Australia) was selected as the preferred bidder in November 2007. Negotiation of a Concession Agreement with Toll was undertaken and the agreement was signed in June 2009, which became effective on 22 October 2009.

10. He then presented the key findings and recommendations under the TA, among which are: (i) while the RRC assets have been deteriorating due to war damage and poor maintenance, and the company has been suffering financial losses, the railway has good potential if the railway is restructured and infrastructure rehabilitated; (ii) TA's recommendation was to concession the operation and maintenance of the railway to a private operator, with the Government maintaining ownership of the railway's infrastructure and assets; (iii) the key elements for successful reform are: (a) strong support and commitment of the Government, (b) governance reform, (c) policy reform, and (d) best PPP process and procedures. He then described the strategy for reform that is being undertaken, involving a clear and visionary policy, a clear concession process to follow, a clear legal framework to attract investor and authorize the concessioning of the railway, and building the business case for three main "clients" of the project – the government, the people, and the investor.

Open Discussion:

11. A suggestion was made (Mekong River Commission) that in the rehabilitation and restructuring of the Cambodian railway, account should be taken of possible implications of developments in inland waterway transport, among which are the current negotiations on a cross-border navigation agreement between Cambodia and Viet Nam and the improvements in navigation channels being undertaken under existing bilateral agreements. The MRC is also conducting research on the development of design standards for inland waterways navigation, and invited the countries to participate in this effort.

12. Thailand expressed admiration for the bold step Cambodia has taken in restructuring its railway system, and inquired whether there would be increases in passenger fare rates under the new concession operations. Mr. Naty clarified that the concession agreement covers only freight and not passenger traffic, but that should a future concession also cover passenger traffic, a public service obligation provision will be included in the agreement.

13. A question was asked (Thailand) on where the connection point between the Cambodian railway and the Thai railway would be set. The Cambodian delegation replied that after considering various options, Cambodia's decision was to use the existing original connection (at Poipet-Aranyaprathet). H.E. Mr. Chankosal further suggested that a high level agreement should be forged between the Cambodian and the Thai governments to definitively set the connection point, and requested the Thai delegation to bring this up to their appropriate authorities. An additional information was given that under the restructuring process, it was

targeted that a Railway Cross Border Agreement between Cambodia and Thailand is targeted to be accomplished within three years.

14. The issue of the need to reform customs procedures for cross border rail traffic was brought up (Mr. Apthorp of GMS Business Forum). The Cambodian delegation and the TA consultant state that they are aware of this problem and need, but that unfortunately there is very little experience to draw from at this point since cross border railway traffic is almost nonexistent in the subregion, with the exception of traffic between Viet Nam and PRC. The meeting, however, agreed that this problem must be squarely addressed in order to realize the full benefits of a subregional railway network.

V. Session 4. Presentation of the Draft Report of the GMS Railway Strategy Study

Part 1: Current Status of the Railways and International Railway Transport in the GMS and Key Findings of the Study

15. Mr. Lynch, Co-Chair, gave a brief background on the GMS Railway Strategy Study. The study was undertaken basically in response to the directive given by GMS Leaders at the Third Summit and to requests made at STF-12. An ADB regional technical assistance, TA No. 7255, was approved in March 2009 and under this, a consultant was engaged to undertake the study, which would look into ways toward the development of an integrated GMS railway network that enhances overall GMS connectivity, and strengthens linkages with neighboring subregions, including a prioritized list of possible projects to be implemented before 2025.

16. Mr. Paul Power, Consultant under ADB regional TA No. 7255, presented the broad outline, key findings, and initial recommendations of the GMS Railway Strategy Study. (A copy of his presentation is in **Appendix 6**.) He first presented the current status of the railways and international railway transport in the GMS, outlining recent developments in railway development in individual GMS countries.

17. He then proceeded to give the study's findings on the key problems and needs of the GMS railway sector. Among these are: (i) ensuring that apart from track construction and upgrading, the required equipment (e.g., locomotives and rolling stock; communications, signalling and train control equipment) are available to meet demand; (ii) enhancing interoperability, e.g., through setting minimum technical standards; (iii) rationalizing and increasing the efficiency of railway organizations; (iv) regulatory reforms; (v) simplifying/ harmonizing cross-border procedures, similar to what is being done under the GMS Cross-Border Transport Agreement, (vi) enhancing intermodal connections, e.g., with road networks; (vii) facilitating railway data/information exchange. He also emphasized the importance of the private sector awareness and participation in railway development, noting that attract private investment, regulatory and governance reform must first be undertaken.

Part 2: Proposed Goals and Strategy for the Development of an Integrated GMS Railway Network

18. Mr. Power then presented the goals and key elements/priorities under the proposed Strategy. The main goals are ensuring rail connectivity within ten years, promoting the development of a seamless rail network, ensuring that rail infrastructure and equipment are moder and sufficient to meet demand, supporting the development of GMS railway organiztions, developing best practice in railway regulation, and actively involving the private sector in the planning and development of the GMS railway network. The key elements or "strategies" he recommended are:

(i) invest to construct missing links to ensure that there is at least one GMS rail route by 2020;
(ii) invest in upgrading the capacity of supporting lines;
(iii) support to technical initiatives toward an efficient rail network, e.g., determining infrastructure upgrading needs on existing lines, determining interoperability standards, determining locomotive and rolling stock needs, organizational change, regulatory reform; and
(iv) establish a GMS Rail Coordination Office.

Part 3: Elements of a Possible Action Plan for the Next Ten Years

19. Mr. Power mentioned that he inluded in his distributed materials a preliminary or long list of possible rail line/projects for development and invited the delegation's comments and inputs on these. (The list is in **Appendix 7**.) The Co-Chair suggested that the delegations review this list later and send their comments, but that discussion could focus at this time on the general elements of the strategy that have been presented.

Open Discussion:

20. Mr. Power made further general comments, as follows:

- Railway development does not just involve building railway lines, but rather many things that have to be done; a holistic perspective is needed instead of just a strictly engineering one.
- In subregional railway development, it is critical to make the decision whether we will build at least one connected GMS rail route or just focus efforts on improving/building individual country railway systems.
- The GMS Rail Coordination Office that is being proposed will not be an operations management or coordination unit, but rather will just ensure that plans and broad activities are coordinated and that all stakeholders are involved.

21. Mr. Apthorp (GMS-BF) remarked that until the railways, even if they are interconnected, are able to assure traders and freight transport operators definite time delivery of their cargoes, they would not use this mode and, consequently, private investments in rail assets would not be forthcoming. Mr. Power agreed and noted that that ensuring that the supporting services and facilities to ensure definite time delivery should be part of any railway development strategy.

22. Mr. Chartier (ESCAP) posed a number of questions, explaining the importance of having clear answers to each of them: (i) for what purpose and who are the specific sectors to be served by the planned railway systems – e.g., if the intention is to maximize profits, then railway development designed for freight transport should be the direction, as passenger transport is usually less profitable; (ii) which track gauge will be used – as the choice also has simplications on profitability; (iii) how is the interoperability issue being addressed – given that it is difficulffic that to develop and adopt common standards, would the volume of traffic that could be generated make this worthwhile; (iv) what are railway authorities doing to contribute to efforts to address the issues of climate change and energy dependency; and (v) what specific kinds of participation is envisioned for the private sector, given that it is unlikely to invest in main railway line development.

23. Further to the above comments, Viet Nam (Ms Nga) remarked that: (i) to establish the legal framework for a subregional railway network, it may be worthwhile to pursue the forging of bilateral agreements, such as the one between Viet Nam and the PRC; (ii) given the complicated issues on adopting common technical specifications, it may be less costly to just

upgrade or rehabilitate existing railway lines rather than build new links; (iii) the private sector is not likely to invest in railway lines, but it may be more willing to invest in what are needed to operate railway lines, e.g., ICDs, locomotives/rolling stock; (iv) the possible setting up of a "GMS Railway Working Group", to look into the development of both the hardware and software requirements of the sector, may be considered.

24. Mr. Power concurred with most of the foregoing observations. He further posed the question with regard to developing a cross border agreement for railway traffic, whether it would be better to approach this regionally or bilaterally. Mr.Chartier (ESCAP) observed that there are already existing possible models for such agreements. Mr. Butiong (ADB) noted that the GMS Cross Border Transport Agreement (CBTA) started out as an agreement among three countries, but later was developed to cover all GMS countries; but now, after certain problems have been encountered in regionwide application, countries are going into bilateral agreements to apply CBTA principles and provisions. He remarked that in the case of railways, there may be some merit in forging bilateral agreements at this time, further observing that the choice may one between being pragmatic and being idealistic.

25. Mr. Power reiterated the importance of making a decision on whether to focus efforts on upgrading/developing national lines or building a connected GMS line. However, he remarked that if the intention is to establish subregional railway connectivity, it would be necessary to build at least one subregional line. Thailand (Mr. Sunant) suggested that deciding on which lines to develop first, those that could be completed most quickly and at least cost should be given precedence, and initially just use existing links; then once this first step has been taken, look for and develop links that could be best be sustained in the long-term, e.g, depending on the relative volumes of traffic and trade flows. Mr. Butiong (ADB) recalled that under the first GMS Transport Strategy, rehabilitation of existing roads was given precedence over building new ones, mainly to minimize investment costs and maximize impact; he remarked that in the case of railways, it may be good to have similar quick wins at this time.

26. With regard to further questions from the floor regarding the participation of the private sector in railway development, Mr. Power clarified that this participation should not be limited to investment in railway assets but more generally as user of the railways. It is the private sector that uses these facilities for freight or for passenger traffic, and ultimately they are the ones who will determine the kinds of services to be developed and investments to be made. They therefore have to be part of the planning and design process.

27. Cambodia (Mr. Sorya) informed the meeting that there is a "Railway Sub-Working Group" under the ASEAN framework, whoese next meeting in 2010 Cambodia will host. Moreover, there is one protocol that covers railways under the ASEAN Framework Agreement on Trade Facilitation. He noted that under the latter, a regional approach was initially adopted, but after several years, bilateral approaches are currently being pursued by member countries. He suggested that ADB and the STF may wish to consider ways of harmonizing its efforts in this area with this framework.

VI. Wrap Up of First Day Sessions

28. The Co-Chair briefly wrapped up the day's discussions as follows:

- The countries gave interesting reports on their transport sectors, which increasingly reflect intermodal approaches and more conscious efforts to consider the software side of transport development.
- The briefing on Cambodia's experience it restructuring its railways showed that this is a highly complex process that requires considerable time and effort. ADB remains keen in

continuing to support Cambodia's efforts to rejuvenate its railways and to become a regional hub in this transport mode. Toll Holdings likewise shared interesting information on the plans and prospects of transforming the rail sector in Cambodia into a useful, modern, and profitable enterprise.

- The presentation on the key elements of the proposed GMS Railway Strategy was able to stimulate discussion and debate and provided a useful framework for tackling the most important issues regarding railway development in the subregion. This discussion is, however, just the beginning and the strategy is still work in progress. The countries should continue to review the issues and give further comments. A working/technical meeting is planned to be held in January next year to consider a further refined draft of the strategy, your further comments, and a proposed pipelineof possible projects.

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VII. Session 5. Review and Further Prioritization of GMS Transport Projects

29. Mr. Lynch, Co-Chair, and Mr. Ronald Antonio Butiong, Senior Regional Cooperation Specialist, ADB gave a presentation on the Transport Projects along the GMS Corridors. (A copy of their presentation is in **Appendix 8**.) Mr. Lynch explained that the purpose of reviewing completed, ongoing and planned priority GMS transport infrastructure projects along the identified GMS transport corridors is to further prioritize planned projects, and possibly identify others that are not yet included in existing plans. The overall aim of this exercise is to identify ways of further rationalizing and accelerating the development of an efficient GMS transport corridor network that will support the needs of regional integration and sustainable development.

Open Discussion:

30. The country delegations gave their comments and inputs as regards what they consider are gaps in the corridor network segments within their respective countries, in terms of physical infrastructure and agreements and other software on cross border transport, as well as other priority projects that would further enhance connectivity along the corridors. The Secretariat said that these inputs will be incorporated in the present list of transport projects in the Vientiane Plan of Action.

VIII. Session 6: Remarks/Updates from Other Development Partners

31. Mr. Marcus Bartley Johns of AusAID noted that the GMS transport agenda has advanced well, particularly in terms of physical connectivity. Australia has played a part in this progress, supporting projects such as the First Mekong Friendship Bridge between Thailand and Laos; the Southern Coastal Corridor project; the Northern Transport Network Improvement in Laos; and the Road Asset Management in Cambodia. It is also at an advanced stage in exploring a new investment in rail infrastructure in Cambodia and considering a major new bridge in the Mekong delta. It has also providing targeted funding to help address some of the negative impacts of increased connectivity, e.g., infectious diseases, human trafficking. However, he noted that trade and transport reforms are crucial in taking full advantage of greater physical connectivity. He also cited the potential benefits of the rehabilitation of the Cambodian railway and said that Australia is considering providing a significant grant to help finance the project.

32. Mr. Pierre Chartier of ESCAP gave a presentation (**Appendix 9**) describing ESCAP's programs and activities supporting transport development in the region. He first presented the region's current and short-to-medium term economic prospects, with focus on the growing intra-Asian trade, and then gave certain contrasting features between the prosperous coastal areas and the remote hinterlands, which serve as basis for the key role of transport development. The declarations of the countries meeting in Busan, Republic of Korea in November 2006, reaffirm their commitment to intermodal transport and logistics development, particularly to th efforts toward the establishment of the Asian Highway and the Trans-Asian Railway. He then described the trends toward increasing containerization and globalization and the opportunities they offer. He also emphasized the role of intermodal transport development in addressing new issues, such as climate change and sustainable development.

33. Mr. Paul Apthorp of the GMS Business Forum reiterated the crucial need for facilitating cross-border procedures for rail traffic. He remarked that if this issue is not addressed, the problems being faced by freight transporters in using the roads in cross border operations would be magnified in the case of rail, due to the greater load capacity of trains compared to trucks. He said that many road transport operators would shift to rail if the present cumbersome documentary and procedural cross border requirements are eased.

IX. Other Matters

34. In line with the tradition of rotating the venue of the STF among the GMS members according to the alphabetical order of country names, the PRC delegation said that they will make the appropriate consultations with their authorities for the holding of the Fourteenth Meeting of the STF in PRC, and will advise ADB of the outcome as soon as possible.

X. Adoption of the Draft Summary of Proceedings

35. The Summary of Proceedings of the STF-13 was adopted *ad referendum*.

XI. Acknowledgements

36. The GMS countries and the ADB expressed their sincere thanks and appreciation to the Royal Government of Cambodia, in particular, to the Ministry of Public Works and Transport, for the warm hospitality and excellent arrangements provided to the Thirteenhth Meeting of the Subregional Transport Forum.

13th Meeting of the GMS Subregional Transport Forum

Siem Reap City, Cambodia
27-28 October 2009

PROVISIONAL PROGRAM and AGENDA
(Annotated)

Meeting Theme: Toward the Development of an Integrated GMS Railway Network for Greater Connectivity

Objectives:

1. *To review the Draft Report on the GMS Railway Strategy Study, outlining a proposed strategy and plan for the development of an integrated railway network that enhances connectivity within the GMS and with neighboring subregions.*
2. *To review the progress of the transport projects contained in the Vientiane Plan of Action for GMS Development (2008-2012).*
3. *To further review and prioritize key GMS transport projects along the GMS transport corridors.*

First Day

0800-0830 **Registration**

0830-0900 **Opening Session**

Welcome Remarks

H.E. Mr. Tram Iv Tek
Minister, Ministry of Public Works and Transport
Royal Government of Cambodia

Opening Remarks

Chair, H.E. Mr. Tauch Chankosal
Secretary of State, Deputy Minister of Public Works and Transport, Royal Government of Cambodia

Co-Chair, Mr. James Lynch
Director, Transport and Urban Development Division,
Southeast Asia Department, Asian Development Bank (ADB)

0900-0915 **Group Photo Session**

0915-1130 **Session 1. Country Status Reports on the Transport Projects in the Vientiane Plan of Action**

[The session provides the venue for monitoring the progress on the Transport Sector projects in the Vientiane Plan of Action (VPOA) for GMS Development (2008-2012) endorsed and adopted by the Third GMS Summit. It aims to: (i) obtain updates on actual developments/ status of the various action items/projects contained in the VPOA pertaining to each country; and (ii) apprise the STF on any issues, concerns, and needed actions regarding the projects.]

Presentor: Each Country Delegation

[Twenty (20) minutes will be allotted for each country presentation.]

0915-1015 *Presentations by: Cambodia, People's Republic of China, Lao People's Democratic Republic*

1015-1030 Coffee/tea Break

1030-1130 *Presentations by: Myanmar, Thailand, Viet Nam*

1130-1215 **Session 2. Plans for the Development of Domestic and International Railway Traffic in Cambodia**

Presentor: **Mr. Kevin Treloar**
Representative for the Railway Concessionaire, Toll Holdings Limited

Discussion

1215-1330 **Lunch**

1330-1430 **Session 3. Restructuring the Cambodian Railway: Process and Lessons Learned**

Presentor: **H.E. Mr. Tauch Chankosal**
Secretary of State, Deputy Minister of Public Works and Transport, Cambodia

Discussion

1430-1445 Coffee/tea Break

1445-1715	**Session 4. Presentation of the Draft Report of the GMS Railway Strategy Study**
	Part 1: Current Status of the Railways and International Railway Transport in the GMS and Key Findings of the Study
	Presentor: TA Consultant
	Discussion
	Part 2: Proposed Goals and Strategy for the Development of an Integrated GMS Railway Network
	Presentor: TA Consultant
	Discussion
	Part 3: Proposed Action Plan for the Next Ten Years
	Presentor: TA Consultant
	Discussion
1715-1730	**Wrap Up of First Day Sessions**
	Co-Chairs
1900-	**Dinner hosted by Asian Development Bank**

Second Day

0900-1030	**Session 5. Review and Further Prioritization of GMS Transport Projects**
	[This session will review completed, ongoing and planned priority GMS transport infrastructure projects along the identified GMS transport corridors, with a view to their further prioritization and rationalization in line with the development of the overall GMS transport corridor network.]
	Presentors/Lead Discussants:
	Representatives from the Transport and Urban Development Division and the Regional Cooperation Integration Group, Southeast Asia Department, Asian Development Bank (ADB)

1030-1045	Coffee/tea Break
1045-1130	**Session 6: Remarks/Updates from Other Development Partners** Moderated by Co-Chairs
1130-1245	**Session IX: Other Matters** *[Further issues that may be raised for discussion.]*
1200-1215	**Wrap Up of the Meeting** *Co-Chairs*
1215-1315	**Lunch**

Greater Mekong Subregion
13th Meeting of the Subregional Transport Forum (STF-13)
Sofitel Angkor, Siem Reap, Cambodia
27-28 October 2009

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GMS Business Forum

Paul Apthorp

GMS: (STF-13)
13th Meeting of the Sub-regional Transport Forum

Defining the GMS Transport Network's Role in Enhancing Competitiveness

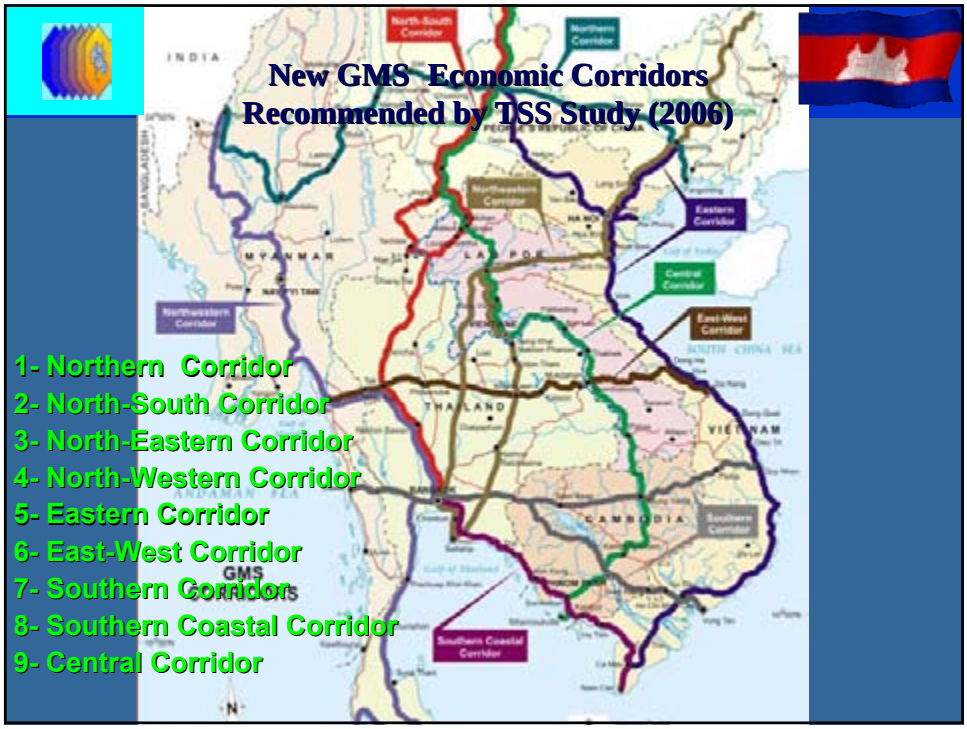
Siem Reap –CAMBODIA

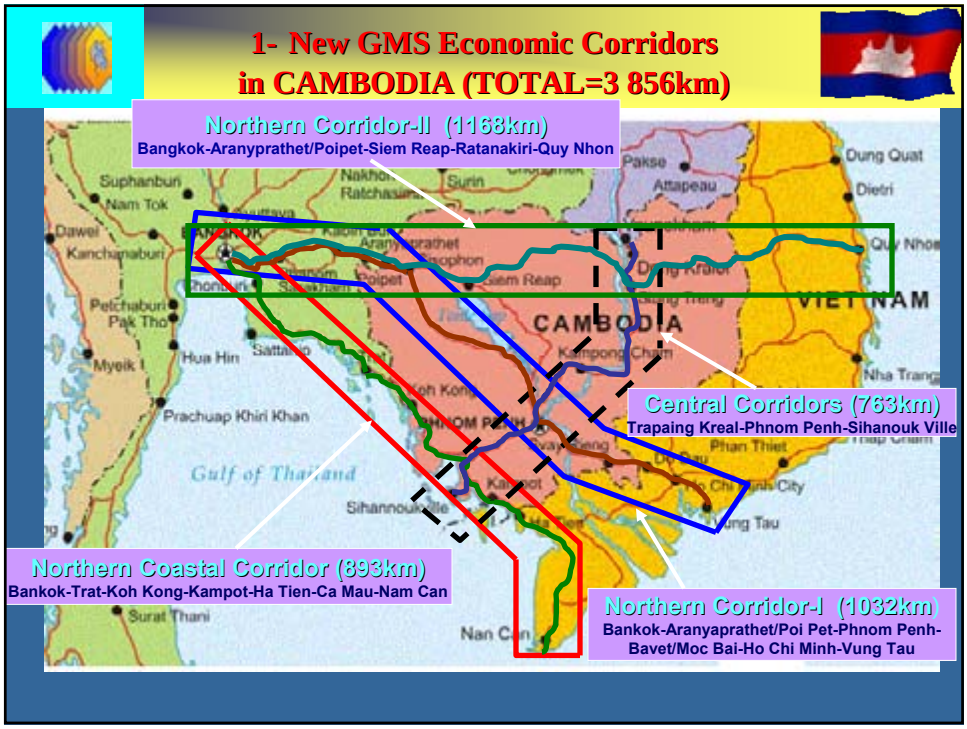
27-28 October 2009

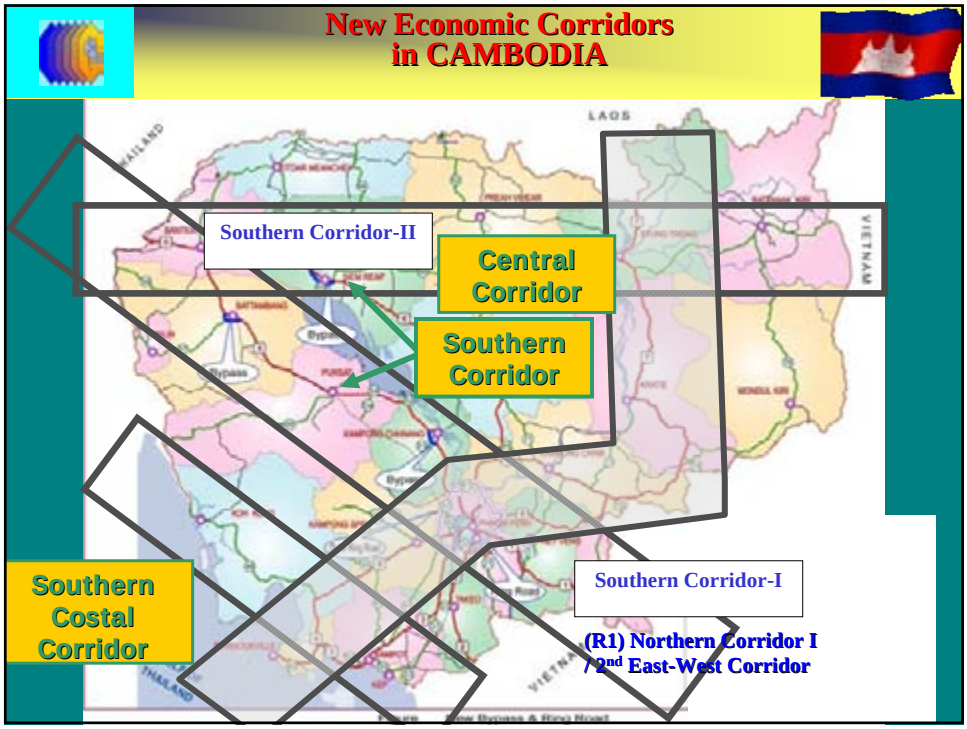
Presented by Mr. Vasim Sorya
Director General, General Department of Planning and Administration
Ministry of Public Works and Transport
Kingdom of Cambodia

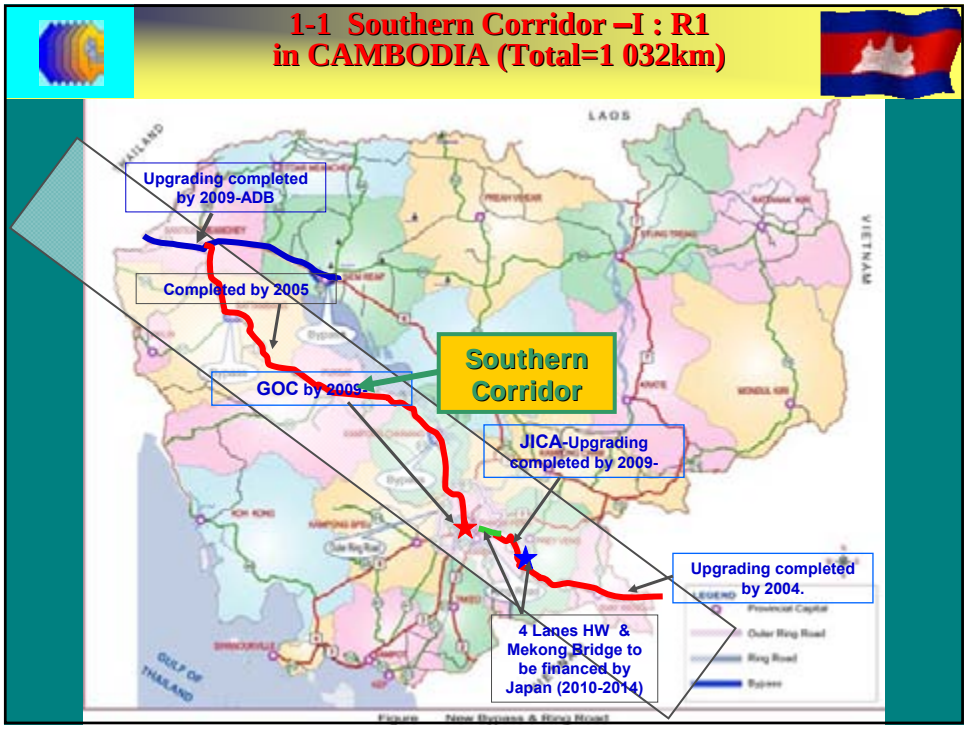
Contents

Regional Corridors and International Highways in Cambodia
Road Transport Projects
Summary of Projects Supports GMS Corridors
Status of Road Rehabilitation Projects – September 2009
Water Transport Projects
Air Transport
Development in Transport, Logistics and Cross-border Transport Facilitation Related Issues
Rail Transport Projects

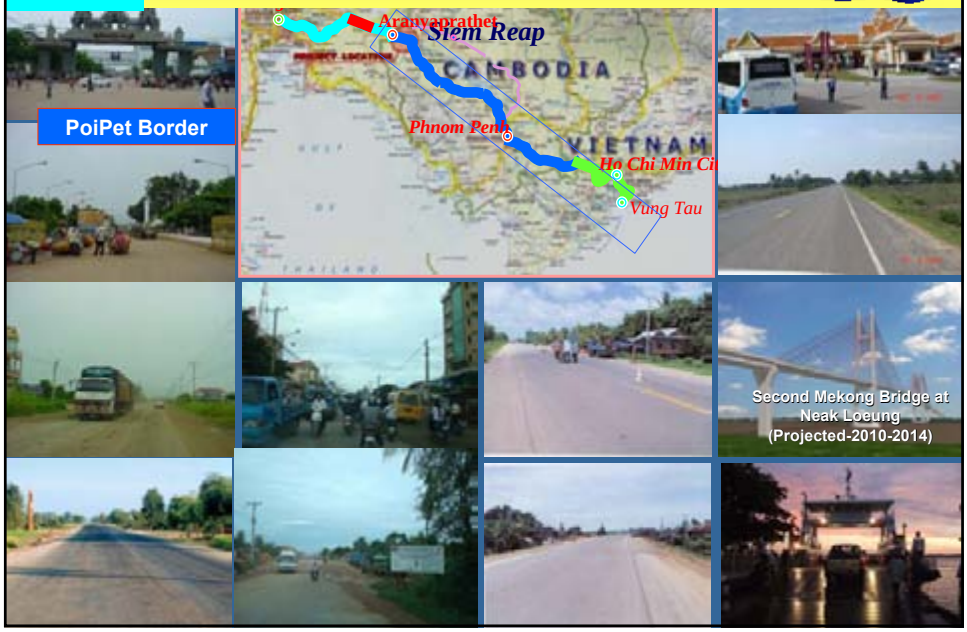

New GMS Economic Corridors
Recommended by TSS Study (2006)
1- Northern Corridor
2- North-South Corridor
3- North-Eastern Corridor
4- North-Western Corridor
5- Eastern Corridor
6- East-West Corridor
7- Southern Corridors
8- Southern Coastal Corridor
9- Central Corridor
GMS
INDIA
MYANMAR
THAILAND
CAMBODIA
VIET NAM
SOUTH CHINA SEA
ANDAMAN SEA
N


1- New GMS Economic Corridors
in CAMBODIA (TOTAL=3 856km)
Northern Corridor-II (1168km)
Bangkok-Aranyprathet/Poipet-Siem Reap-Ratanakiri-Quy Nhon
Central Corridors (763km)
Trapaing Kreal-Phnom Penh-Sihanouk Ville
Northern Coastal Corridor (893km)
Bankok-Trat-Koh Kong-Kampot-Ha Tien-Ca Mau-Nam Can
Northern Corridor-I (1032km)
Bankok-Aranyaprathet/Poi Pet-Phnom Penh-
Bavet/Moc Bai-Ho Chi Minh-Vung Tau
CAMBODIA
VIET NAM
Gulf of Thailand
Suphanburi
Nam Tok
Dawei
Kanchanaburi
Petchaburi
Pak Tho
Myeik
Hua Hin
Prachuap Khiri Khan
Surat Thani
Nakhon Ratchasima
Surin
Siem Reap
Pakse
Attapeau
Dung Quat
Dietri
Nha Trang
Phan Thiet
Vung Tau
Sihanoukville
Nan Can

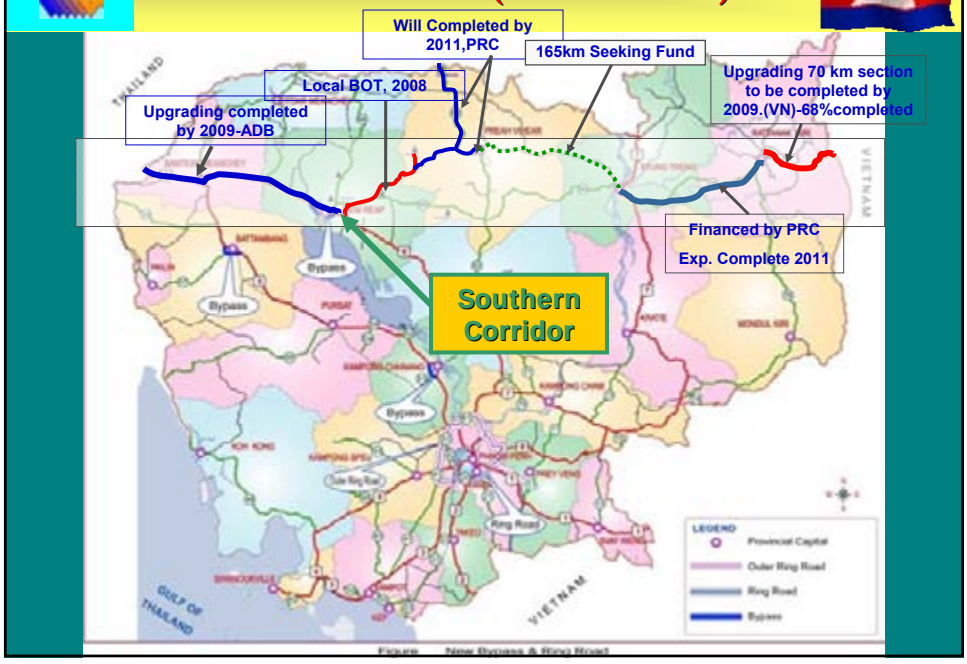

New Economic Corridors
in CAMBODIA
LAOS
THAILAND
VIETNAM
Southern Corridor-II
Central Corridor
Southern Corridor
Southern Costal Corridor
Southern Corridor-I
(R1) Northern Corridor I
/ 2nd East-West Corridor


1-1 Southern Corridor –I : R1
in CAMBODIA (Total=1 032km)
LAOS
THAILAND
VIETNAM
Upgrading completed by 2009-ADB
Completed by 2005
GOC by 2009-
Southern Corridor
JICA-Upgrading completed by 2009-
Upgrading completed by 2004.
4 Lanes HW & Mekong Bridge to be financed by Japan (2010-2014)
GULF OF THAILAND

1- Southern Corridor –I : R1 in CAMBODIA (Total=1 032km)

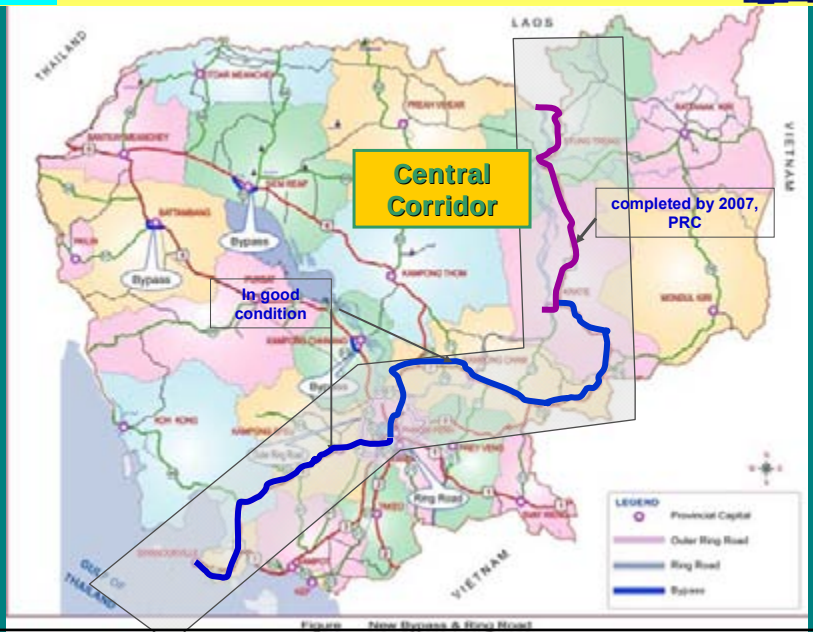


1-2 Southern Corridor –II : R9 in CAMBODIA (Total =1 168km)



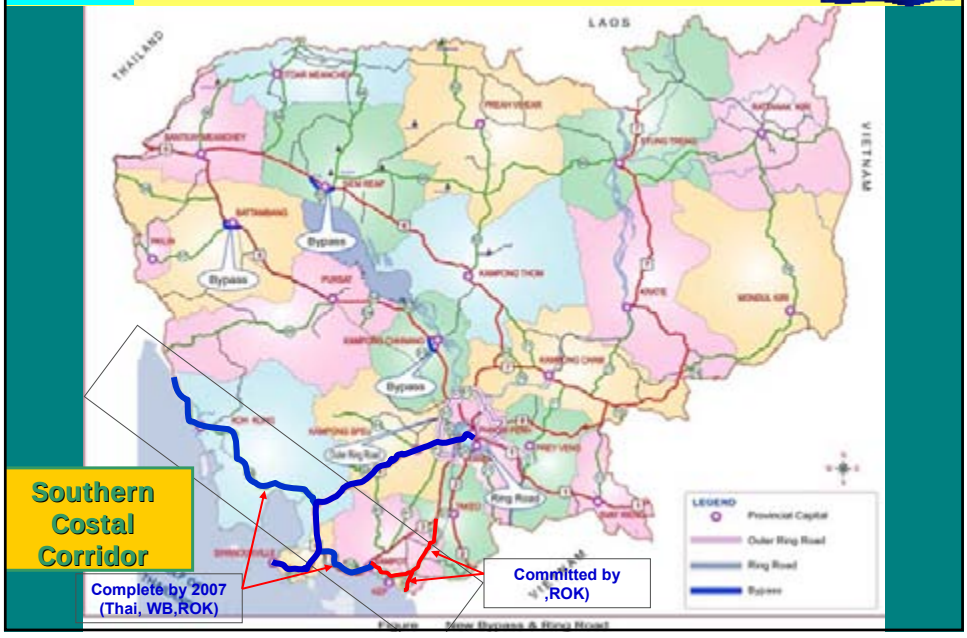
1-2- Southern Corridor –II : R9 in CAMBODIA (Total =1 168km)

1-3- Central Corridor : R6 in CAMBODIA (Tal= 763km)

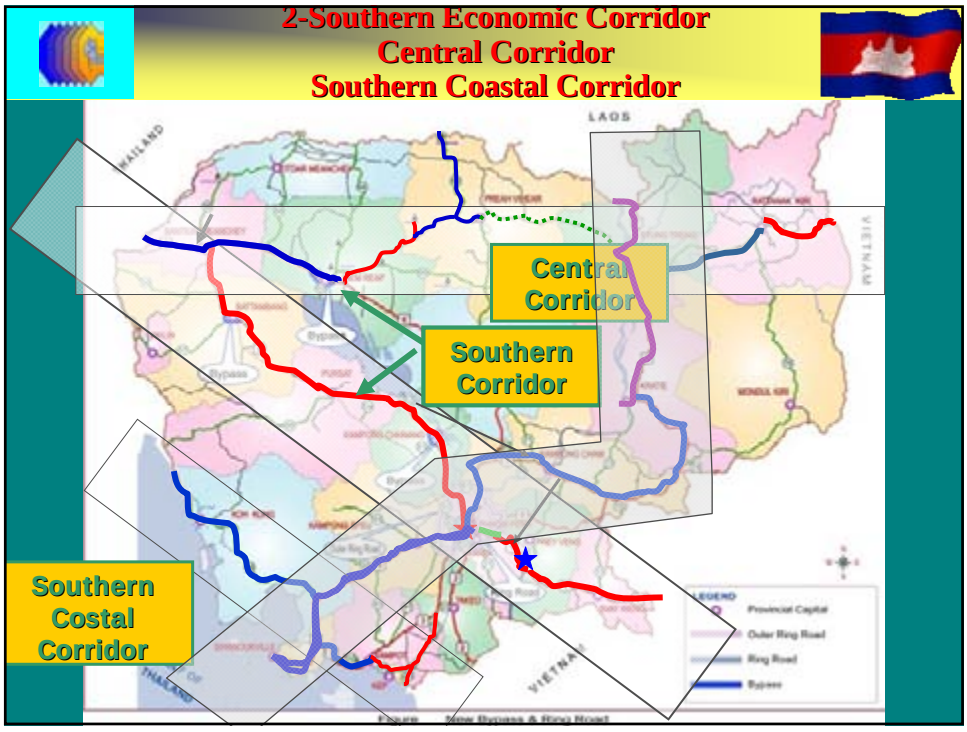


1-3- Central Corridor : R6 in CAMBODIA (Tal= 763km)

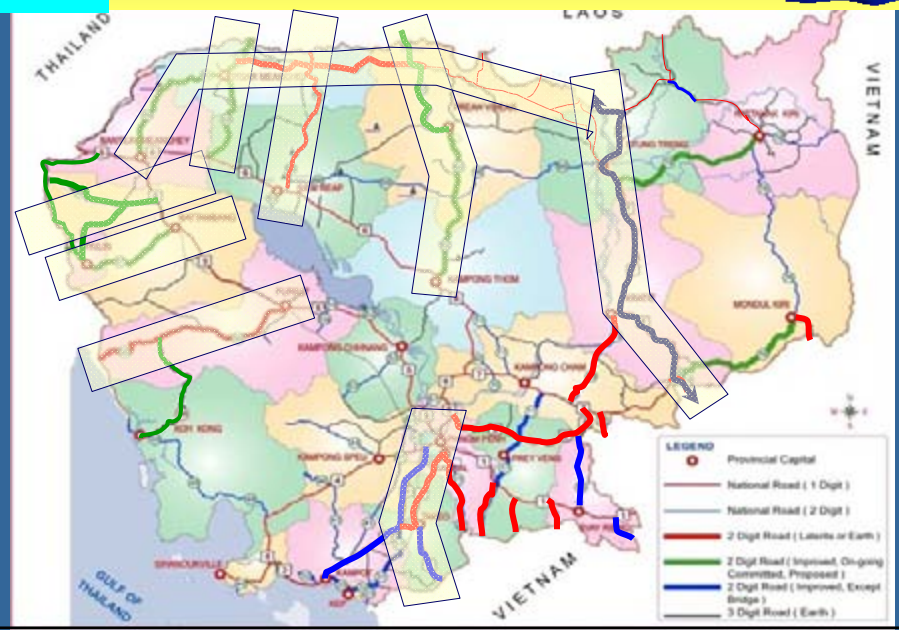
1-4 - Southern Coastal Corridor : R10 in CAMBODIA (Total= 893km)




1-4 - Southern Coastal Corridor : R10
in CAMBODIA (Total= 893km)
THAILAND
Tra
&
Hat Lek
Kho Kong
CAMBODIA
Sre Amble
Kampo
ot
Sihanoukville
Hatie
VIETNAM
Ho Chi Min City
VIETNAM
Cambodia
NR-3: completed
WB : 2005
NR-3 : Completed
Korea : 2007


2-Southern Economic Corridor
Central Corridor
Southern Coastal Corridor
LAOS
THAILAND
VIETNAM
Central
Corridor
Southern
Corridor
Southern
Costal
Corridor
LEGEND
Provincial Capital
Outer Ring Road
Ring Road
Bypass

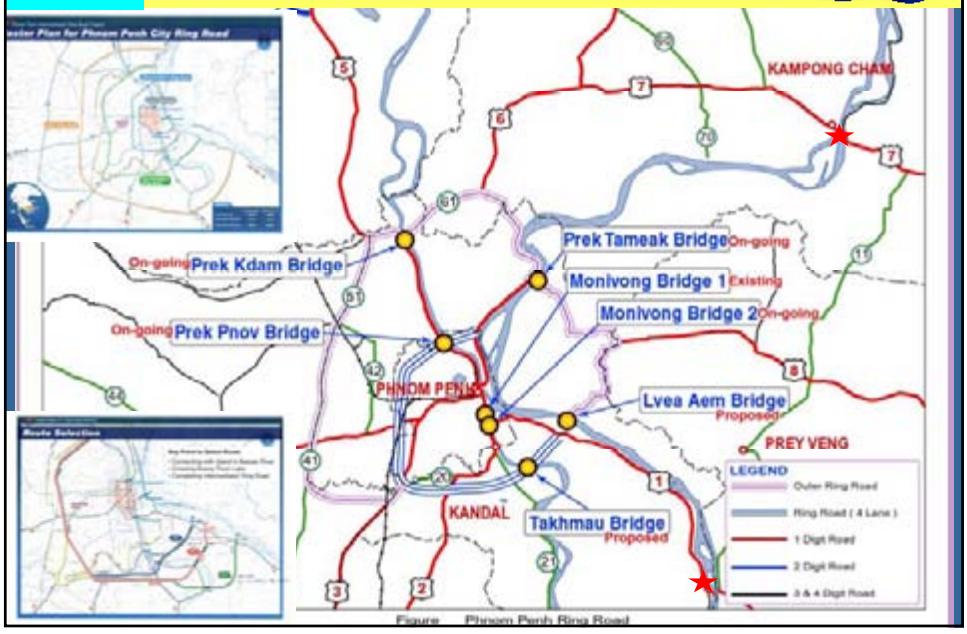
3- Others Corridors

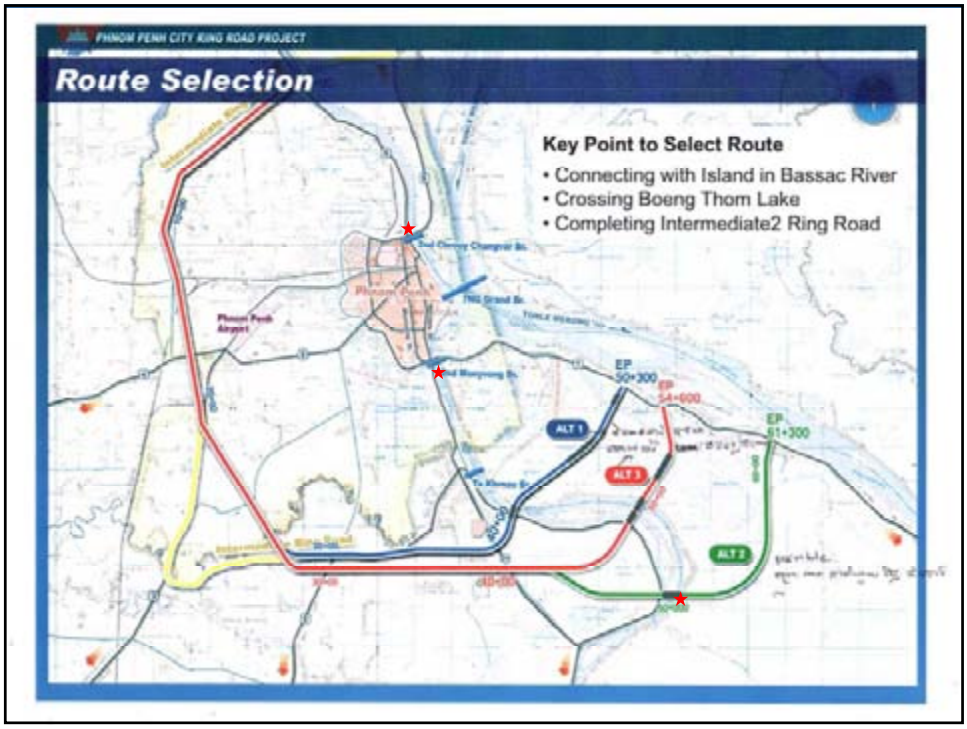


3- Others Corridors

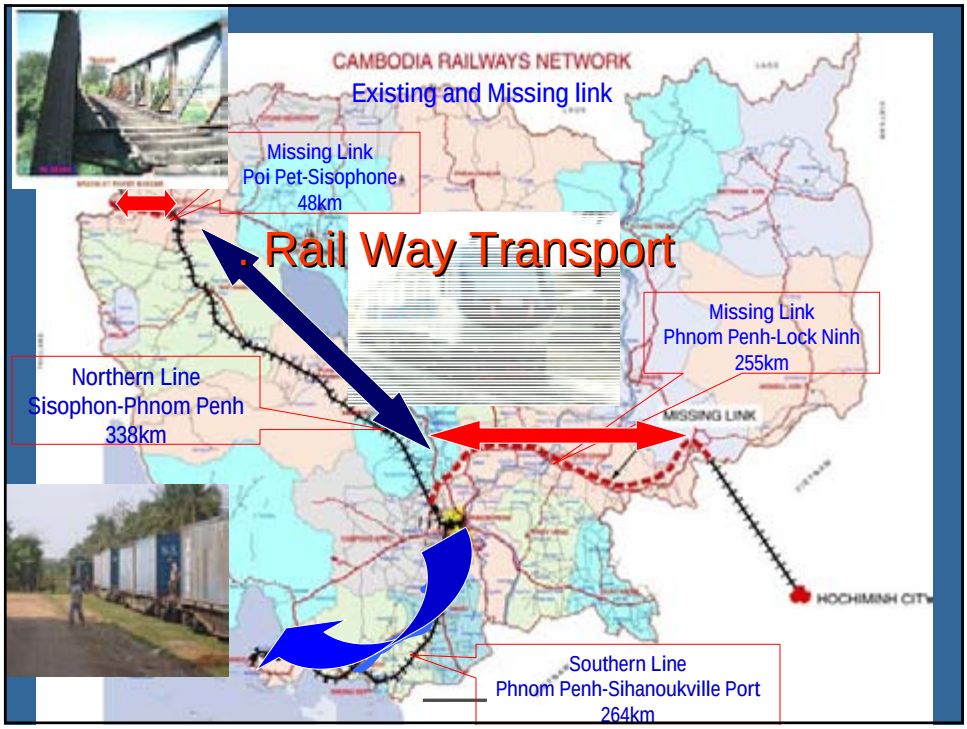
4-Proposed Road Network Master Plan 2020

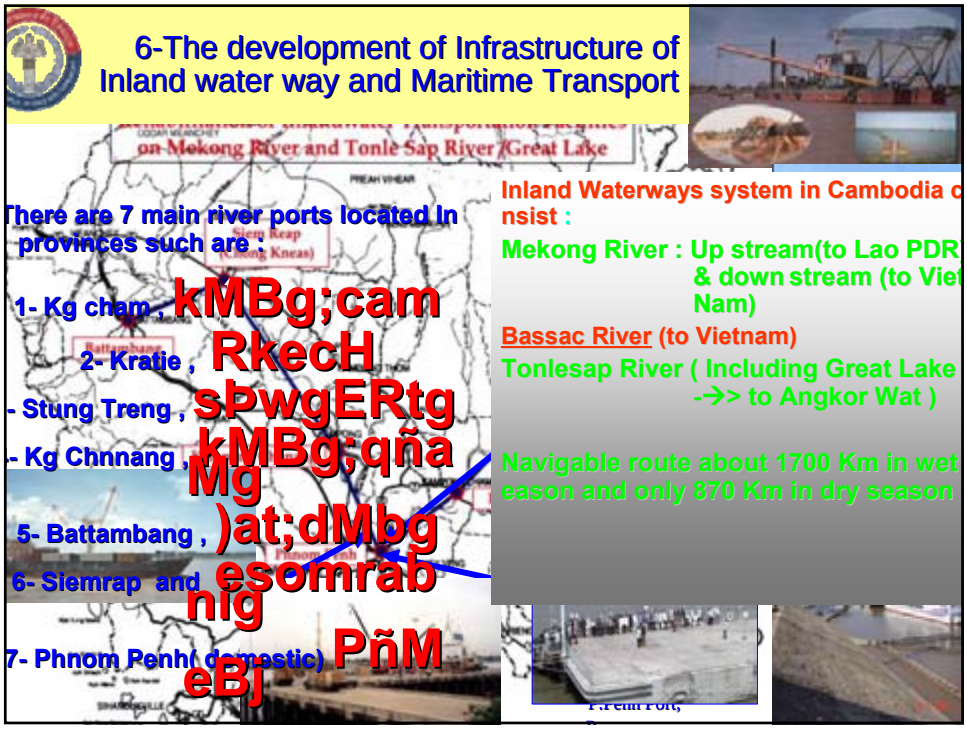
5- Phnom Penh Ring Roads




PHNOM PENH CITY RING ROAD PROJECT
Route Selection
Key Point to Select Route
• Connecting with Island in Bassac River
• Crossing Boeng Thom Lake
• Completing Intermediate2 Ring Road
Phnom Penh Airport
EP 50+300
EP 54+600
EP 61+300
ALT 1
ALT 2
ALT 3


Phnom Penh Intermediate2 Ring Road Project
Master Plan for Phnom Penh City Ring Road
Intermediate1 Ring Road
Inner Ring Road
Outer Ring Road
Intermediate2 Ring Road
LEGEND


CAMBODIA RAILWAYS NETWORK
Existing and Missing link
Missing Link
Poi Pet-Sisophone
48km
Rail Way Transport
Missing Link
Phnom Penh-Lock Ninh
255km
Northern Line
Sisophon-Phnom Penh
338km
MISSING LINK
HOCHIMINH CITY
Southern Line
Phnom Penh-Sihanoukville Port
264km


6-The development of Infrastructure of
Inland water way and Maritime Transport
on Mekong River and Tonle Sap River (Great Lake
There are 7 main river ports located in
provinces such are :
1- Kg cham , kMBg;cam
2- Kratie , RkecH
- Stung Treng , sPwgERtg
- Kg Chnnang , kMBg;qña
Mg
5- Battambang ,)at;dMbg
6- Siemrap and esomrab
nig
7- Phnom Penh(domestic) PñM
eBj
Inland Waterways system in Cambodia c
nsist :
Mekong River : Up stream(to Lao PDR
& down stream (to Viet
Nam)
Bassac River (to Vietnam)
Tonlesap River (Including Great Lake
-->> to Angkor Wat)
Navigable route about 1700 Km in wet
eason and only 870 Km in dry season

6- INLAND WATERWAY TRANSPORT

BUDGET FOR IWT PROJECTS

		US$ million
Dredging:	Up to Phnom Penh, short-term	8.47
	Up to Phnom Penh, medium-term	2.29
	Up to Kampong Cham	0.59
Port Development:	Phnom Penh, Short-term	2.21
	Re-location of Phnom Penh Port	36.69
	Kampong Cham Container Facility	1.67
	Passenger facilities, Chong Kneas	0.40
	New Chong Kneas Port	15.57
Waterway Safety:	Immediate priority measures	1.01
	Medium-term	1.00
Legal:		0.35
	TOTAL	US$ 70.25 million

7- AIR TRANSPORT

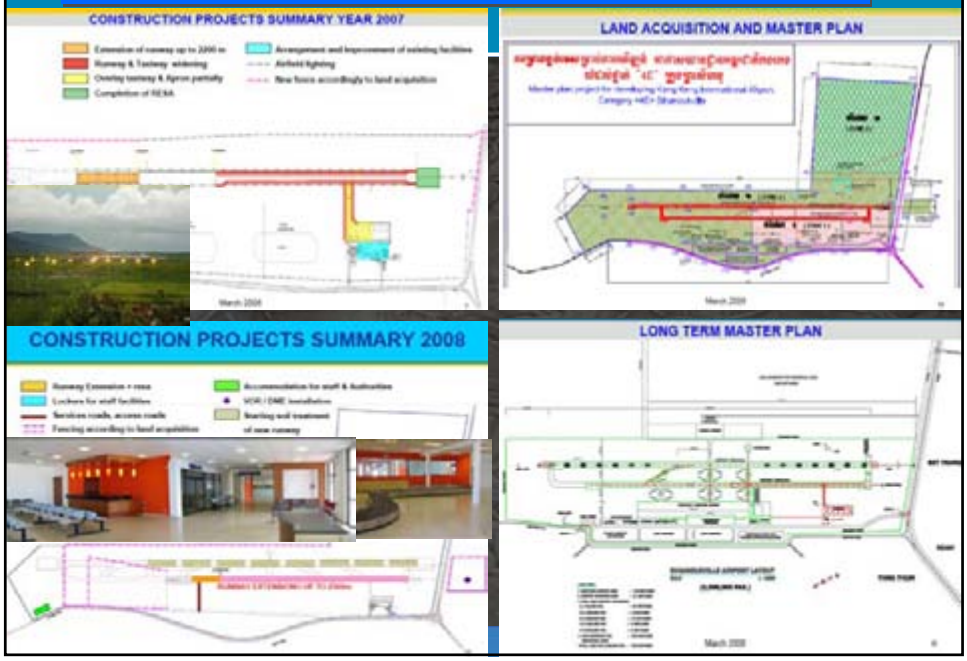
Phnom Penh International Airport

Passenger Terminal completed in 2004

Siem Reap International Airport

Passenger Terminal completed in 2006

SIHANOUK VILLE AIRPORT-2008



Domestic Airport Management and Rehabilitation

Sihanoukville Airport

- opened as 3C type since early 2007 to accommodate aircraft type ATR72 or equivalent
- The airport will be upgraded to the international type in 2008

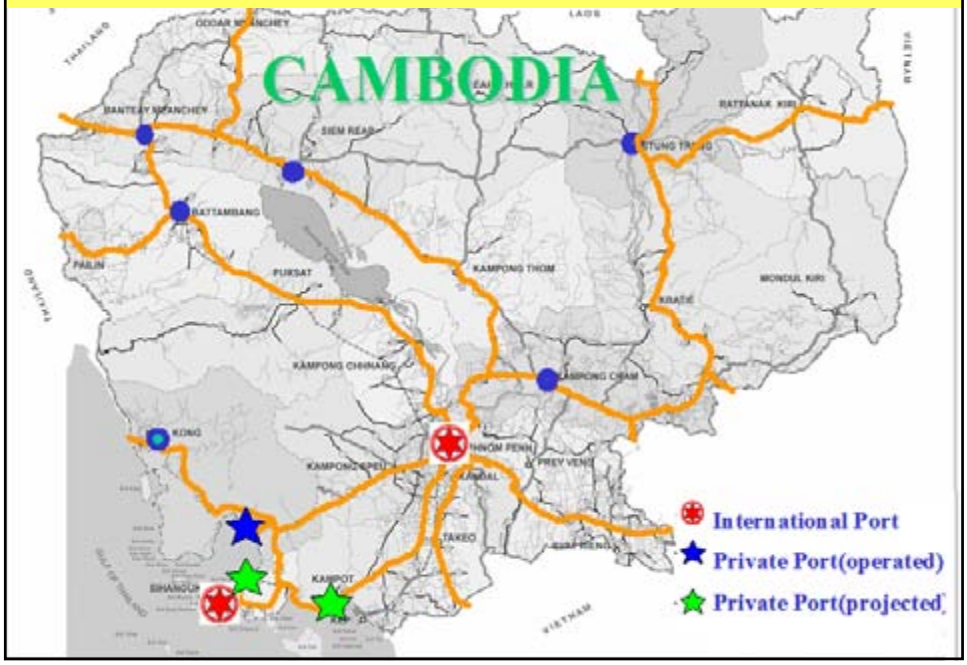
Ratanakiri Airport

Sihanoukville Airport

Rehabilitation and Upgrade the following domestic airports:

Preahvihear
Rattanakiri
Stung Treng
Koh Kong
Kratie
Kratie
Mundulkiri

8- INTERNATIONAL PORTS



9- The Development of Sihanoukville International Port

PORT'S FACILITYS :

-Container Terminal Length 400m Depth -8,30m Berths 03

-General Cargo: Length 640m Depth -7,50m Berths 05

-Passenger Terminal: Length 290m Depth -8,50m Berths 02

OIL PORT

Sokimex : Length 200m Depth -9,20m Berths 01

Pontoon : Length 110m Depth -6,50m Berths 01

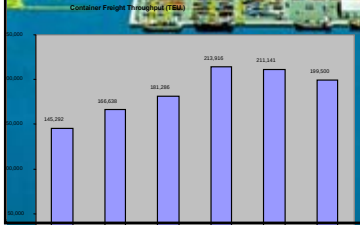
Stone Wharf : length 53 m Depth -4,20m Berths 01

YARDS :

-New Container terminal 64,000m²

-Full Container Yard 35,000 m²

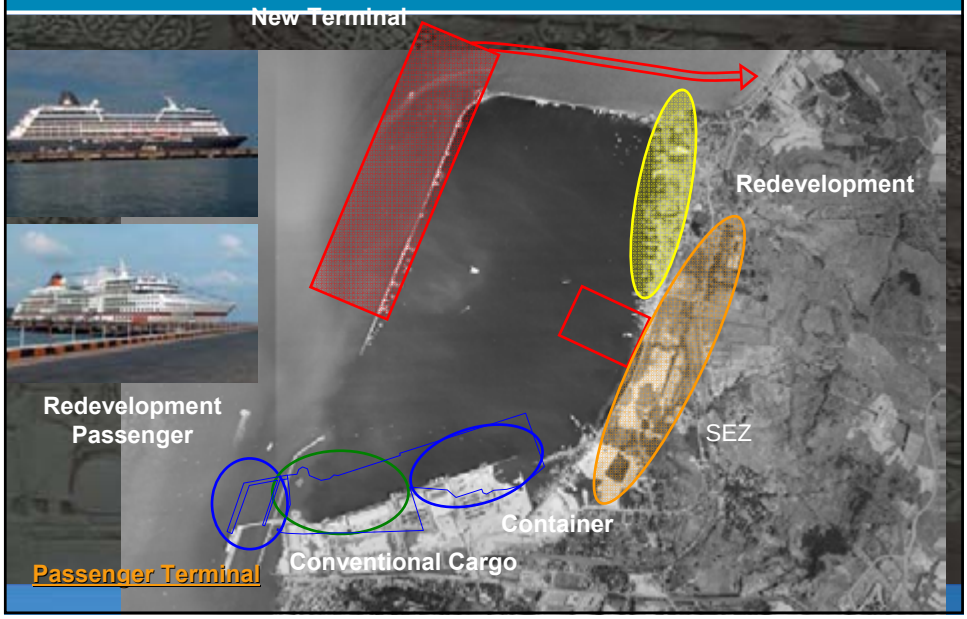
-Empty Container Yard 75,000m²



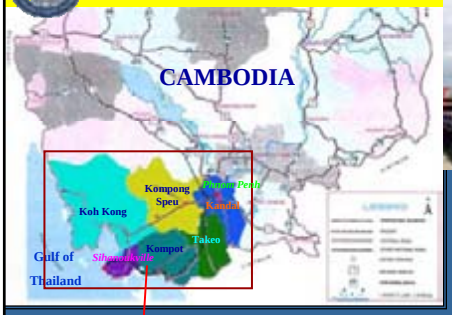
A- Capacity of 400 m of container berth :

- max. capacity of container yard [3] 7,900TEUs
- capacity per annum[3] 340,000TEUs/yr
- productivity 25 TEU. Hour /unit

Possible Development of Sihanoukville Port



Special Economic Zone



Sihanoukville Port SEZ Dev. Project
Phase I. CP-P6 2006-2009 Project Cost 3 18.000.000 ¥
Project Phase II. CP-P8 2008-2017 Proje ct Cost 3.651.000.000 ¥

Multi-Purpose Terminal

Sihanoukville Port Multipurpose Terminal Development Project 2009-2014
Project Cost 8.500.000.000 ¥
(Japan = 7.200.000.000 ¥
Cambodia = 1.300.000.000 ¥)

Passenger Terminal

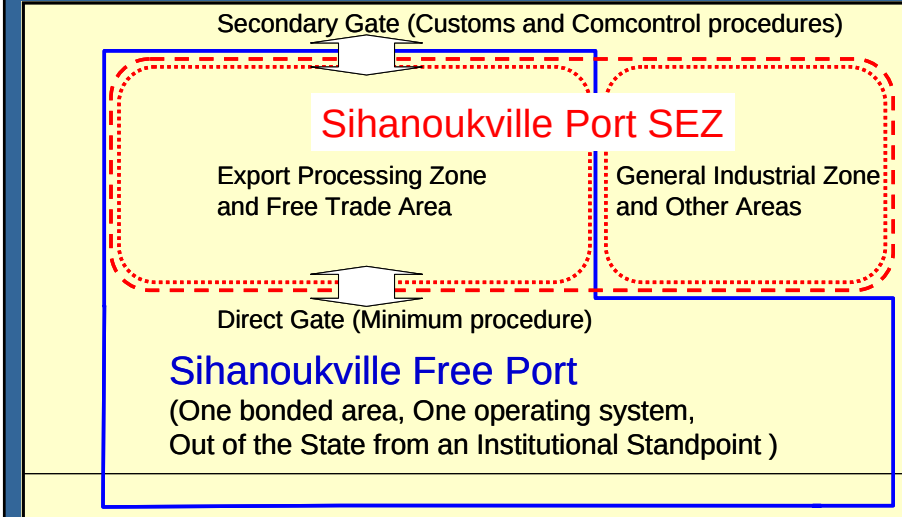
The project for improvement of old jety to passenger terminal

- Old Jety:length 290m X 2 depth -8.8m
- cost estimation ^{3} US$1,000,000
- Terminal Construction ^{3} US$500,000
- Project starting date : ^{3} in 2009
- Project completion date in 2011

Capacity and Benefit :

1- can facilitate the entry of thousand tourism;
2- can contribute to the encourage Cambodian tourism sector / non-chimney industry

Conceptual Map of Sihanoukville Free Port and SEZ



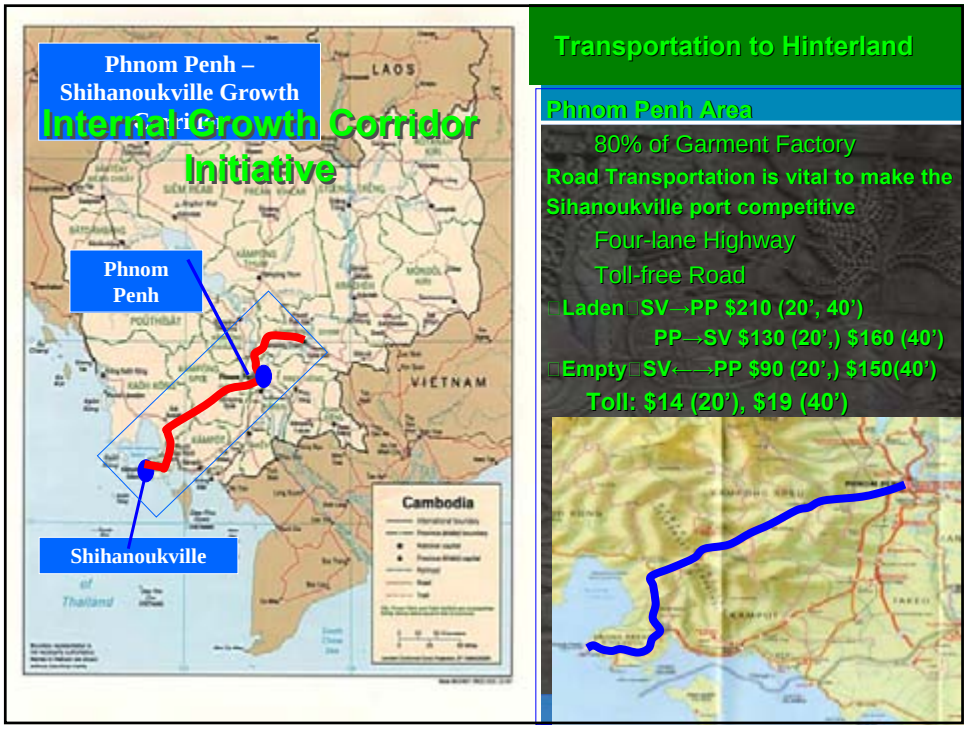
Distance to Gateway Sea Ports from Phnom Penh

Ho Chi Minh	246 km Road No.1 430 km Inland Waterway
(Cai Mep – Thi Vai)	335 km Road No.1 380 km Inland Waterway
Sihanoukville	230 km Road No.4
Laem Chabang	690 km Road No.5 (410 km to Poipet)

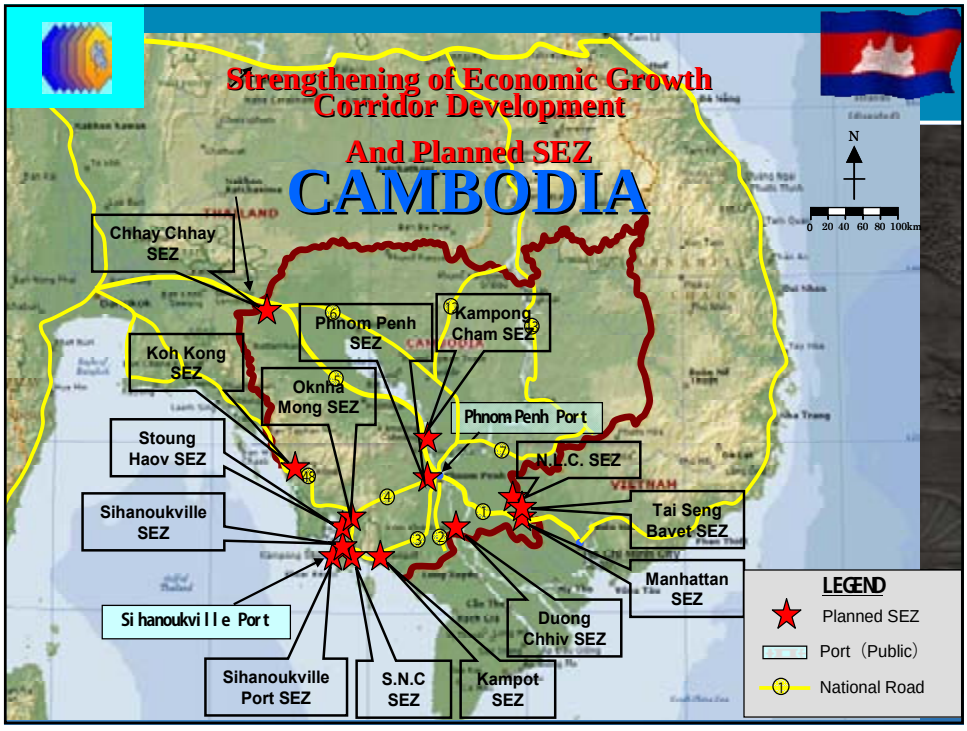
International Container Transportation Route

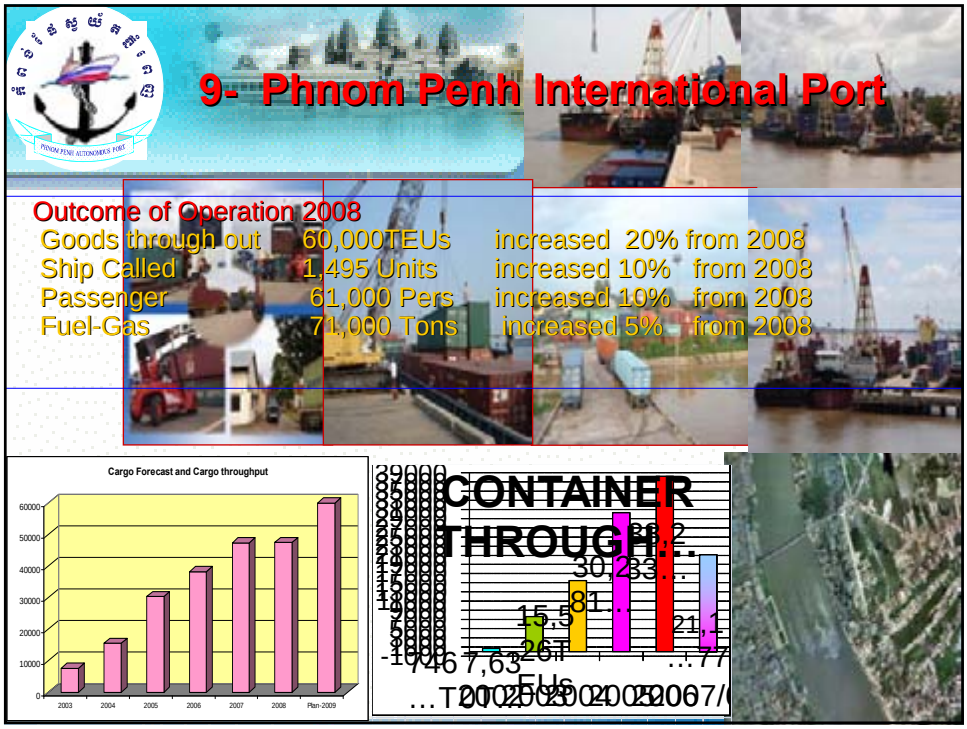
Route 1: Sihanoukville Port (including surrounding private ports)
Route 2: Phnom Penh Port (via the Mekong River and Ho Chi Minh Ports)
Route 3: Vietnamese Border (Bavet) (via Ho Chi Minh Ports)
Route 4: Thai Border (Poipet) (via Laem Chabang Port)


Hinterland of Gateway Sea Ports
LAOS
THAILAND
CAMBODIA
VIETNAM


Phnom Penh – Shihanoukville Growth Corridor
Internal Growth Corridor Initiative
LAOS
Phnom Penh
VIETNAM
Shihanoukville
Cambodia
Transportation to Hinterland
Phnom Penh Area
80% of Garment Factory
Road Transportation is vital to make the Sihanoukville port competitive
Four-lane Highway
Toll-free Road
Laden SV→PP $210 (20', 40')
PP→SV $130 (20',) $160 (40')
Empty SV←→PP $90 (20',) $150(40')
Toll: $14 (20'), $19 (40')


Strengthening of Economic Growth
Corridor Development
Planned SEZ
CAMBODIA


Strengthening of Economic Growth
Corridor Development
And Planned SEZ
CAMBODIA
N
0 20 40 60 80 100km
Chhay Chhay SEZ
Phnom Penh SEZ
Kampong Cham SEZ
Koh Kong SEZ
Oknha Mong SEZ
Phnom Penh Port
Stoung Haov SEZ
N.I.C. SEZ
Sihanoukville SEZ
Tai Seng Bavet SEZ
Manhattan SEZ
Si hanoukvi l l e Port
Duong Chhiv SEZ
Sihanoukville Port SEZ
S.N.C SEZ
Kampot SEZ
LEGEND
Planned SEZ
Port (Public)
National Road



Handling Facilities	Specification and quantity
Crane	6.5Ton: 03 Units, 16Ton: 01 Units, 25Ton: 03 Units,
	50Ton: 1 Unit, 70Ton: 1 Unit, 70Ton: 1 Unit, 80Ton: 1 Unit, 100Ton: 1 Unit,
Forklift	3.5Ton: 5 Units, 6Ton: 3 Units, 25Ton: 1 Unit
Con-stacker	45Ton: 2Unit
Sky-stacker	18Ton: 1Unit
Truck	08 Units
Trailer	for 20' container: 6Units
Tugboat	550HP 1Unit , 680HP: 1 Unit
Dredger N°1	Main engine :840HP, Auxiliary engine: 150HP Built :1966, Dredging depth: 12m
Dredger N°2	Main engine :1,200HP, Auxiliary engine: 400HP Built:1988, Dredging depth: 15m

CARGOS THROUGTH PUT AT PHNOM PENH PORT 2004-2007

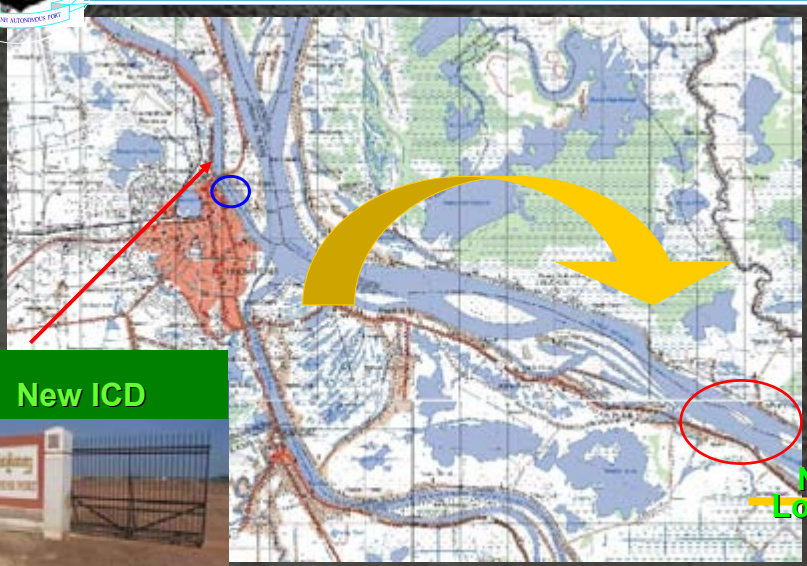
Achievement in 2008

- setting up 57 buoys and navigation aids from Phnom Penh-KaAmsamnor
- improving the security network and CCTV network;
- setting up One-Stop Service in collaboration with concerned authorities;
- extending the commercial zone for Phnom Penh Port
- opening an administration building for One Stop Service;
- opening maritime international school;

Planning in 2009

- improving the crane capacity;
- Studying and improving the price for competition;
- Improving the management quality and employee by HRD and Training
- setting up buoys and navigation aids from Phnom Penh-Kampongcham
- modernization of passenger terminal;
- study for the construction of a new container terminal;
- finalizing and conclusion of the Agreement and Protocol on Inland
- Waterway between Cambodia and Vietnam

New Port in Phnom Penh Area



10- Private Investment on Ports

11- Private Investment on Transport Sector
Investment on Road and Bridges by BOT Scheme


KAMPUCHEA SHIPPING AGENCY & BROKERS (KAMSAB)
1200
1000
800
600
400
200
0
703
805
835
886
828
381
301
828
381
301
2003
2004
2005
2006
2007
2008


Dry ports and Warehouse of Tec Srun Company
12- Facilities / Logistics Provided by 5 Dry-Ports
1-So Ngoun Dry-Port
-Two warehouses :26,000.Sqm
-Empty container Yard-25,000.Sqm
Dry ports and Warehouse of So Nguon Company
2-TWT Dry-Port
- Office/Warehouse & Yards :50,000.Sqm
3-Tech Srun Dry-Port
- NA
Teng Lay Dry ports
Cambodia CWT Dry Port
Dry ports -Warehouse of Tec MSE KPM Dry Port
4- KPM Dry-Port
- NA
5- Teng Lay Dry-Port
- NA

13- Cross-Border Transportation Facilitation

GMS Agreement on Cross-Border Transport (CBTA):
signed and ratified the GMS CBTA and 17 Annexes and 3 Protocols.
Initial Implementation on GMS CBTA (GMS IICBTA) between Cambodia and Thailand: signed:

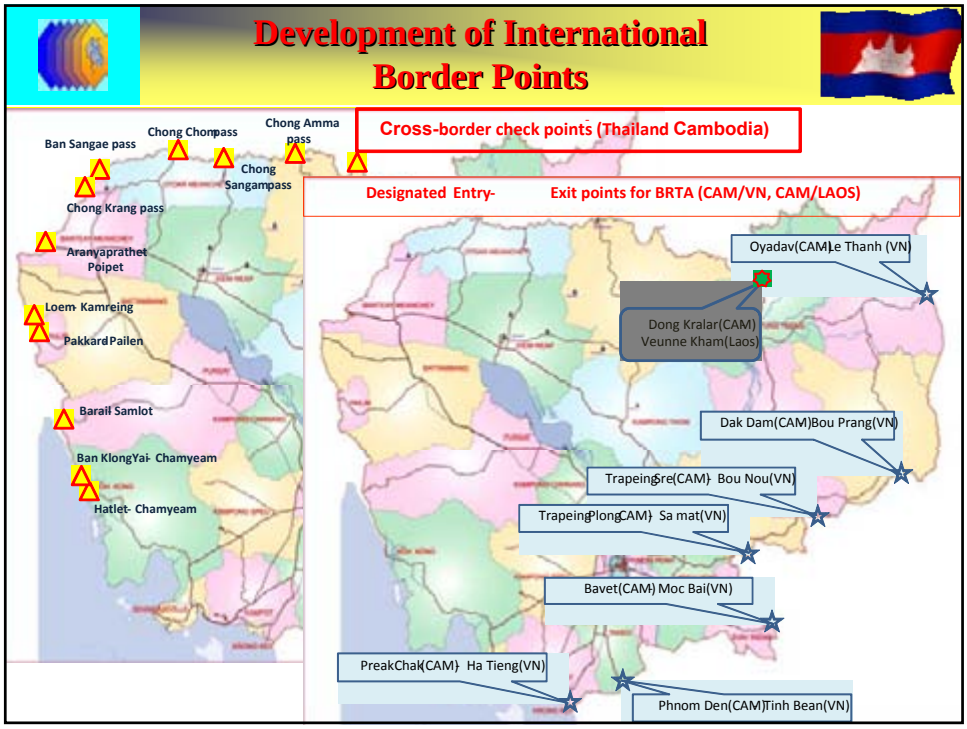
- MOU on GMS IICBTA Through the Aranyaprathet-Poipet Border Crossing Points
- MOU on the Exchange of Traffic Rigth (to allow 40 vehicles from each country to perform the cross-border transportation)
- Addendum to the MOU between on the Exchange of Traffic Rights for Cross-Border Transport Through the Aranyaprathet-Poipet Border Crossing Points. (De-Linking The MOU2 from MOU1).
- Cambodia and Thailand is plaaned to meet on 2 November 2009 : discusse detailed procedure for implementation .

Initial Implementation on GMS CBTA (GMS IICBTA) between Cambodia and Vietnam:

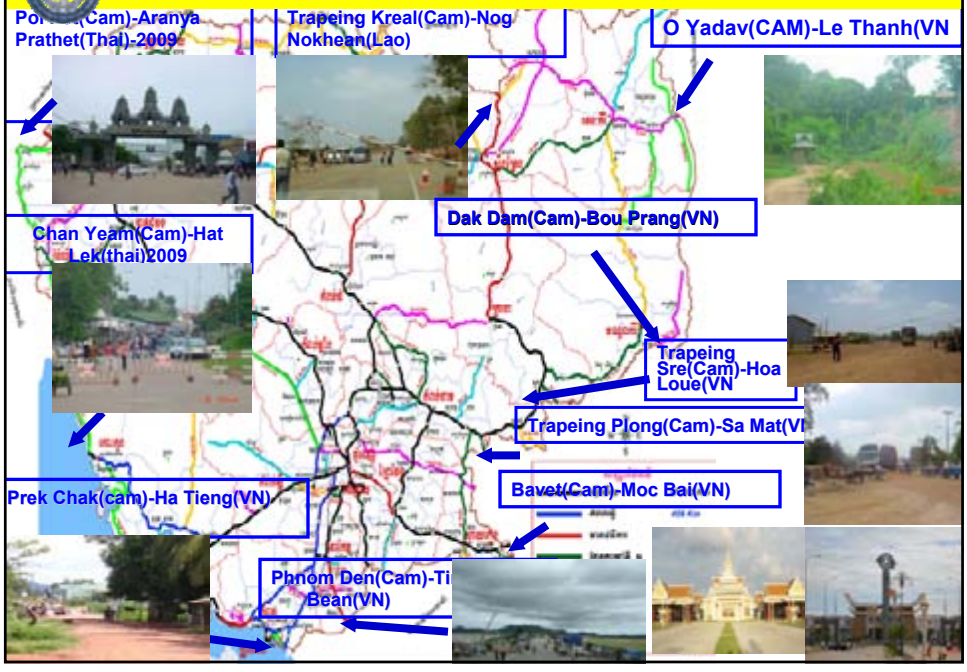
- signed MOU on Initial Implementation on GMS CBTA (GMS IICBTA) between Cambodia and Vietnam at Bavet Moc Bai border point : (MOU on GMS IICBTA).The MOU has not been implemented due to some reasons: location identification/designation and the non-existance of Common Control Area (CCA) at Bavet border-gate; and the Custom Clearance Procedure and Custom Transit System for Goods and Vehicle.
- Customs from both sides have signed MOU on cross-border procedure on ...

Implementation of Bilateral Road Transport Agreement (BRTA) between Cambodia and Vietnam :
Cambodia has signed Agreement and Protocol on Road Transportation between Cambodian and Vietnam
Allow 40 vehicles (truks and buses) to perform cross-border transportation between Cambodia and Vietnam;
More 6 border gates between two countries will open and perform cross-border transpotation;
MOU on Type and Quantity of conmercial vehicles will sign on 17 March 2009 to increased quotas from 40 to 150 vehicles;
Implementation of Bilateral Road Transport Agreement (BRTA) between Cambodia and Lao PDR :
Cambodia has signed Agreement and Protocol on Road Transportation between Cambodian and Lao PDR;
40 Trucks from each countries will perfom cross-border transportation.
Bus\Passenger services will perform saperately by partner contract between the association and company(s) of the two countries. The route, stations, prices, quota number, and other condition of the contract should be agreed upon and certify by two authorities/ministries (MPWTs);

Development of International Border Points



Main Border Gates for Implementation of Bilateral and Multilateral CBTA




• Bavet(Cam)-Moc Bai(VN)
• Prek Chak(Cam) – Ha Tieng(VN)


• Phnom Den(CAM)- Tinh Bien(VN)
• Trapeing Plong (CAM)- Xa Mat(VN)


• Trapeing Plong(Cam) – Xa Mat (VN)
• Prek Chak(Cam) – Ha Tieng(VN)


BAN KLONG YAI - CHAM YEAM
CHAM YEAM (CAM) - BAN HATLEK(THA)

TO CHONG BOK PASS AND THE EMERALD TRIANGLE

TO CHONG SA - NGAM PASS

CHONG ANMA PASS

O SMACH - CHONG CHOM PASS

THMAR DON - CHONG KRANG PASS

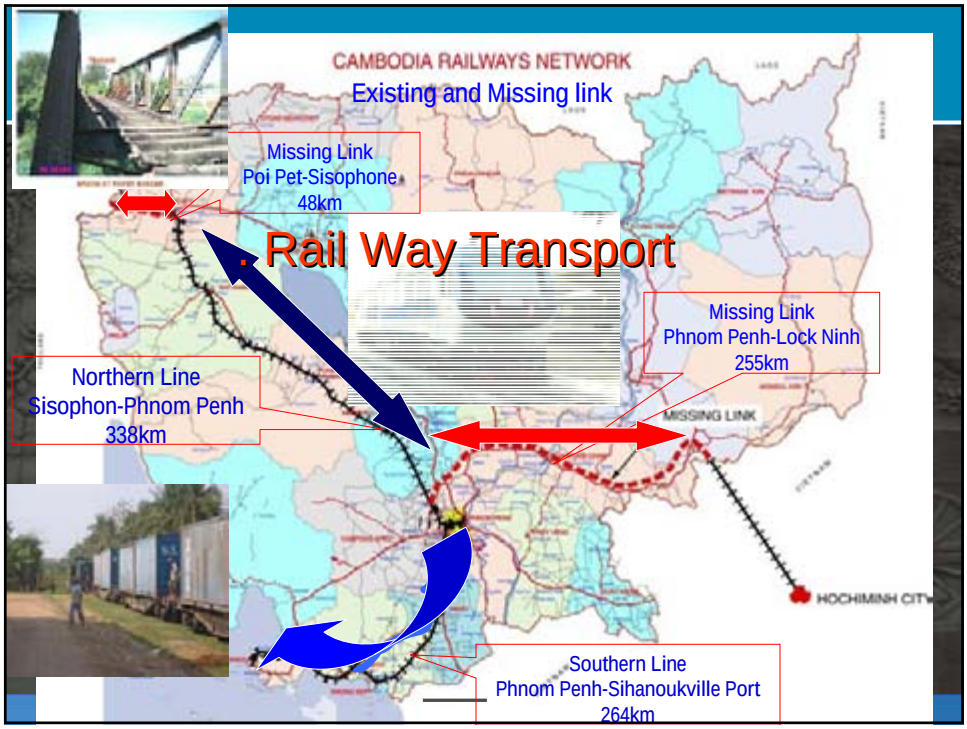
ARANYAPRATHET - POIPET

BAN LAEM - KAMRIENG

TA PHRAYA – BAN SANGAE PASS

BAN PAKKAT - PAILIN

BAN MAMUANG - SAMLOT



THANK YOU
FOR YOUR KIND ATTENTION

Greater Mekong Subregion Economic cooperation Program

13th Meeting of the GMS Subregional Transport Forum

Siem Reap City, Cambodia
27-28 October 2009

Country Reports on Transport Projects in the Vientiane Plan of Action for GMS Development, 2008-2012

Country: People's Republic of China

People's Republic of China: Country Report on Projects Included in the Vientiane Plan of Action

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
ROADS					
1.	North-South Economic Corridor International Mekong River Bridge (with financial assistance from the People's Republic of China and Thailand) *(PRC, Lao PDR, and Thailand)*		59.4	Ongoing PRC, Lao PDR and Thailand signed Memorandum of Understanding (MOU) under which PRC and Thailand agreed on a 50-50 cost sharing of the bridge. Completed detailed design in June 2008 with a grant from Thailand of about $1.2M. ADB assisting in procurement of process for civil works.	Civil works will commence in December 2009; completion is targeted by 2012.
2.	Western Yunnan Roads Development Project II *(People's Republic of China [PRC])*	Construction will commence in Oct.2010 with 4-years construction period.	1,426.0	Included in the ADB RCOBP for GMS (for a loan of $ 250 M under the 2010 pipeline) and COBP for PRC.	Preliminary works is being conducted.

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
3.	Dali-Lijiang Road Upgrading *(PRC)*	Construction works commenceby the end of 2009 with 4 years period	2,400.0	To be financed by PRC government.	Preliminary work is being conducted
4.	Baise-Debao-Longbang Expressway *(PRC)*		1,016.0	To be financed by PRC government.	To be implemented by two sections. Baise-Debao-Jingxi started construction on September 25, 2009, Jingxi to Longbang section will be started in 2010.
5.	Hechi-Baise Expressway *(PRC)*		2,012.0	To be financed by PRC government.	Feasibility study report is completed. To be started in 2010.
RAILWAY					
6.	Nanning-Kunming Railway Capacity Expansion *(PRC)*		12,900.0	To be financed partly by ADB loan and the rest by PRC Government.	Feasibility study report has been submitted to the National Development and Reform Committee
7.	Dali-Ruili Railway Line *(PRC)*	2013	2,160.0	To be financed by the PRC Government.	By August 2009, 14.2% investment has been finished
8.	Mengzhi-Hekou Railway Line *(PRC)*	2012	1,200.0	To be financed by PRC Government.	By August 2009, 5% investment has been finished.

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
PORTS/AIRPORTS					
9.	Mengzhi Airport Upgrading *(PRC)*		15.0	The proposed project has been submitted by the Yunnan provincial government for financing by the PRC government.	Ongoing
10.	Nanning International Airport Improvement *(PRC)*		126.0	Proposed to be financed by the PRC government.	Ongoing
11.	Guilin International Airport Improvement *(PRC)*		90.0	To be financed by the PRC government.	Ongoing
12.	Improvement and Maintenance of Navigation Channels along the Lancang-Mekong River *(PRC, Lao PDR, Myanmar, and Thailand)*		TBD	There are ongoing activities under the Joint Committee on Coordination of Commercial Navigation (JCCCN) on the Lancang-Mekong River, based on the Quadriparties Agreement on Commercial Navigation that was signed by PRC, Lao PDR, Myanmar and Thailand in April 2000.	Need financial assistance from ADB under GMS framework. The Chinese delegation recall the meeting that the 13th GMS Ministers' meeting held in Dali, China agreed that ADB would work out a strategic planning for water transport. Therefore ADB is requested to expedite this process.

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
				Including the Upper Mekong River Navigation Channel Improvement Project with a grant of $5M by PRC government.	
13.	Study of use of Red River for Subregional Transport			Concerned ministries and agencies in Vietnam and PRC (Yunnan province)	Proposed study to look into the feasibility of and requirements for subregional transport (similar to the role played by the upper Lancang-Mekong River)
14.	The second bridge on the Red River beween Hekou and Lao Cai	Completed in Sept.2009		Co-financed by Vietnam and PRC	
15.	Preparation of CBTA implementation Manuals for the pilot boder crossing of Mohan to Boten			Ongoing PRC and Lao PDR signed the MOU on the initial implementation of CBTA at Mohan-Boten in September 9, 2009.	ADB is requested to assist PRC and Lao PDR to draft a CBTA implementation manual for the border crossing of Mohan-Boten.
16.	Preparation for triparties' MOU among PRC, Lao PDR and Thailand for the exchange of traffic rights along the north-south economic corridor				As CBTA implementation along the EWEC among Vietnam, Lao PDR and Thailand has started from 11 June 2009, ADB is requested, in the similar way, to assist China, Lao PDR, Thailand to start the discussion of triparties' MOU among PRC, Lao PDR and Thailand for the exchange of traffic rights along the North-South Economic Corridor.

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
17.	Preparation for convening of the Third Joint Meeting of GMS National Facilitation Transport Committee				ADB is requested to make preparation for the convening of the Third Joint Meeting of GMS National Facilitation Transport Committee.
18.	Fangcheng–Dongxing (54km)	completed; but further upgrading to expressway planned	Upgraded to class 2 in 2006. Further upgrading to expressway planned	Financed by PRC government	Feasibility study report is under the review of the government; planned to start construction by end of 2009
19.	Nanning-Baise (188 km)	completed	expressway between Greater Nanning (Tanlou City) and Baise City. Assisted by ADB under the Guangxi Roads Development II project (Loan No. 2094 approved in September 2004).		Project started in June 2005 and completed in Dec. 2007

Greater Mekong Subregion Economic cooperation Program

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Siem Reap City, Cambodia
27-28 October 2009

Country Reports on Transport Projects in the Vientiane Plan of Action for GMS Development, 2008-2012

Country: Lao People's Democratic Republic

Lao PDR: Country Report on Projects Included in the Vientiane Plan of Action

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
ROADS					
1.	Border Crossing Facility at the Cambodia/Lao PDR Border (road linking National Road 7 in Cambodia and National Road 13 in Lao PDR) *(Cambodia and Lao PDR)*			Fund is sought by both sides	No progress in terms of funding. Design of Lao side border checkpoint has been finished. Single window inspection being undertaken on temporary basis.
2.	Nakhon Phanom-Khammouane Mekong Bridge *(Lao PDR and Thailand)*		38.0	Financed by Government of Thailand under Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS).	The civil works are carried out by Thai contractor (Ital-Thai). Completion is expected by 2012.
3.	North-South Economic Corridor International Mekong River Bridge (with financial assistance from the People's Republic of China and Thailand) *(PRC, Lao PDR, and Thailand)*		59.4	PRC, Lao PDR and Thailand signed Memorandum of Understanding (MOU) under which PRC and Thailand agreed on a 50-50 cost sharing of the bridge.	Financing Agreement is to be signed by PRC and Thailand during the 15th ASEAN Summit in Thailand (October 2009).

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
4.	Second GMS Northern Transport Network Improvement: Louangphrabang-Thanh Hoa *(Lao PDR and Viet Nam)*		125.0	Estimated cost of $40 M for Lao PDR section to be financed by ADB (grant of $20 M); Lao PDR ($2 M); and cofinancing ($18 M).	Section of 6A and 6B in Houaphan Province will be financed by ADB Regional Assistance. The detailed design is being carried out. The construction is expected to start 2010.
5.	Route 14A: Junction Route 16-Lao PDR/Cambodian Border *(Lao PDR)*		33.0	This road section had been identified as high priority by the Japan-assisted Study on the Southern Road Network. Cambodia is also seeking financing for the Wat Phou border section.	No funds.
6.	Route 16A: Junction Route 16-Junction Route 11 *(Lao PDR)*		34.0	This road section had been identified as high priority by the Japan-assisted Study on the Southern Road Network.	Construction of Road 16B – Section Sekong to Lao-Vietnam Border is being carried out by Lao private contractor.
7.	Bridge over Mekong between Xieng Kok and Kyaing Lap including Access Road from Tarlay-Kyainglap *(Lao PDR and Myanmar)*		34.0	Lao PDR and Myanmar are seeking financial assistance for implementation of the bridge project.	No funds.

	(1) **Project Name** *(countries involved)*	(2) **Indicative Timeline**	(3) **Estimated Cost ($M)**	(4) **Source/s and Status of Financing**	(5) **Status/Progress of Implementation**
RAILWAY					
8.	Thanaleng-Nong Khai Railway Extension to Vientiane *(Lao PDR and Thailand)*		TBD	NEDA has committed financial assistance (30% grants and 70% soft loan).	- The detailed design is being carried out by Thai Consultant (Team Consulting Engineering and Management Co., Ltd.) and is to be completed by May 2010. - The Comprehensive Study on Logistics System in Lao PDR is being carried out by JICA including Vientiane Logistic Park and is to be completed by 2010.
PORTS/AIRPORTS					
9.	Savannakhet Airport Improvement *(Lao PDR and Thailand)*		17.0	Project has been completed.	
10.	Da Nang Port Upgrading Phase 2 *(Viet Nam)*		TBD	Proposed for JBIC financing, but no confirmation has been obtained from the latter yet.	
11.	Improvement and Maintenance of Navigation Channels along the Lancang-Mekong River *(PRC, Lao PDR, Myanmar, and Thailand)*		TBD		

Lao PDR: Other Projects[1] that Government May Consider as High Priority

	(1) Project Name *(countries involved)*	(2) Indicative Timeline	(3) Estimated Cost ($M)	(4) Source/s and Status of Financing	(5) Status/Progress of Implementation
ROADS					
1.	Luangnamtha-Oudomxay-Pakmong	2011-15	60	Credit from PRC	Section Luangnamtha-Oudomxay is under detailed design stage. Construction is expected to start by 2012.
2.	Houaphan-Louanphrabang	2011-15	60	ADB-RETA and loan from ADB	Detailed design is expected to start by 2012 and construction might be around 2013.
RAILWAY					
1.	Vientiane-Lak Sao Et Industrial Zone	2012	50	To be sought from PRC	

[1] Not included in the Vietiane Plan of Action For GMS Development (2008-2012)

13th Meeting of the GMS Subregional Transport Forum

Siem Reap City, Cambodia
27-28 October, 2009

Country Report on Transport Projects in the Vientiane Plan of Action (Myanmar)

Presented by
Thant Sin Maung
General Manager (Planning & Admin.)
Myanma Railways.

Part . I

Projects Included in the Vientiane Plan of Action

For GMS Development, 2008-2012

GMS CORRIDORS & Proposed Deep Sea Port

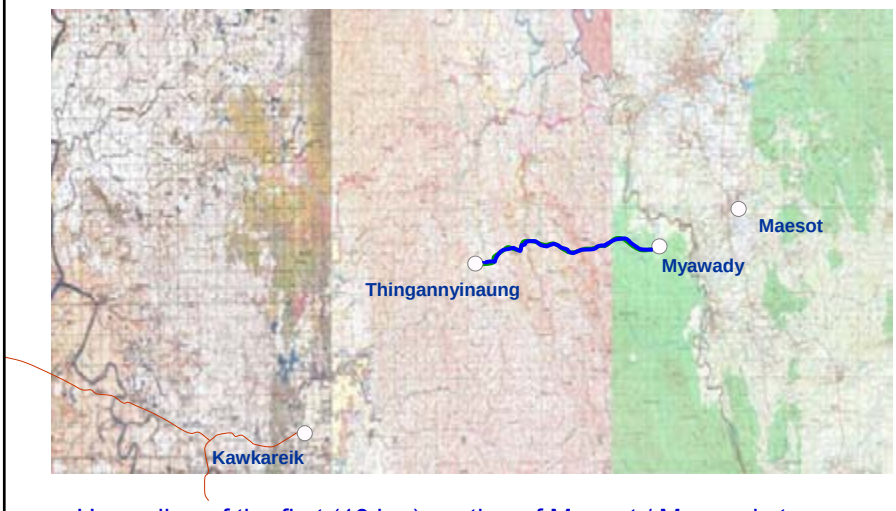
1. TRN . 021

East – West Economic Corridor

Thinganyinaung - Kawkareik

(Myanmar)

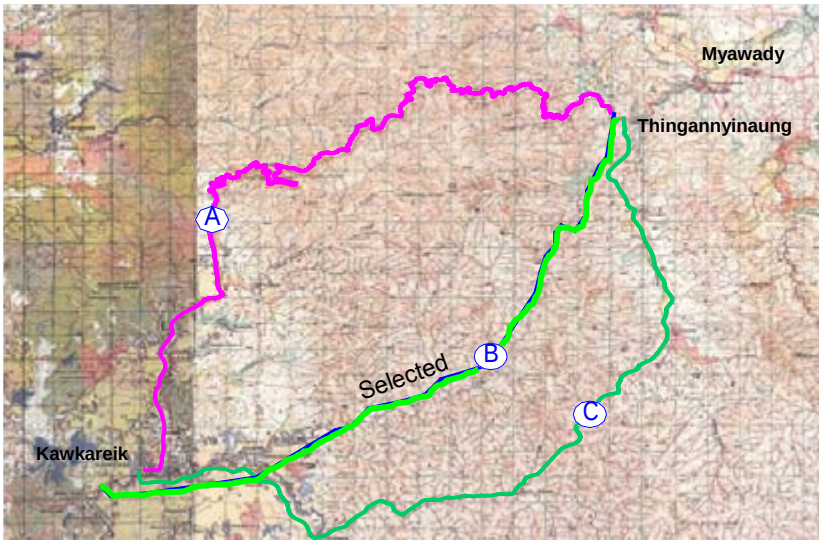
Myawady – Thingannyinaung Upgraded Portion



Upgrading of the first (18 km) section of Maesot / Myawady to Thingannyinaung, with grant aid of Thai Government, was completed in June 2006.


AH1
AH1 at Myawady
19/04/2007

Thingannyinaung – Kawkareik New Alignment



This project involves construction on the new alignment between Thingannyinaung and Kawkareik.Detailed design was completed in 2008 with Thailand's grant of about Baht 15 m.

2. TRN . 024

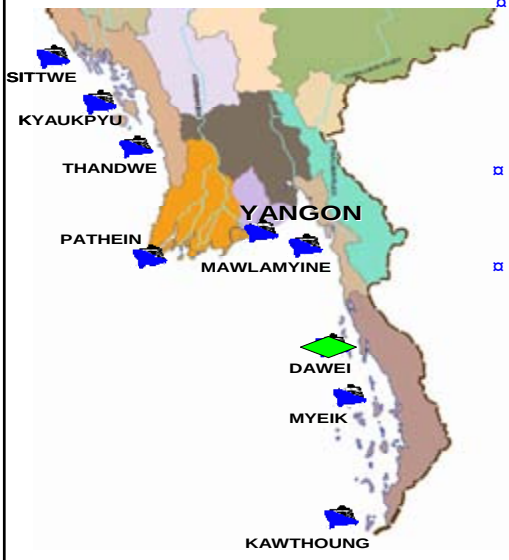
Bridge over Mekong betweenXiengkok and Kyainglap including Access Road from Tarlay to Kyainglap (Lao PDR and Myanmar)

*** Construction of suspension bridge has been proposed**

*** The access road from Tarlay- Kyainglap (Myanmar side) is under Construction**

*** Lao PDR & Myanmar are seeking financial assistance for Construction of the bridge.**

3. TRN . 038 Dawei Deep Sea Port and Road Link to Thailand.



- Just after signing of MOU, between Italian–Thai Development Public Co., Ltd (ITD) and Myanmar Port Authority (MPA), ITD dispatched a survey team to conduct soil exploration and survey works at the project site in Dawei area.
- Survey works along the road link between Dawei and Thailand are yet to be conducted within this year.
- ITD will carry out the following program for development of the project after full completion of pre - engineering works: -
  - (a) A preliminary engineering design and a feasibility study
  - (b) An environment impact assessment
  - (c) To submit project proposal to the Government of the Union of Myanmar for receiving of permission

This project includes the following works

(1) Development of a new deep sea port

(2) Ship building and maintenance service facility

(3) Industrial estate

(4) Petrochemical complex

(5) Oil refinery

(6) Steel mill

(7) Hydropower project

(8) Road and railway link between Dawei and Bangkok

(9) Oil pipe line and etc

4. TRN. 040

Improvement and Maintenance of Navigation Channels along the Lancang – Mekong River (PRC, Lao PDR, Myanmar, and Thailand)

The improvement for Khon Phi Laung shoal located at the border of Laos and Thailand is under negotiation between these two sides. Only after the two sides have agreed, the project can be continued.

(1) **Wanpung Port (Ramp type jetty)**
- (i) Length is 170m;
- (ii) lowest water level in dry season is 3m;
- (iii) 300 Ton vessels can berth:

(2) **Soploi Port (Ramp type jetty)**
- (i) length 200m;
- (ii) lowest water level in dry season is 3m;
- (iii) 300 Ton vessels can berth;

Part . II

Other Project that Government may consider as High Priority

Other Project that Government May Consider as High Priority
China-Myanmar missing Rail link (Lashio-Muse-Rueli)

* **Conducted by** 2nd Railway Survey and Design Institute, 2005.
* **The scope of the study**
  A metre-gauge railway line
  Lashio-Muse-Rueli (141.88 km)
  (Change of Gauge)
* **Route Description**
  32.93 km (60 major and medium bridge) 23%
  52.37 km (51 tunnels) 37%
  56.58 km Rolling 40%
* **The investment cost**
  479.47 mil USD (RMB 3598 mil Yuan)
* **Demand Forecast in 2030**

	Total Trade Volume	Total Transport Volume
Myanmar-China	8.9 mil (USD)	10.3mil tons
Myanmar-Southwest China	5.2 mil (USD)	6.28mil tons
Sino-Myanmar Railway Freight Volume	➔	4.5 mil tons

* **Financial & Economic Evaluation**
  # FIRR < 0
  # Repayment period of investment > 25 yrs.
  (RMB 0.10/person-km, RMB 0.10/ton-km)

If the calculation scope extends to Mandalay
FIRR = 0.57 %
Repayment period of investment = 24.61 yrs.
EIRR = 10.87

? Waiting for financial assistance

Other Project that Government May Consider as High Priority
China-Myanmar missing Rail link (Lashio-Muse-Rueli)

- **A part of TAR – S1**
  (Kunming – Frankfurt , 13500 km)
- **A route of SKRL.**
- **A project of highly prioritized proposal**
  (The strategic plan of China-ASEAN transport development)
- **Closed relation between China Railways & Myanma Railways.**

Part . III

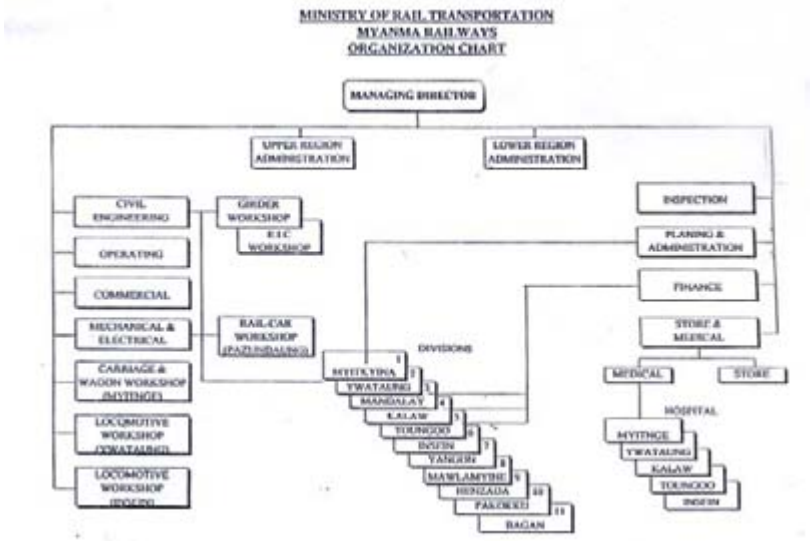
Myanma Railways

and

GMS Railways Strategy Study

1. Existing infrastructure, organization and operation

Organization



Existing Infrastructure

(a) Track

Item	Length		Remarks
	Mile	Km	
Single line Route Mile	2823.05	4516.88	Rails Wt:
Double line Route Mile	415	664	Rails 75 lb RBS Rails 60 lb RBS
Total Route Mile	3238.05	5180.88	Rails 60 lb BS
Total Track Mile	4326.9	6923.04	Rails 50 lb ANSC

(b) Major Facilities & Equipment

Description	Number
Number of Stations	821
(a) Block Stations	480
(b) Wayside Stations	341
Tunnels	12
Bridges	10421
Buildings	21191
Plant & Machinery	675
Wooden Sleeper	7612537
P.C Sleeper	2845074
Yangon Circular Line (Route Mile)	29.50 mile
(Route Kilometre)	(47.52 km)

(c) Motive Power & Rolling Stock

(i) Locomotive Fleet

Type	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
Steam Locomotive	39	39	37	37	37
Diesel Locomotive					
(a) Diesel Electric	196	200	207	228	243
(b) Diesel Hydraulic	96	97	100	100	100
Total:-	292	297	307	328	343
Grand Total:-	**331**	**336**	**344**	**365**	**380**

(ii) Number of passenger coaches

Type	2004-05	2005-06	2006-07	2007-08	2008-09
Upper Class	244	244	297	311	325
Ordinary Class	636	611	651	651	638
Mail Vans	18	16	14	14	14
Brake Vans	82	102	102	102	99
Restaurants	9	9	17	17	17
Others	141	123	116	116	116
Total:-	1130	1105	1197	1211	1209

(iii) Number of Freight Wagons

Type	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
Covered Wagon	1562	1414	1333	1290	1290
Open Wagon Low Sided	632	607	576	575	575
Open Wagon High Sided	420	416	400	398	398
Timber Wagon	646	588	559	547	547
Tank Wagon	233	233	233	233	233
Brake Van	97	97	94	95	95
Others	118	116	109	111	114
Total:-	**3708**	**3471**	**3304**	**3249**	**3252**

(d) Railways Service

Train Type	Nos of Train per day (2008-2009)
Passenger Trains	
Express	42
Mail & Others	30
Mixed	66
Rail Bus	72
Total	210
Yangon Suburban Trains	200
Freight Trains	18
Total Trains	**428**

(e) Traffic Volume

Passenger and Freight Traffic

(Million)

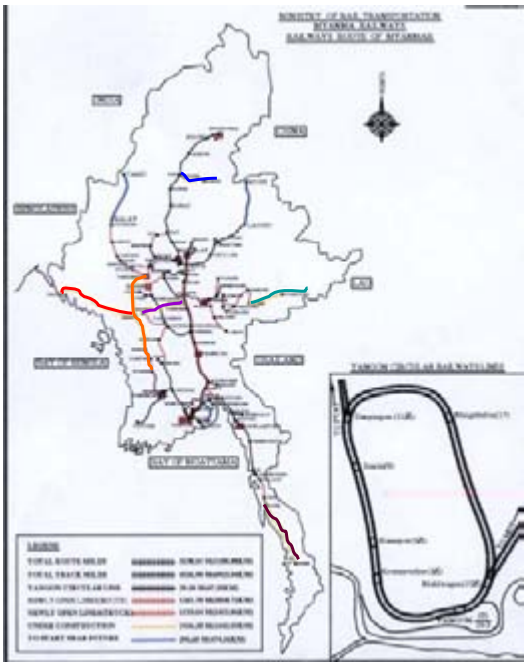
Classification	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
No. of Passenger					
Main	32.77	36.66	38.088	36.731	34.587
Suburban	25.45	32.61	34.62	39.228	38.974
Total	58.22	69.27	72.708	75.959	73.561
Passenger Mile	2604	2969	3297	33784	33489
Ton Carried	2.88	2.88	2.82	2.93	2.95
Ton Mile	544.60	570.10	551.10	535.40	569.91

(f) Financial Statement(Operating Ratio)

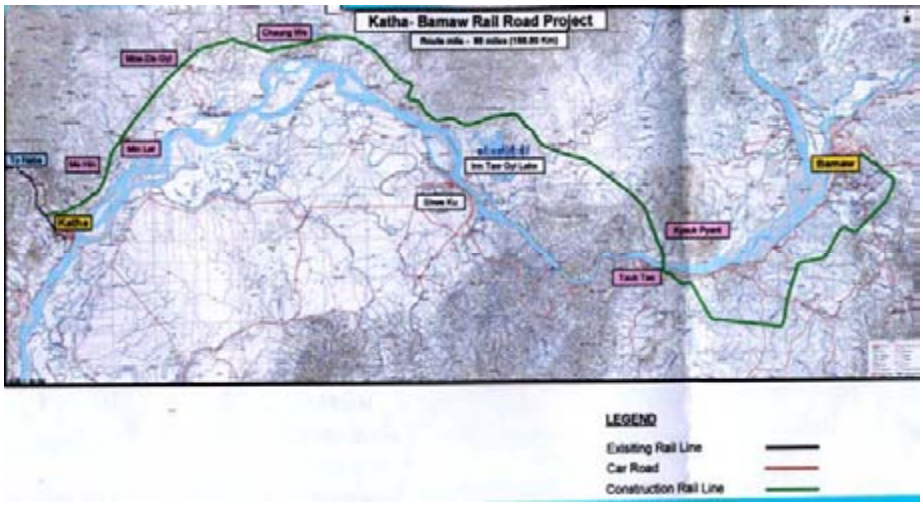
(Kyats in million)

Classification	Actual			
	2005-06	2006-07	2007-08	2008-09
REVENUE				
- Passenger	15747.89	18510.44	20433.62	20541.15
- Goods	5214.64	4867.70	4625.82	5469.13
- Others	1695.27	1794.87	2196.40	2052.23
Total Revenue	22657.80	25173.01	27255.84	28062.51
EXPENSES				
- Operating expenses	20853.35	37677.07	43635.92	49425.02
- Interest.	17.35	24.24	27.68	23.57
Profit & Loss on foreign Exchange.	(-)1.23	1.49	(-)6.98	-
Total Expenses	20869.47	37702.80	43656.62	49448.59
- Operating Ratio. (without interest)	92.03%	149.68%	160.07%	176.12%
- Operating Ratio.(with interest)	92.11%	149.77%	160.17%	176.21%
- Tax	536.50	-	-	-

2. Expansion of national railways network



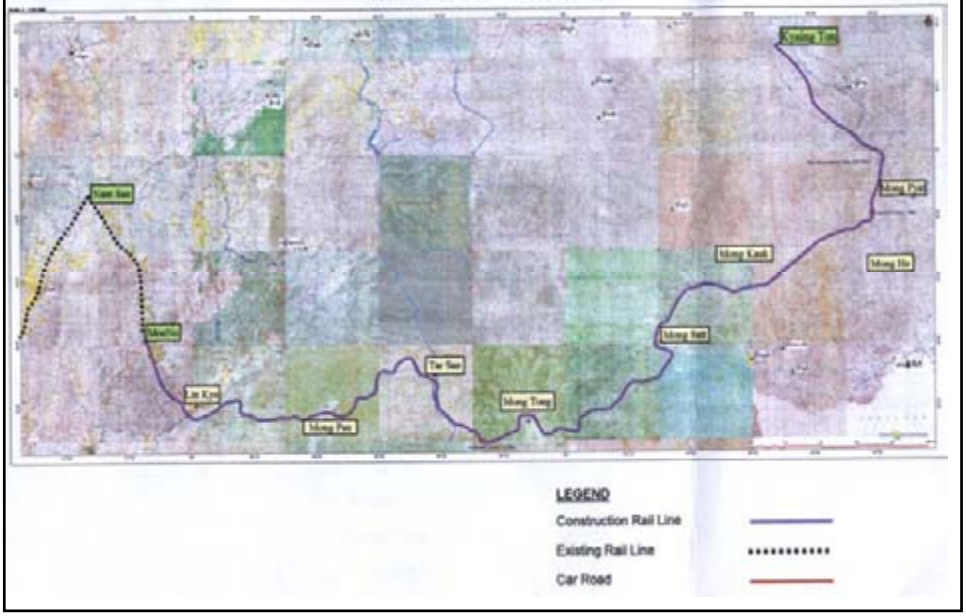
(1) Kyangin – Pakkoku	512.00 km
(2) Katha – Bamaw	156.80 km
(3) Dawei – Myeik	212.00 km
(4) Moene – Kyaingtong	361.60 km
(5) Pyawbwe – Magwe	152.00 km
(6) Minbu – Sittway	411.20 km
Total	1805.60 km


Katha- Bamaw Rail Road Project
Katha
Bamaw
LEGEND
Existing Rail Line
Car Road
Construction Rail Line


Dawei-Myeik Rail Road Project
Route Mile – 132.5 mile (212 Km)
Dawei
Tha Yet Chaung
Pyin Phyu Gyi
Myeik
Tha Mouk

Moe Ne – Kyaing Ton Rail Road Project

Route Mile – 226 Miles (361.60 Km)



LEGEND

Construction Rail Line

Existing Rail Line

Car Road

PyawBwe – NatMauk – Magwe Rail Road Project

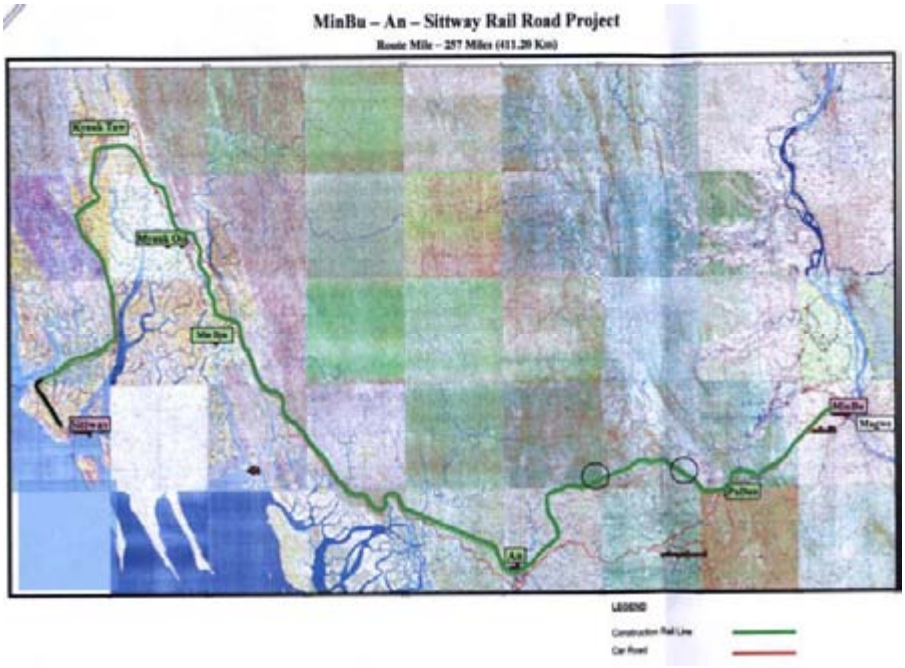
Route Mile – 95 Miles (152.0 Km)

LEGEND

Existing Rail Line

Construction Rail Line

Car Road

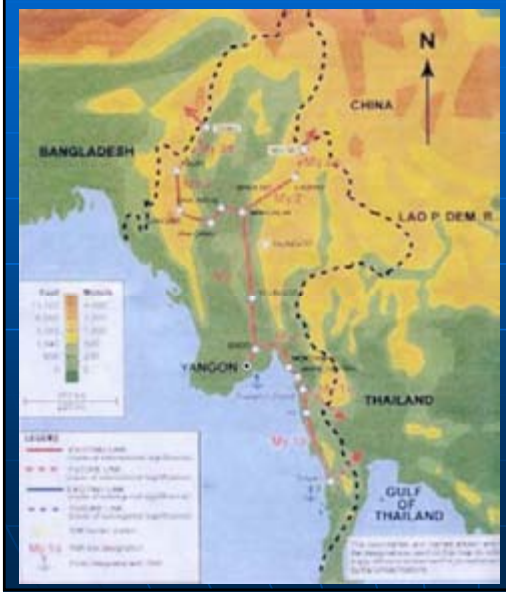


Expansion of MR National Network

Particular	1988/89	Up to end of July, 2009	Under Construction	
Route-km	3162.16 km	5199.22 km	(1) Kyangin - Pakkoku	512.00 km
			(2) Katha - Bamaw	156.80 km
			(3) Dawei - Myeik	212.00 km
			(4) Moene - Kyaingtong	361.60 km
			(5) Pyawbwe - Magwe	152.00 km
			(6) Minbu - Sittway	411.20 km
			Sub - total	1805.60 km
Track - km	4470.17 km	6942.24 km		2100.00 km

3 . Cross – border railways connections

Railway Lines of International Importance in Myanmar



Existing lines

Mandalay-Yangon = 617 km

Mandalay-Lashio = 313 km

Mandalay-Kalay = 539 km

Bago-Thanbyuzayat = 270 km

Missing lines

Kalay-Tamu = 127.4 km**

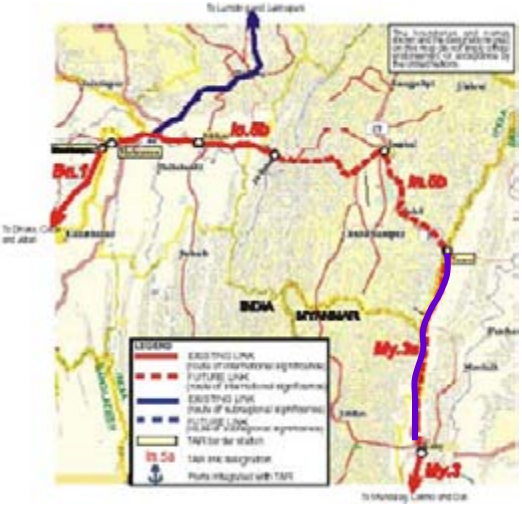
Lashio-Rueli = 141.8 km**

Thanbyuzayat-Three Pagoda Pass = 110 km**

** The route lengths of missing lines are referred from feasibility reports

Summary of Feasibility Studies

(a). Indian-Myanmar Rail link (Kalay-Tamu)



* **Conducted by** RITES Ltd. 2004-2005
* **The scope of the study**
  - **New rail link**
    (i) Jiribam-Moreh (219 kms) India
    (ii) Tamu-Kalay (127.4 kms) Myanmar
  - **Rehabilitation of existing line**
    Kalay-Mandalay (513 kms) Myanmar
* **The construction cost of the project**
  # Tamu-Kalay ➔ 97.68 mil USD. (new line)
  # Kalay-Mandalay ➔ 162 mil USD. (Rehabilitation)
* **Freight Demand Forecast**
  2.48 mil tons in 2027-28
* **The Financial Analysis**
  Jiribam-Moreh (-) 1.7%
  Tamu-Kalay (-) 1.2%
  Combined (-) 1.3%
  Under optimistic scenario, FIRR could improve to (-) 0.6%

*** Comparison of transport between Yangon & New Delhi**

	Without Project	With Project
Transit time	22 days	9 days
per TEU cost	2000 USD	800 USD

(b). China-Myanmar Rail link (Lashio-Muse-Rueli)

* **Conducted by** 2nd Railway Survey and Design Institute, 2005.
* **The scope of the study**
  A metre-gauge railway line
  Lashio-Muse-Rueli (141.88 km)
  (Change of Gauge)
* **Route Description**
  32.93 km (60 major and medium bridge) 23%
  52.37 km (51 tunnels) 37%
  56.58 km Rolling 40%
* **The investment cost**
  479.47 mil USD (RMB 3598 mil Yuan)
* **Demand Forecast in 2030**

	Total Trade Volume	Total Transport Volume
Myanmar-China	8.9 mil (USD)	10.3mil tons
Myanmar-Southwest China	5.2 mil (USD)	6.28mil tons
Sino-Myanmar Railway Freight Volume	➔	4.5 mil tons

* **Financial & Economic Evaluation**
  # FIRR < 0
  # Repayment period of investment > 25 yrs.
  (RMB 0.10/person-km, RMB 0.10/ton-km)

If the calculation scope extends to Mandalay
FIRR = 0.57 %
Repayment period of investment = 24.61 yrs.
EIRR = 10.87

(c). Thailand-Myanmar Rail link (Thanbyuzayat-Three Pagoda Pass)

* **Conducted by** KOICA
  2005-2007
* **The scope of the study**
  # Thanbyuzayat-Three Pagoda Pass (110 km)
  (Myanmar)
  # Three Pagoda Pass-NamTok (153 km)
  (Thailand)
* **The construction cost for Myanmar side**
  246.171 mil USD.
* **Total Traffic Demand Forecast**

In the case of medium demand scenario;

	2017	2027	2037
Freight ton	0.7 mil	3.1 mil	5.7 mil
Passenger	0.06mil	0.2 mil	0.5 mil

* **Economic Evaluation**

In the case of the medium demand scenario
B/C ratio = 0.74
EIRR= 8.1% < discount rate 12%
The project is not viable economically.

Financial Evaluation
For the medium scenario, FIRR = 0.4%

Construction cost for missing links

Sr	Missing link	Distance	Construction Cost (USD mil)
(a)	Kalay-Tamu	127.4 km	97.68
(b)	Lashio-Muse	141.9 km	479.47
(c)	Thanbyzayat- Three Pagoda Pass	110 km	246.00
	Total		823.15

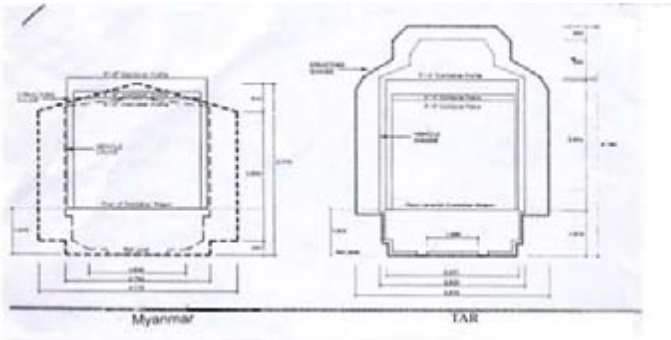
The cost of rehabilitation (or) up-gradation of the existing railway lines

Link	Distance	Estimated Cost (USD mil)	Reported by
Mandalay-Kalay	513 km	162.	RITES. Ltd.
Yangon-Mandalay Bago-Moktama	617 202 } 819 km	41	UNESCAP (1999)
Mandalay-Lashio	313 km	704	UNESCAP (1999)
Total		907	

4. Technical & Operational obstacles

(a) Compatibility with technical standards of TAR

Comparison of clearance (Vehicle gauge & Structure gauge)



	MYANMAR		TAR	
	Width	Height	Width	Height
Vehicle gauge	2,590 mm	3,429 mm	2,820 mm	3,950 mm
Structure gauge	3,770 mm	3,770 mm	3,810 mm	5,100 mm

(b) Axle load and other technical standard

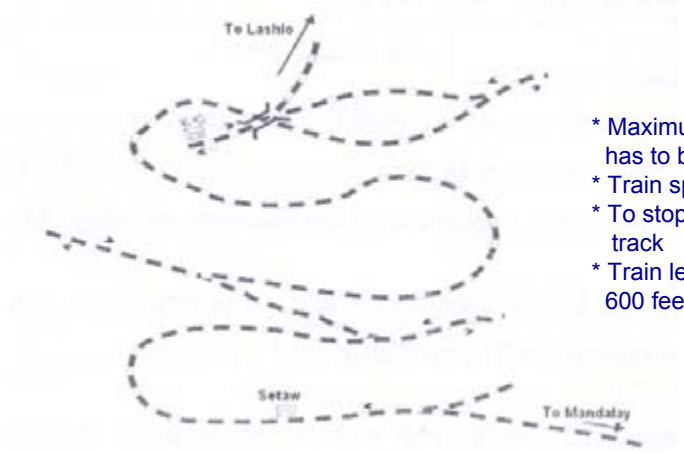
Item		TAR	MR
Target speed	Freight	80 km/hr	48 km/hr
	Passenger	120 km/hr	68 km/hr
Radius of Curvature	Rolling	800 m	200 m
	Mountainous	150 m	
Maximum Gradients	Rolling	1.00%	1.00%
	Mountainous	1.20%-1.25%	4.00%
Track Structure	Rail section	UIC 54	37 kg/m
	Sleeper	P.C	P.C W.S
	Depth ballast	250 mm	120 mm
Axle load		20 ton	12.5 ton

(c) Number of bridges along the railway lines of International Importance

Section	Number of bridges			no. of bridges over headed truss girder
	<30 m	≥30 m	subtotal	
Yangon-Mandalay	900	61	961	19
Mandalay-Kalay	514	26	540	10
Mandalay-Lashio	713	10	723	-
Bago-Thanbyuzayat	230	28	258	7
Total	2357	125	2482	36

GOKHTEIK VIADUCT

erected by an American Firm in 1900.
2200 feet long and the height of the tallest pier is 320 feet.
suffered severe damage during the World War II and was built in 1951.

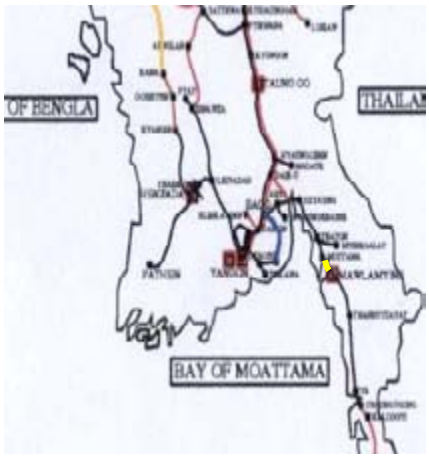


Four Reversing
(Mandalay-Lashio)

* Maximum permissible load has to be reduced to 220 tons
* Train speed is very low.
* To stop and start at the sand track
* Train length not more than 600 feet.

5. Before linking International railway lines Preparations and measures undertaken by Myanma Railways

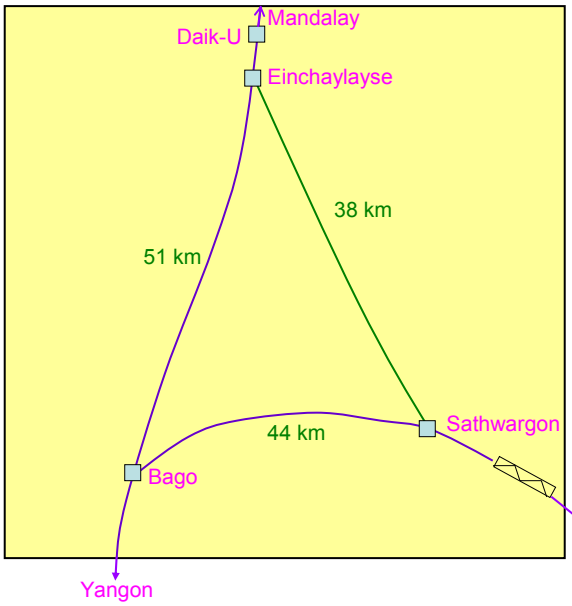
(a) Construction of Thanlwin rail-cum-road bridge



Length of Bridge = 3.528 km

Completed in 2006

(b) Construction of direct railway Linkage to Mandalay trunk line

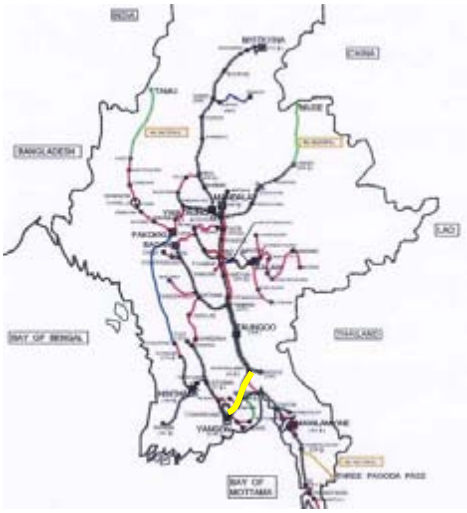


By constructing a new railway link of 38 km which connects Bago – Mawlamyine rail line to Yangon–Mandalay rail line, a train from Thailand can run directly to Mandalay without passing Bago. This new bypass shortened the Mawlamyine – Mandalay rail route mile by 57 km.

(c) Construction of double track on Yangon-Mandalay line

* Yangon-Kyidaungkan and Mandalay-Myohoung sections had been already double tracked
* The rest line Kyidaungkan-Myohoung (240 km in length) was completed in November, 2007.
* So the whole (Yangon-Mandalay) main line has been double tracked.

(d) Upgradation of track on Yangon-Nyaunglaybin



MR received a soft loan USD 10 million from OPEC fund.
MR purchased a tamping machine & a Flash-butt welding machine.
Along this section, the short-welded rails are being laid.
MR set up a P.C sleeper plant which can produce 150,000 per year.

(e) Rehabilitation of track on Bago-Mawlamyine-Thanbyuzayat-Ye line

This project was being undertaken with the following works:

- Renewal of 75 lb/yd rails in place of existing 60 lb/yd rails.
- Installation of P.C sleepers.
- Filling ballast to be thickness of 100 mm to 150 mm.
- Purchasing an another P.C sleeper plant to be built at Moktama (by Indian loan)

The completion period will be extended to 2010 because of financial constraints.

(f) Up-gradation of signalling and telecommunication system along Yangon-Mandalay trunk line

The following works will be undertaken:

- To lay Optic Fibre cable along Yangon-Mandalay line
- To install the double line token- less block instrument with axle counter.
- To adopt interlocking system at some major stations along this line.
- To fix colour light signal at some stations along this line.
- To improve train control system on this line.

The project commenced in 2006 and will be completed in 2010.

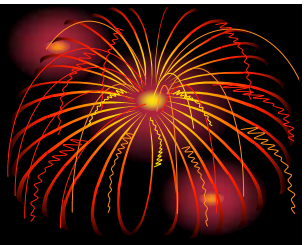
Prioritization

1. Expansion of domestic railway network.
2. Rehabilitation (or) Up-gradation of existing network.

Within our own resources.

3. Construction of cross-border missing links to the neighbouring countries.

(by financial & technical assistance)



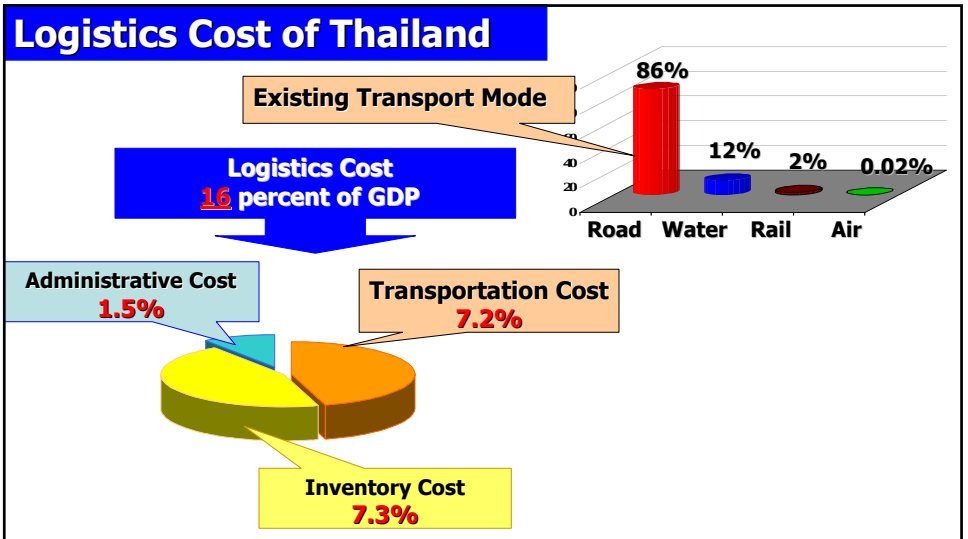
Thank you for your kind attention.

Thailand Country Report on 13th Meeting of the GMS Subregional Transport Forum (STF)

Existing Infrastructure

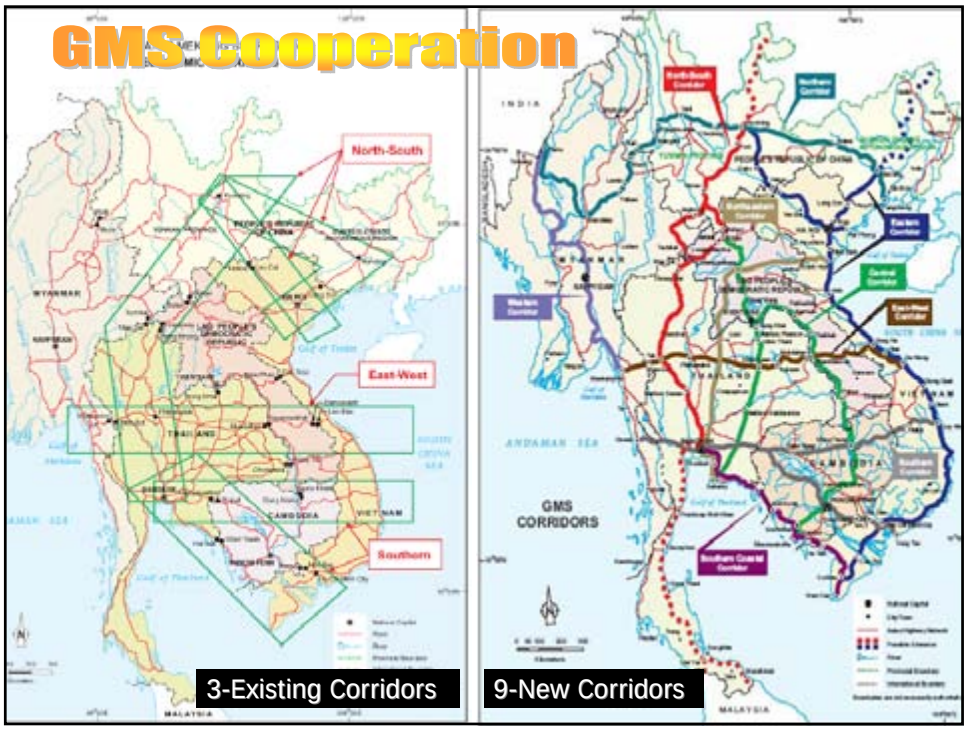
National Highways	National highways Motorways & Expressways	51,297 km. 450 km.
Rural Roads	DOR-constructed Local administration	42,500 km. 107,500 km.
Waterways	Coastline IWT	2,614 km. 2,583 km.
Rail tracks	Single track Double tracks Triple Track	3,698 km. 173 km. 107 km.
Airports	International airport Domestic airport	6 31

Logistics Cost of Thailand



Mission

- Waterways and Rail as main Transport mode , Road as Feeders
- Double Track Development in suitable long loop routes
- Hub & Spoke Development



GMS Road Projects in Thailand

North-South

R3: Chiang Rai - Kunming Road Improvement via Myanmar and Lao PDR

East-West

R2: Myanmar - Thailand - Lao PDR - Viet Nam (East - West Corridor) Project

Southern

R1: Bangkok - Phnom Penh - Ho Chi Minh City - Vung Tau Road Improvement Project

R10: Southern Coastal Corridor Project

Infrastructure Development

Roads

- Project included in Vientiane Plan of Action
  1. Nakhon Phanom - Khammouane Mekong Bridge
  2. Highway 1020, 1152 Expansion Project
  3. NSEC bridge (Chiang khong/Houayxay)
  4. Highway 1016 Expansion project
  5. Highway 1290 Expansion Project
  6. Mae Sot - Mukdahan Highway Expansion Project
  7. GMS Highway expansion project
- Other projects that may consider as high priority
  2. Highway 1129 Expansion Project
  3. Thingannyinaung - Kawkareik road construction

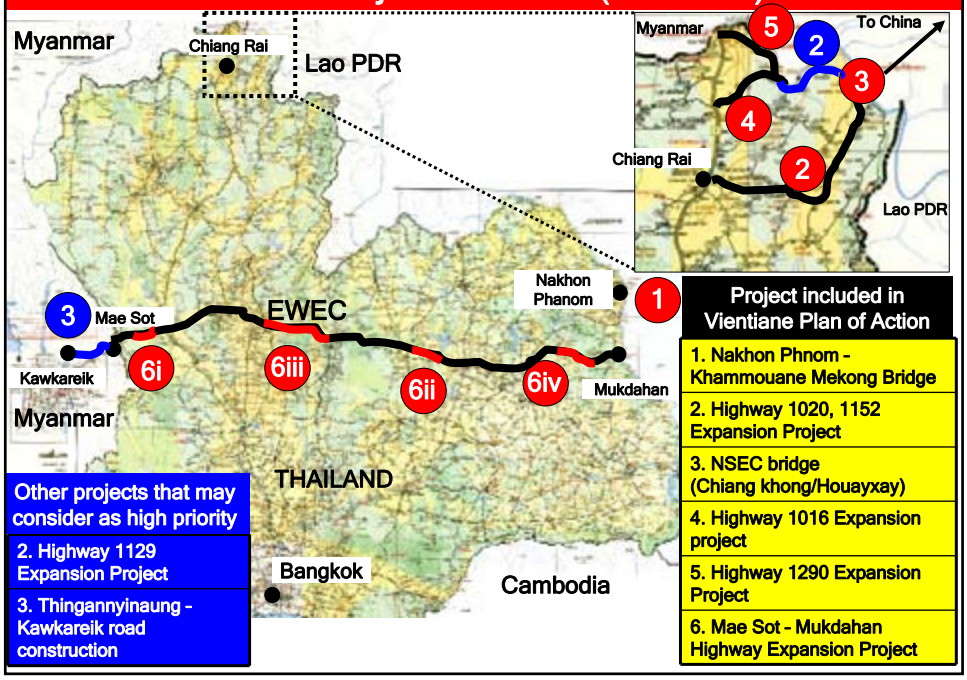
Railway

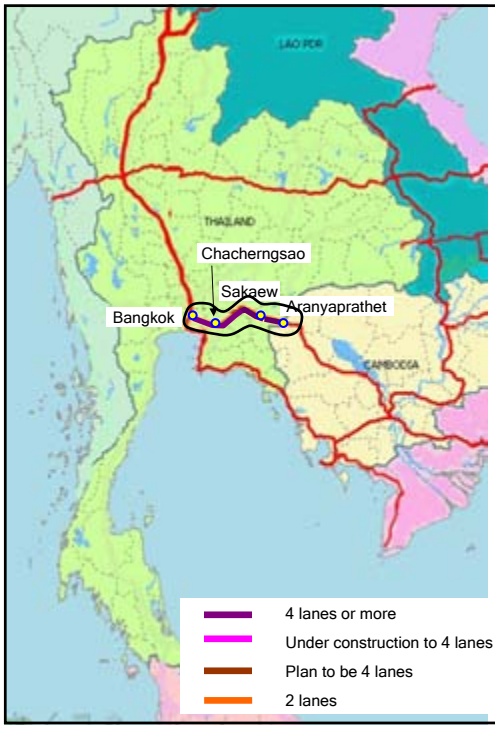
8. Thanaleng - Nong Khai Railway extension to Vientiane

Ports/Airports

9. Savannakhet airport
10. Chiang Saen 2nd port
11. Dawei deep seaport and road link to Thailand
12. Improvement and maintenance of Navigation Channels along the Lancang-Mekong

Roads Project Location (Thailand)



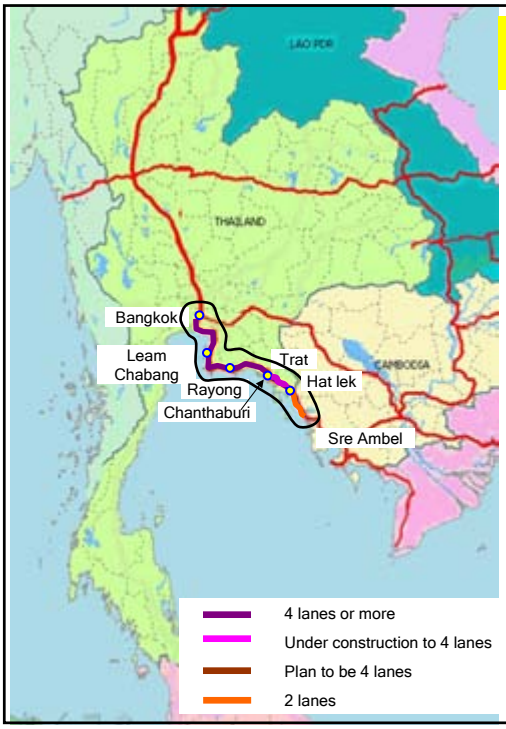


Southern Economic Corridor (R1)

Bangkok - Phnom Penh - Ho chi min City (R1)

Road

- Bangkok - Phnom Sarakam - Krabinburi - Sakaew - Aranyaprathet (Thailand/Cambodia border) (272 kms) - completed 4 lanes
- New alignment (Phnom Sarakam - Sakaew) (72 kms) - 2 lanes and committed to be 4 lanes (ADB loan)



Southern Coastal Economic Corridor (R10)

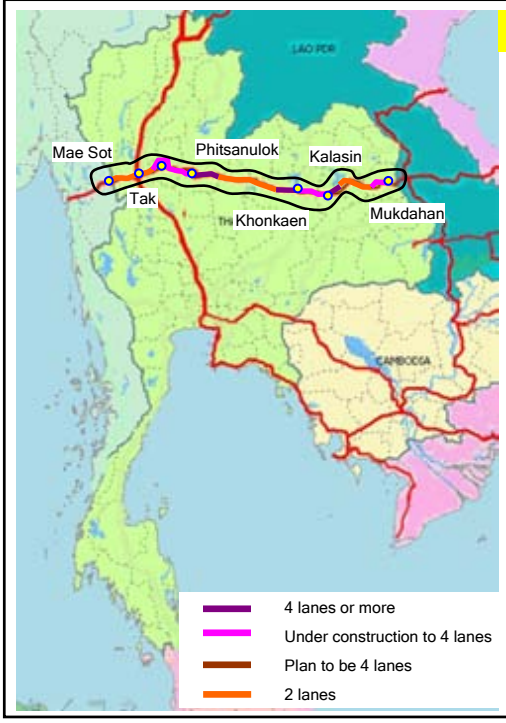
Bangkok – Trat – Koh kong – Sre Ambel – Camao (R10)

Thailand

- Bangkok - Trat (290 kms) - 4 lanes
- Trat – Hat lek (89 kms) - Under construction to 4 lanes

Cambodia

- Koh kong – Sre Ambel (151 kms) + 4 bridges - grant and soft loan from Thailand – 2 lanes (completed)



East – West Economic Corridor (R2)

Myanmar – Thailand – Lao PDR - Vietnam (R2)

Bridge

- Mukdahan-Savannakhet bridge (loan from JBIC) completed in Dec 06

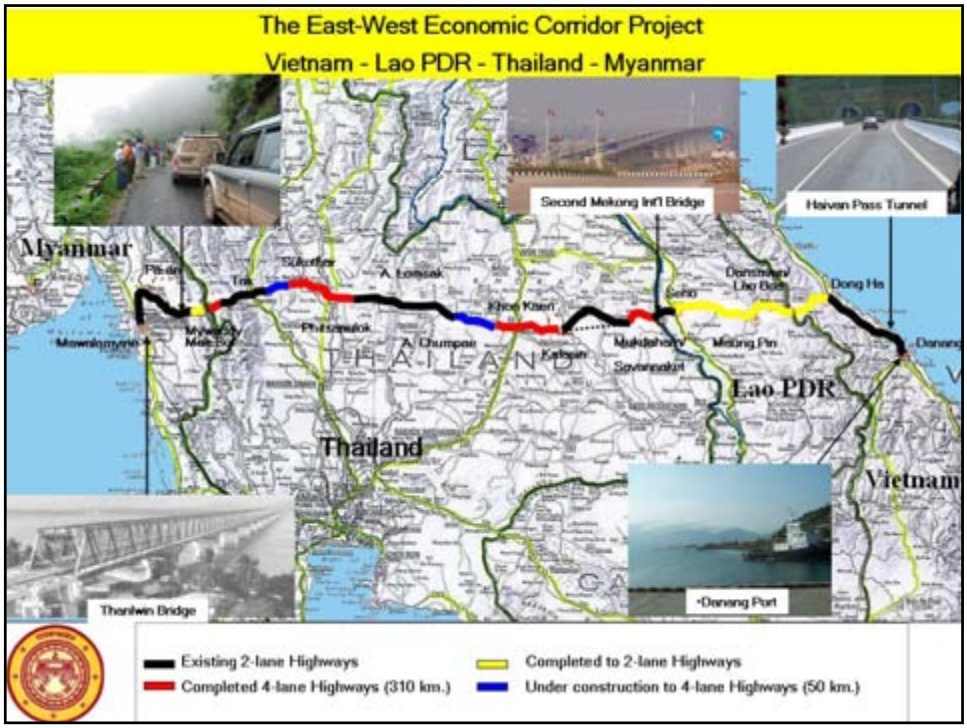
Road

Myanmar - 200 kms

Thailand - 800 kms :50% is 4 lanes

Lao PDR - 240 kms : 2 lanes

Vietnam - 260 kms : 2 lanes

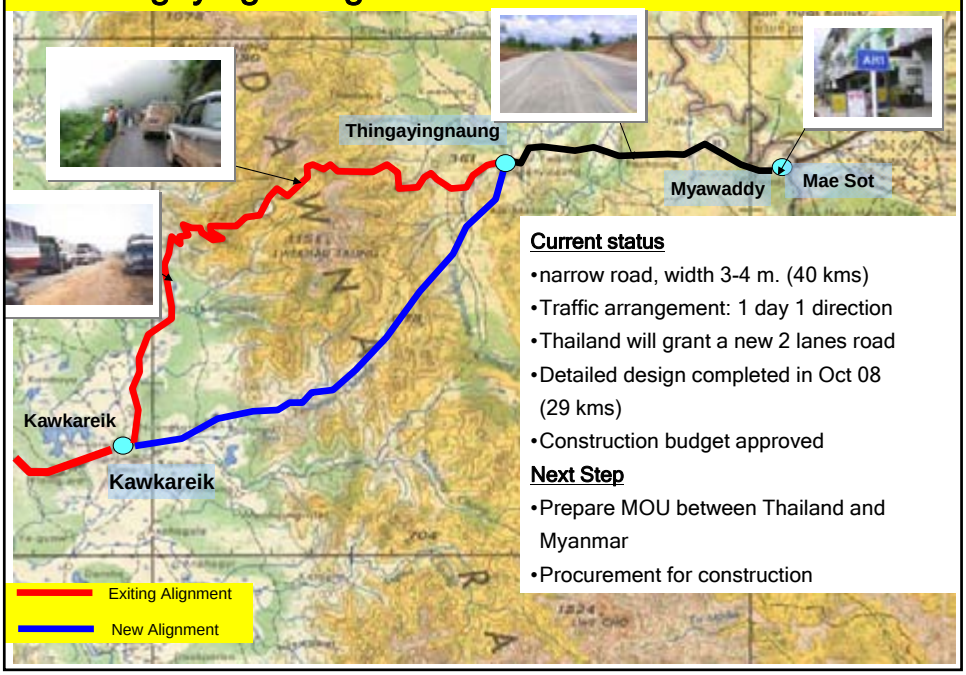


Nakhon Phnom – Khammouane Mekong Bridge (3rd International Mekong Bridge)

- Thailand grant for Lao PDR (F.S., D.E., construction)
- 6 march 09, ground breaking ceremony
- Under construction (Italian-Thai company)
- Construction period: 900 days (26 May 2009 – 11 Nov 2011)

Length 1.423 kms
Cost 1,723.2 MB

Thingayingnaung – Kawkareik Road Construction



Current status

- narrow road, width 3-4 m. (40 kms)
- Traffic arrangement: 1 day 1 direction
- Thailand will grant a new 2 lanes road
- Detailed design completed in Oct 08 (29 kms)
- Construction budget approved

Next Step

- Prepare MOU between Thailand and Myanmar
- Procurement for construction

Myawaddy - Dawna Range

EWEC in MYANMAR

Dawna Range - Kawkareik

North - South Economic Corridor (R3)

- Bangkok - Chiang Rai (830 kms) - 4 lanes
- Chiang Rai - Kunming 1,200 kms.
  - Thailand - 2 lanes
  - Lao PDR - 2 lanes
  - Myanmar - 2 lanes
  - China - 2 lanes + expressway

Thailand - Southern China Route (R3)

Bottleneck section R3E

1. Road in Lao PDR
   - Completed
   - Official opening ceremony 30 March 2008
2. Mekong Bridge
   - Thai + China share cost 50:50
   - Detailed design completed
   - Under procurement process



Mohan - Jinghong

R3 in CHINA

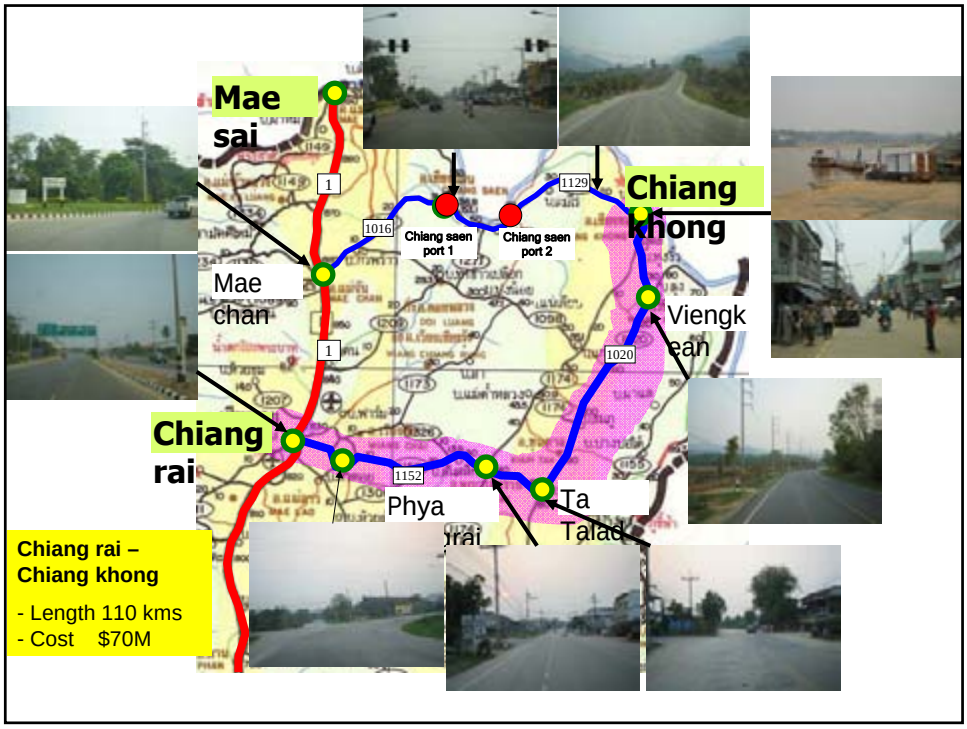
Jinghong - Kunming

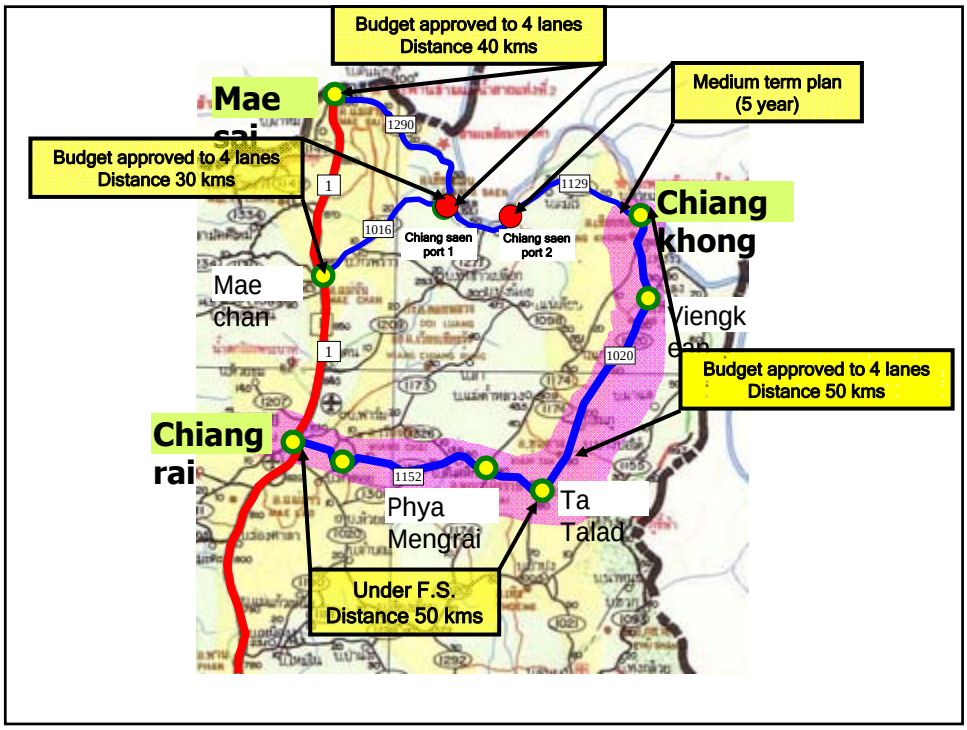


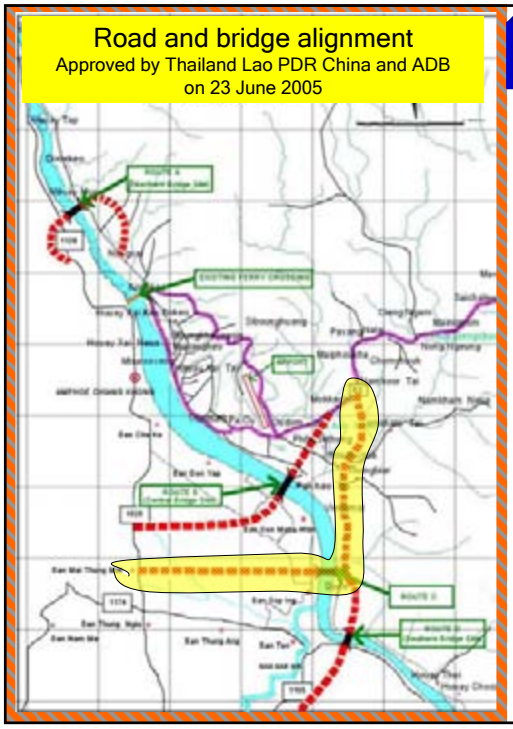


R3 in Lao PDR



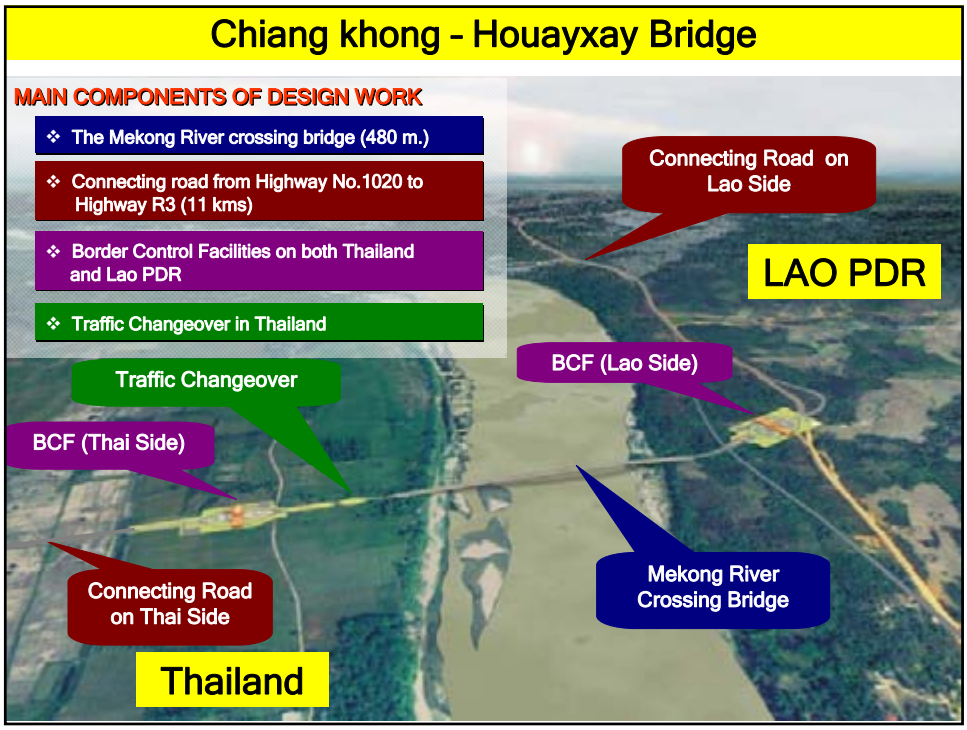

Mae sai
Mae chan
Chiang rai
Chiang khong
Viengk ean
Chiang saen port 1
Chiang saen port 2
Phya
Ta Talad
1
1016
1129
1020
1152
Chiang rai – Chiang khong
- Length 110 kms
- Cost $70M


Budget approved to 4 lanes Distance 40 kms
Medium term plan (5 year)
Budget approved to 4 lanes Distance 30 kms
Budget approved to 4 lanes Distance 50 kms
Under F.S. Distance 50 kms
Mae sai
Mae chan
Chiang rai
Chiang khong
Chiang saen port 1
Chiang saen port 2
Phya Mengrai
Ta Talad
1290
1
1016
1129
1020
1152



Chiangkong/Houayxay bridge project

- 21 June 2007: MOU signing ceremony between Thailand Lao PDR and China at the head office of ADB in the Philippines
  - Cost sharing: Thailand/China 50/50
  - Thailand conducted detailed design
- Detailed design completed
- Estimate cost $54M (total length 11 kms, bridge length 480 m.)
- Construction period 2010 – 2012



Chiang khong – Houayxay Bridge

Current status : Using barge for crossing

MOU signing ceremony
21 June 2007 in the Philippine

Technical meeting (Thailand Lao China ADB)
(27 June 2005)

Signing ceremony of Agreement between government of Thailand and the People Republic of China on Financial arrangement for the construction NSEC bridge project (Chiang Khong / Houayxay)

- On 25th October 2009 at the 15th ASEAN Summit, Cha-am, Thailand
- Thailand and China share construction cost 50/50 (exclude VAT)
- Specify details of financial arrangement

<u>Next step</u>

- Procurement of consultants and contractor

Infrastructure Development

Roads

- Project included in Vientiane Plan of Action
  1. Nakhon Phanom - Khammouane Mekong Bridge
  2. Highway 1020, 1152 Expansion Project
  3. NSEC bridge (Chiang khong/Houayxay)
  4. Highway 1016 Expansion project
  5. Highway 1290 Expansion Project
  6. Mae Sot - Mukdahan Highway Expansion Project
  7. GMS Highway expansion project (ADB,WB loans)
- Other projects that may consider as high priority
  2. Highway 1129 Expansion Project
  3. Thingannyinaung - Kawkareik road construction

Railway

8. **Thanaleng - Nong Khai Railway extension to Vientiane**

Ports/Airports

9. Savannakhet airport
10. Chiang Saen 2nd port
11. Dawei deep seaport and road link to Thailand
12. Improvement and maintenance of Navigation Channels along the Lancang-Mekong

Present State of Transport and Traffic (Cont'd)

Thailand Railway Network

Thailand - Lao PDR Railway link between Thanaleng - Nongkhai 3.5 km. (Funded by Thai Government : 30% grant and 70% soft loan) is completed and the opening ceremony was held on 5 March 2009.

8. Thanaleng - Nong Khai Railway Extension to Vientiane

Thailand (NEDA) assist F.S. and D.E. ongoing, 9MB, 8 months, will be completed in May 2010

Rail Transport

Route Alternatives for SKRL Project

1. Singapore - Malaysia - Bangkok - Aranyaprathet - Cambodia - Vietnam - China
2. Singapore - Malaysia - Bangkok - Three Pagodas Pass - Myanmar - China
3. Singapore - Malaysia - Bangkok - Nong Khai - Lao PDR - Vietnam - China
4. Singapore - Malaysia - Bangkok - Nong Khai - Lao PDR - China
5. Singapore - Malaysia - Bangkok - Ubon Ratchathani - Lao PDR - Vietnam - China
6. Singapore - Malaysia - Bangkok - Bua Yai - Mukdaharn - Lao PDR - Vietnam - China
7. Singapore - Malaysia - Bangkok - Chiang Rai - Chiang Khong/Houy Sai - Lao PDR - China

Railway network in Thailand

Denchai – Chiang rai

- Detailed design completed
- Length 246 kms
- Under EIA process

Chiang rai – Chiang khong

- F.S. completed
- Length 80 kms

Total project cost

35,000 mil.baht
(approx 1,000 mil.US$)

Infrastructure Development

Roads

- Project included in Vientiane Plan of Action
  1. Nakhon Phanom - Khammouane Mekong Bridge
  2. Highway 1020, 1152 Expansion Project
  3. NSEC bridge (Chiang khong/Houayxay)
  4. Highway 1016 Expansion project
  5. Highway 1290 Expansion Project
  6. Mae Sot - Mukdahan Highway Expansion Project
  7. GMS Highway expansion project (ADB,WB loans)
- Other projects that may consider as high priority
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Ports / Airports

9. **Savannakhet airport**
10. **Chiang Saen 2nd port**
11. **Dawei deep seaport and road link to Thailand**
12. **Improvement and maintenance of Navigation Channels along the Lancang-Mekong**

Thailand Ports / Airports

9. Savannakhet airport improvement
10. The 2nd Chiang Saen port
11. Dawei Deep seaport and road link to Thailand
12. Improvement and maintenance of navigation channels along Lancang river

Savannakhet Airport improvement

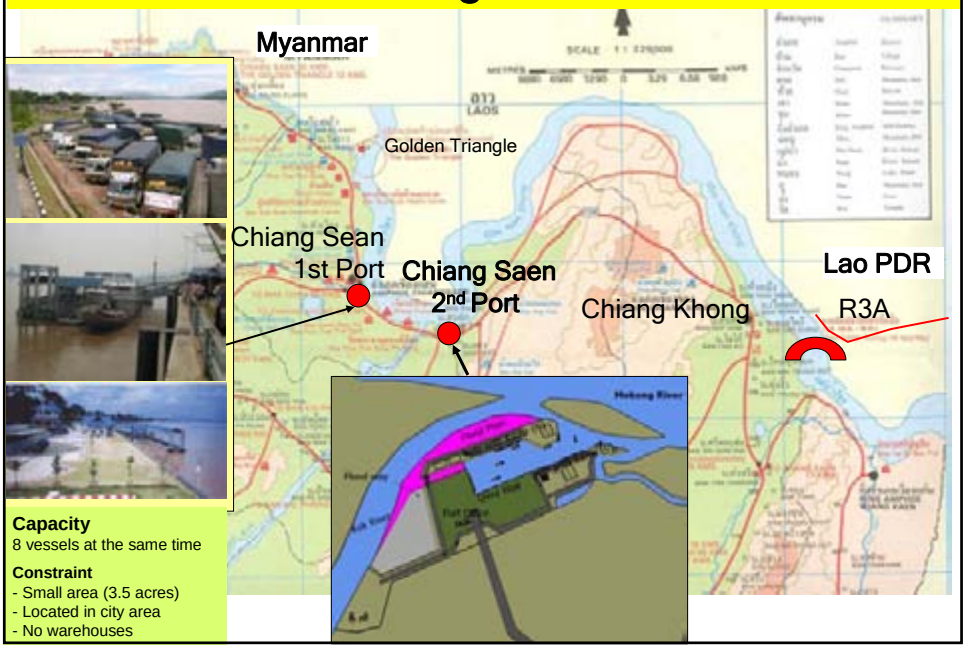
Current status

- Temporary closed due to low passenger traffic demand
- Overall physical condition is good, ready to operate

Future plan

- Joint utilization of the airport between Thailand and Lao PDR
- Issue
  - •Passenger handling
  - •Passenger demand
  - •Investment cost ($4M)

2nd Chiang Saen Port



2nd Chiang Saen Port Development

- Owner : Marine Department
- Budget allocated in 2008 (1,546.4 MB)
- Start Construction : May 2009
- Construction Period : 2 yrs

Policy on Dawei Deep Seaport

- **19 May 08, MOU between Thailand and Myanmar on the Development of Dawei Deep Seaport and Road link to Bangkok**
  - Construction of Dawei deep seaport
  - Establish road link Dawei – Bangkok
  - Establish Dawei – Bangkok border crossing point
  - Other projects
- **12 June 08, MOU between Myanmar Port Authority and Italian-Thai Co.,Ltd**

Mae Ta Mee (Border) - Dawei Road Construction Project

Policy

- Dawei port will be developed
- Road linking Dawei port to Thailand border will be developed

Current Status

- Dawei port is under survey and detailed design by Ital-Thai Co.,Ltd.
- Dawei port will be located in Nabule (northern part of Dawei)
- 3 stages of developments
  First stage to develop seaport, road, railway, facilities


Local port in Dawei


Road in Dawei


Dawei market

Proposed Development Program

DAWEI DEVELOPMENT PROJECT

Development of Deep Sea Port & Industrial Estate
Enhanced with Cross-Border Road & Railways Corridors

LAYOUT PLAN

Dawei Project Site - Kanchanaburi

Lancang-Mekong river transport

Agreement among upper Mekong countries (China – Myanmar – Lao PDR – Thailand) on Navigation of the Lancang-Mekong river

- by Jan 2007 : Channel capable for 300 ton vessel
- Long term : 500 ton vessel

Chiang saen port – Kuan loei port

Distance	265 kms
water depth	1.5 – 7 m.

Agreement on Commercial Navigation on Lancang-Mekong River

- Objectives:
  - To promote transportation along Mekong River
  - To facilitate trade and tourism
  - To strengthen cooperation on commercial navigation
- Members: China, Laos, Myanmar & Thailand
- Signed on 20 April 2000
- Official navigation started on 22 June 2001
- MOU concerning the Implementation of Agreement:
  - Common rules, regulations & guidelines
  - Establishment of Joint Coordinating Committee (JCCCN)
  - Environmental concern

Rapids, Shoal and shallow water




GREATER MEKONG SUBREGION CROSS BORDER TRANSPORT AGREEMENT (GMS CBTA)

- 17 annex and 3 protocols
- All signed
- Most of them are ratified
- Some under process of internal consultation/law amendment

ANNEX	1	Carriage of Dangerous Goods
ANNEX	2	Registration of Vehicles in International Traffic
ANNEX	3	Carriage of Perishable Goods
ANNEX	4	Facilitation of Frontier-Crossing Formalities
ANNEX	5	Cross-Border Movement of People
ANNEX	6	Transit and Inland Clearance Customs Regime
ANNEX	7	Road Traffic Regulation and Signage
ANNEX	8	Temporary Importation of Motor Vehicles
ANNEX	9	Criteria for Licensing of Transport Operators for Cross-Border Transport Operations
ANNEX	10	Conditions of Transport
ANNEX	11	Road and Bridge Design and Construction Standards & Specifications
ANNEX	12	Border Crossing and Transit Facilities and Services
ANNEX	13a	Multimodal Carrier Liability Regime
ANNEX	13b	Criteria for Licensing of Multimodal Transport Operators for Cross-Border Transport Operations
ANNEX	14	Container Customs Regime
ANNEX	15	Commodity Classifications Systems
ANNEX	16	Criteria for Driving Licenses
PROTOCOL	1	Design of Corridors, Routes and Points of Entry & Exit (Border Crossings)
PROTOCOL	2	Charges Concerning Transit Traffic
PROTOCOL	3	Frequency and Capacity of Services and Issuance of Quotas and Permits

Promoting the GMS CBTA

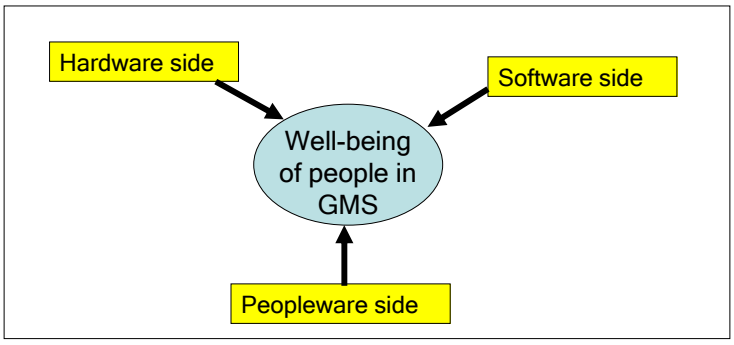
Completed:

- 1 Training the Trainer workshop for Thailand, Lao PDR, and Vietnam.
- 1 Seminar to distribute GMS CBTA details to Thai Transport Operators.
- 2 Workshops to promote GMS CBTA for officials of Department of Land Transport.

Ongoing:

- Training local authorities that have duties relevant to cross-border activities at border province.
- Training the Trainer workshop.

Conclusion



- Hardware: good progress
- Software: much more to be done
- Peopleware: just started

GREATER MEKONG SUBREGION CROSS BORDER TRANSPORT AGREEMENT
(GMS CBTA)

ITEM		Description / Title	CAMBODIA	CHINA	LAO PDR	MYANMAR	THAILAND	VIETNAM
ANNEX	1	Carriage of Dangerous Goods	Ratified	Ratified	Ratified	Signed	Signed	Ratified
ANNEX	2	Registration of Vehicles in International Traffic	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
ANNEX	3	Carriage of Perishable Goods	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
ANNEX	4	Facilitation of Frontier-Crossing Formalities	Ratified	Ratified	Ratified	Signed	Signed	Ratified
ANNEX	5	Cross-Border Movement of People	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
ANNEX	6	Transit and Inland Clearance Customs Regime	Ratified	Ratified	Ratified	Signed	Signed	Signed
ANNEX	7	Road Traffic Regulation and Signage	Ratified	Ratified	Ratified	Signed	Signed	Ratified
ANNEX	8	Temporary Importation of Motor Vehicles	Ratified	Ratified	Ratified	Signed	Signed	Signed
ANNEX	9	Criteria for Licensing of Transport Operators for Cross-Border Transport Operations	Ratified	Ratified	Ratified	Signed	Signed	Ratified
ANNEX	10	Conditions of Transport	Ratified	Ratified	Ratified	Signed	Signed	Ratified
ANNEX	11	Road and Bridge Design and Construction Standards & Specifications	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
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ANNEX	14	Container Customs Regime	Ratified	Ratified	Ratified	Signed	Signed	Signed
ANNEX	15	Commodity Classifications Systems	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
ANNEX	16	Criteria for Driving Licenses	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
PROTOCOL	1	Design of Corridors, Routes and Points of Entry & Exit (Border Crossings)	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
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PROTOCOL	3	Frequency and Capacity of Services and Issuance of Quotas and Permits	Ratified	Ratified	Ratified	Signed	Signed	Ratified

VIET NAM COUNTRY REPORT
Thirteenth Meeting of the Sub-regional Transport Forum (STF-13)
27-28 October 2009, Siem Reap City, Cambodia

OUTLINE OF VIETNAM PROJECTS

- **GMS Corridors**

1. Eastern Corridor:
   - Ha Noi – Lang Son Expressway
   - Ha Long – Mong Cai Expressway
   - GMS Dau Giay – Phan Thiet – Nha Trang Expressway;
   - Dau Giay – Lien Khuong Expressway
   - Central Mekong Delta Connectivity
2. Northeastern Corridor:
   - 2nd GMS Northern Transport Network Improvement –HW 217;
3. Southern Corridor:
   - Bien Hoa-Vung Tau Expressway;
4. Southern Coastal Corridor

- **Other expressways and project**
  - Ben Luc – Long Thanh Expressway;
- **Railways projects**:
  - Singapore – Kunming railway: HCMC – Loc Ninh Missing link
  - Other projects related to SKRL

❖ Eastern Corridor

1. **GMS Ha Noi – Lang Son:**

- Timeline: 2012-2016
- Project cost : $900M - to be financed by ADB - $500 M (in indicative 2011 pipeline); GOV ($100M) co-financing being sought 300 M;

2. **Ha Noi – Mong Cai expressway**

- Timeline: 2012-2016
- Project cost: $1000M - Included in the expanded ADB indicative pipeline for 2009-2012; Government ($100 M); co- financing being sought $500;

➢ **Status/Progress of Implementation**:
Coupled with detailed designs for both projects to be prepared by the TA loan for Expressway Preparation Facility, to which the TA will be piggybacked, outputs of Project design will be agreed between the Government of Viet Nam and ADB for the ensuing investment loans for the Expressway Projects.

❖Eastern Corridor

3. **GMS Dau Giay – Phan Thiet – Nha Trang Expressway**

- Estimated Total Cost ($M): 1,2
- Indicative timeline: 2011 - 2015
- Status of Financing: TBD
- Status/Progress of Implementation: The F/S has been carried out by Viet Nam Road Administration, it is expected to be approved by MOT end of Oct. Proposed to implement

4. **Dau Giay – Lien Khuong Expressway**

➢ Estimated Total Cost ($M): 1,2; Indicative timeline: 2011 - 2015

➢ Status/Progress of Implementation: The F/S has been carried out by Viet Nam Road Administration, it is expected to be approved by MOT end of Oct. Proposed to implement

❖Eastern Corridor

5. Central Mekong Delta Transport Connectivity

- This project includes the following components: (1) Cao Lanh Bridge; (2)Cao Lanh and Vam Cong connecting road (15km); (3) My An – Cao Lanh section; (4) Long Xuyen bypass and NH 91 connecting road + 3.5km from TL 943 and Vam Cong Bridge
- Estimated Total Cost ($M): 560
- Indicative timeline: 2009-2015
- Status of Financing: $ 737M in which:
  - (1) $190M to be financed by the Australian Gov;
  - (2) & (3): $240M to be financed by ADB;
  - (4) & (5) : to be financed by the Korean Gov

  The rest will finance by Viet Nam GoV.
- Status/Progress of Implementation:
  - TA Grant have been approved by the ADB on July 2008;
  - Draft PPTA will be finished by 31, May 2010;
  - ADB, AusAID and MOT will finalize the contract for detailed design of the project prior to January 2011 and will sign the financing agreements for it prior to July 2011. MOT will arrange an appropriate project initiation ceremony at the Cao Lanh Bridge site, also prior to July 2011

❖ North-Eastern corridor

1. **Second GMS Northern Transport Network Improvement – HW 217**

- Viet Nam component is HW 217 with total length of 196km plus 100km of feeder roads
- Technical specifications: in consistent with Road Class III and IV of VN TCVN
- Estimated Total Cost ($M): 205,46
- Indicative timeline: 2011-2014
- Status of Financing: To be financed by ADB (in indicative 2009 pipeline) and Vietnamese government
- Status/Progress of Implementation:
  - Final report conducted by consultant will be finished by end of Oct, 2009
  - Loan Agreement is expected to be signed by 3rd quarter 2010; civil works will be commenced by 4th quarter 2011.
  - TA with amount of 1,6 mil USD was approved;
  - TA Grant have been approved by the ADB on July 2008;

❖ Southern Corridor

1. **Bien Hoa-Vung Tau Expressway**
   - Estimated Total Cost: $679M
   - Indicative timeline: 2013 - 2018
   - Status of Financing: The project is proposed for BOT scheme
   - Status/Progress of Implementation: 1st phase of the Project's proposal has been completed by a domestic private consortium including Idico + BIDV+Song Da and will submit to MOT for approval shortly.

❖Southern Coastal Corridor

- **Estimated Total Cost** ($M): 312M (based on report made by review mission conducted from 7-9/9/09. Previous estimated cost is 208 M)
- **Indicative timeline**: 2008-2012
- **Status of Financing**: Financed by ADB (loan $75 M); Korea $50M; Australia ($ 25.5 M); and Government of Viet Nam ($58.2M). An increasing amount about $ 70M is proposed to ask financing by Korea. In principle, KXIM agreed to finance with requested amount.
- **Status/Progress of Implementation:**
  - Loan Agreement was signed on 18th Feb 2008, became effective on 29th May 2008 and closing date will be 30th June 2015.
  - Detail Design will be submitted by November 2009.
  - For ADB & Australia' funded components, civil works will commence on January 2010;
  - For 2 EDCF' funded components (Korea) civil works will commence on January 2010;
  - Tripartite meeting between VN, Cambodia and ADB on border checkpoint facilities will be held on earlier Nov, 2009.

❖Other expressways

Ben Luc – Long Thanh Expressway

- Estimated Total Cost ($M): 1,760.0 ; Indicative timeline: 2010-2014
- Status of Financing: Proposed co-financing by ADB, JICA and GOV. Amount to be financed by ADB of $930M (in which $300M from OCR; the rest could be from a multi-tranche financing facility – MFF), GOV will request JICA financing on two bridges and ITS facilities.
- Status/Progress of Implementation:
  - TA approved on 23rd October 2008;
  - Mid-term review mission conducted from 14-16/9/09;
  - Final report of TA will be finished by end of Nov, 2009 and submit for approval by Jan/2010;
  - Detail Design Consultant Service will be planned on 2nd quarter 2010;
  - Loan approval by ADB by Sep/2010 if ADB finances costs for the land acquisition and resettlement

❖Railways projects

1. Singapore – Kunming railway: 4 components:

there are four sections in Vietnam:

i. Missing link: Loc Ninh - HCM city;

ii. 2. Section: HCM city - Ha Noi;

iii. 3. Section: Ha Noi – Lao Cai;

iv. 4. Spur line: Vung Ang – Tan Ap – Mu Gia (Border with Lao PDR).

1. The missing link Loc Ninh - HCM city:

- Length: 129 km;
- The F/S has been completed in 2005;
- In May 2009, a revised F/S made by Chinese Association CMC and CRCC has been presented with main contents as follow:
- Railway grade: ordinary railway grade I
- Target speed: passenger train 120km/h, goods train: 80km/h.
- Upper structure: First stage for 1.000mm gauge; Lower structure (Embankment) for future 1435mm gauge.

The missing link Loc Ninh - HCM city continue:

- Minimum radius curve: Rmin=800m
- Limit track slope: 90/00
- Traction: DIEZEN, future: electric
- Gross train mass: 1200 ton/1500 ton (year 2012/year 2015).
- Using length of arrival siding: 500m. First stage is 400m.
- Blocking system: semi-automatic block.
- Bridge load: T20
- Estimated total investment cost: 570 mil. USD.

The Agreement between the Government of the Socialist Republic of Viet Nam and the Royal Government of Cambodia on Railway Connection Point has been signed and came into force from 04th, November 2008. According to the Agreement, Vietnam has sent summary project plan and coordinate of rail connection point to Cambodia.

- The construction works is expected to be started in 2010.

2. The Section HN – HCM city:

- Total length: 1726 km;
- Rehabilitation and upgrading is ongoing in the whole section;
- The Phase 3 (2007 – 2011) of rehabilitating weak bridges has been implementing with the cost of 19.5 bil Japanese Yen.
- The Project for Modernization of Telecommunication and Signaling System has been carried out with the funds from the Governments of Republic of France, P.R of China and Viet Nam totaling approximately USD 200 mil.
- To implement step by step and up to 2015, to complete the replacement of new rails and sleepers of remaining sections of the rail route, to upgrade the route into the 2nd grade according to the National Standards' classification. This project costs about USD 200 mil. using local funds.

3. The Section Ha Noi – Lao Cai:

- Total length: 296 km;
- Rehabilitation and upgrading of the section as follows:
- Replacement of super structure, rehabilitation of weak bridges, realignment of some sections, set up some new stations...have been carrying out by using mix-funds from ADB, AFD (France) and national budget with the total cost of USD 160 mil. The project will be completed in 2011.
- The Project for Modernization of Telecommunication and Signaling System has been carrying out by using ODA fund from the Government of China costly USD 70 mil. The project will be complete in 2010.

4. The Vung Ang – Tan Ap – Mu Gia Spur line:

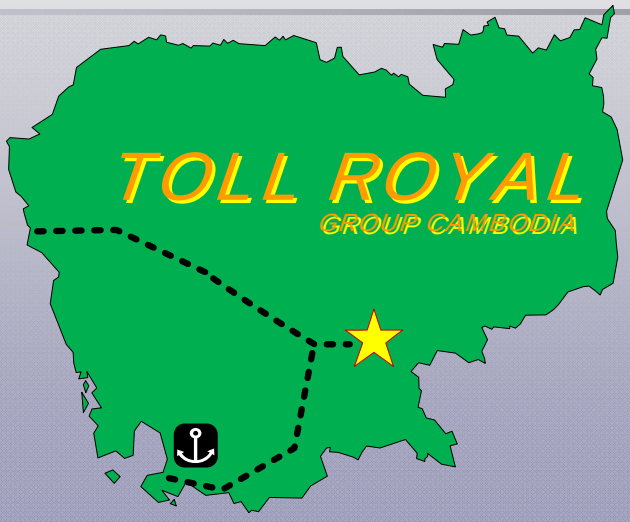
- Length: 119km. This route connects with the Vung Ang deep seaport and links with the planned railway network of Lao PDR;
- The Pre F/S has been completed in 2007;
- Construction work commencement: not yet determined;
- Related to this project, the Pre-F/S of the Mu Gia – Tha Khek Spur line has been completed in September 2008 by a coordination of Viet Nam and Lao PDR.

5. Other projects related to SKRL

- The Ha Noi – Cai Lan Port dual-gauge track (1000 & 1435mm) rail route in Quang Ninh province has being implemented with the total cost of USD 500 mil. and is expected to complete in 2011;
- The F/S of the North – South high speed rail line linking Ha Noi to Ho Chi Minh city has being carried out with cooperation from Japan and Korea;
- The F/S of the Ho Chi Minh City – Vung Tau Seaport Railway Project is on going;
- The Fre-F/S of the Ho Chi Minh – My Tho – Can Tho high speed Railway Project is in progress;
- To set up a Plan of the Railway Network in the Central Highland after 2020.

THANK YOU FOR YOUR ATTENTION.

The Royal Cambodian Railway



Background

- Present & past state of system
- Rail is cleaner, greener & more efficient
- Toll is a capable multinational logistics company
- The Royal Group is well established locally in infrastructure & finance sectors
- 30 Year Concession Effective 22 October 2009

Contents

- 1 Operator, 2 Lines & Nations, 3 Modes, Markets & Gateways
- Trans Asian Railway (TAR)
- Mining: - Catalyst for Development
  - Rail; the only alternative
  - Vietnam & Lao Linkages
- Next: - Customers & Partners - Thai Link
  - Modeling & Markets
  - Development
  - Action Plan

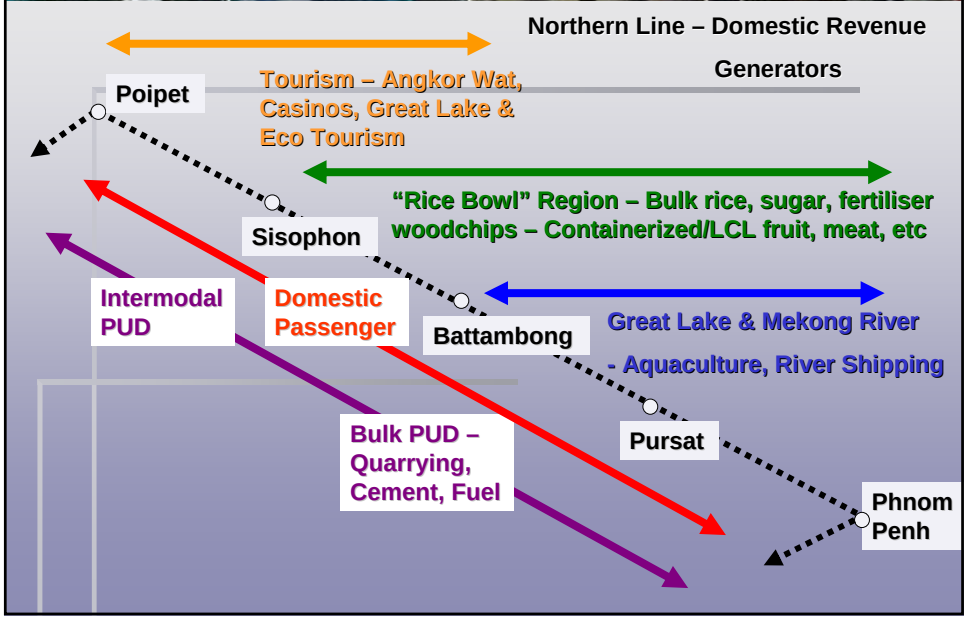

1 Operator
2 Lines & 2 Nations
3 Modes, 3 Markets & 3 Gateways
GMS-BF
GLOBAL LOGISTICS


1 Operator
Target: 3 years to full utilisation of all trackage
Over a decade of experience in the corporatisation of government owned rail operations
In partnership with government – Australian above rail operator has been spun off into the biggest rail company nationally – Toll is now one of the biggest customers of our former subsidiary
This experience will help Cambodia come to a higher level of market sophistication
GLOBAL LOGISTICS

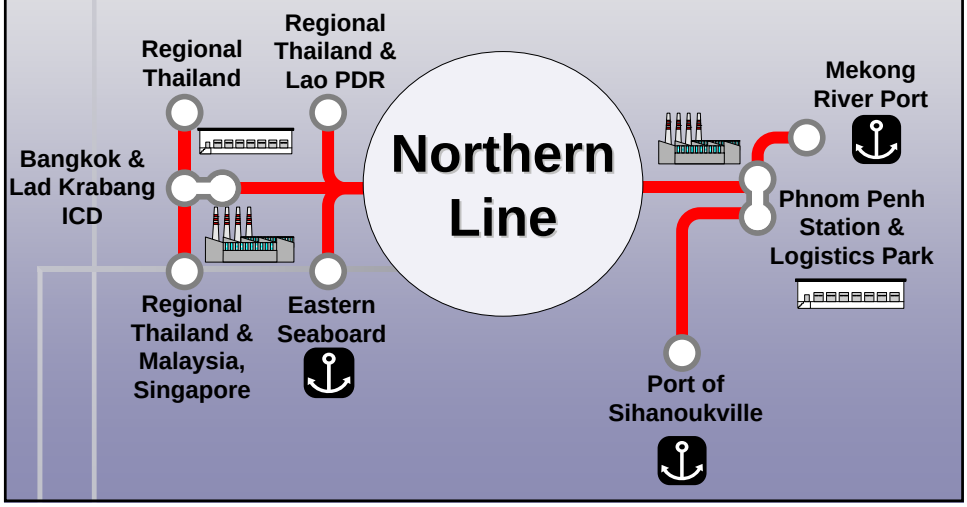
2 Lines & 2 Nations

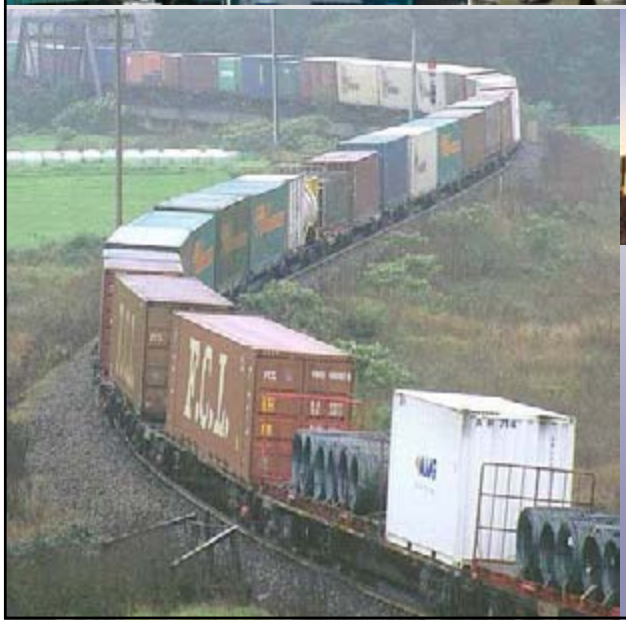
Line 1 or the Northern Line

- 388km, will link the Phnom Penh Logistics Park with Pursat, Battambong, Sisophon & the State Railway of Thailand's System at Poipet/Aranyaprathet
- Planned freight depots at these population centres with product type & handling capabilities to be developed
- Long term view to domestic and international passenger travel reintroduced with a focus on high end luxury tourism
- However focus is upon international bulk & intermodal movements from Bangkok, the Thai Eastern Seaboard, regional Thailand, Malaysia & beyond



Northern Line – External Revenue Generators



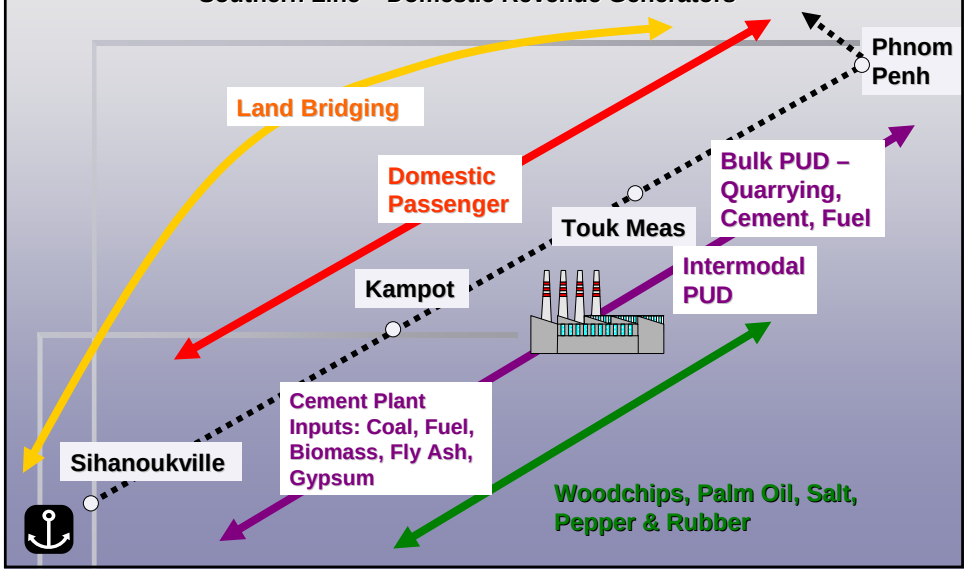


AIM: Intermodal Overnight, Bangkok – Phnom Penh

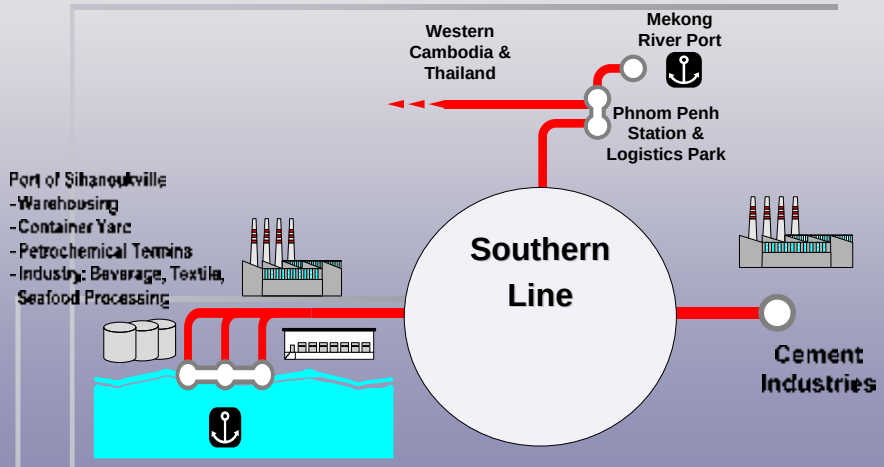
Line 2 or the Southern Line

- 265km, will link the Phnom Penh Logistics Park with Takeo, Kampot and the deep sea Port of Sihanoukville
- Passenger travel reintroduced to link the Holiday Coast & Bokor
- Freight Depots and sidings/spurs to be developed, focusing upon cement, sand, aggregate, and plantation products – woodchips, rubber & palm oil
- However focus is upon international bulk & intermodal movements between Phnom Penh & Sihanoukville – Land Bridging service will cater to containers, tanktainers, petrochemical, cement, heavy machinery, gas, etc
- Existing tanker terminal and developing offshore petroleum industry will have a major influence on future market

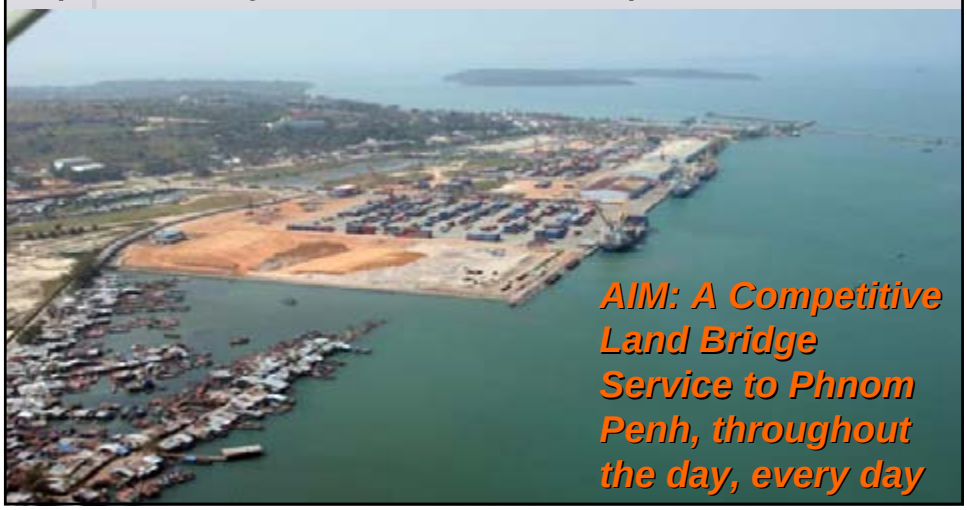
Southern Line – Domestic Revenue Generators



Southern Line – External Revenue Generators



Port of Sihanoukville – presently 275,000 TEUs p.a

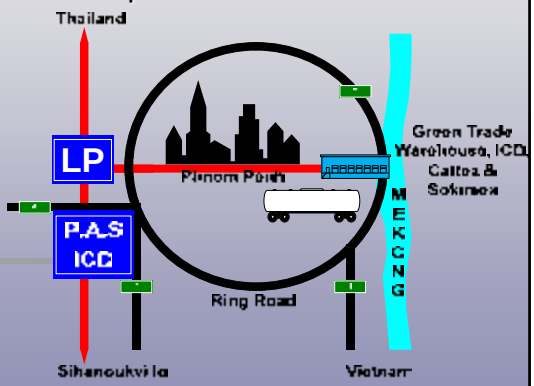


AIM: A Competitive Land Bridge Service to Phnom Penh, throughout the day, every day

3 Modes

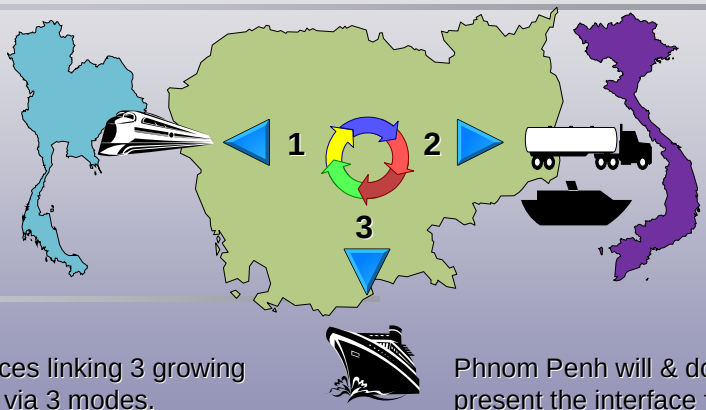
- The Toll Royal Cambodian Railway will complement, not compete with, water and highway transport
- Port of Sihanoukville
  - Containers, Bulk & Petrochemical
- Intermodal Toll Royal Logistics Park & Maintenance Workshop on 98ha at Samrong Junction, 9km from PP Central
- P.A.S. Phnom Penh Inland Container Depot
  - 27 hectares owned by Port Authority of Sihanoukville
  - 14km from downtown Phnom Penh on National Route 4 and ring road
  - Reduces the impact heavy articulated vehicles in the City and on the highways
  - Room for expansion and new location for industry

- Phnom Penh River Port
  - Green Trade Warehouse, Phnom Penh Inland Container Depot, Caltex & Sokimex Fuel Depots



- P.A.S. & Toll Royal Logistics Park ICDs located outside city
- Riverfront Access & PP Marshalling Yards in heart of city

3 Markets & 3 Gateways



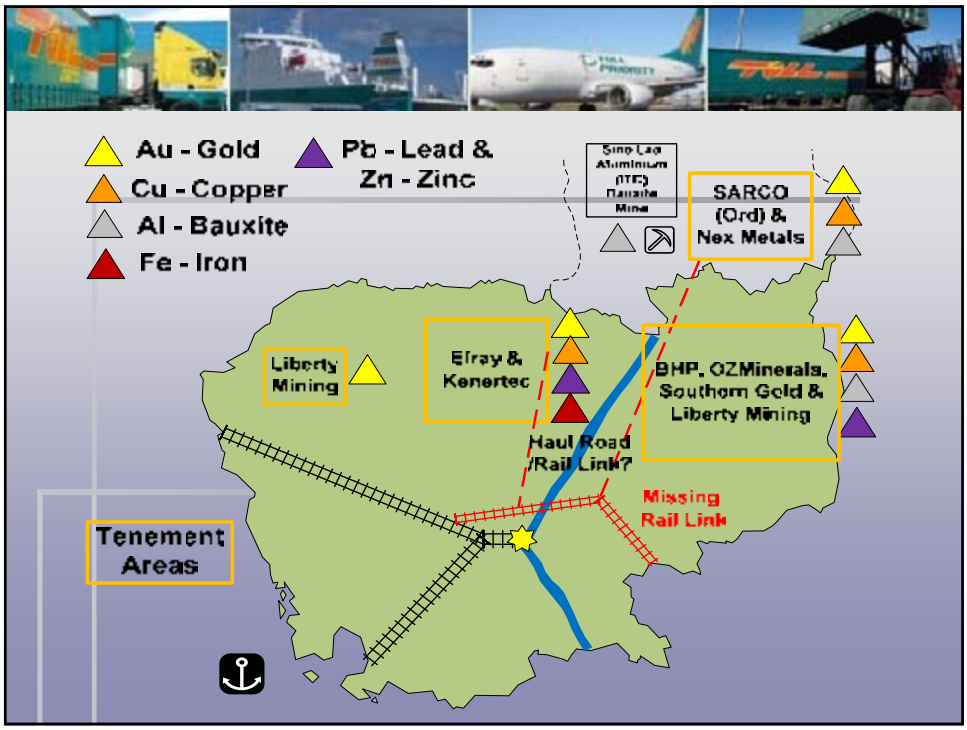
3 interfaces linking 3 growing markets via 3 modes. Thailand, the Port & the Western Half of Cambodia will be served by rail.

Phnom Penh will & does present the interface for overland transshipment to Vietnam from the rest of Southeast Asia

The Trans Asian Railway (TAR)

- The bridging of the Mekong represents a huge financial & engineering challenge. However, the river effectively divides the nation in half. Overcoming this barrier should be seen as a social necessity and national priority. This supersedes purely financial concerns when considering the social, economic and environmental benefits to be accrued in the longer term.
- Faster paced economic development domestically and regionally by completing the TAR's missing link will be a prime benefit. However, there is one more factor, long unconsidered that has recently come to the fore:


MINING


Au - Gold
Cu - Copper
Al - Bauxite
Fe - Iron
Pb - Lead &
Zn - Zinc
SARCO
(Ord) &
Nex Metals
Liberty
Mining
Elray &
Kenertec
BHP, OZMinerals,
Southern Gold &
Liberty Mining
Haul Road
/Rail Link?
Missing
Rail Link
Tenement
Areas

The Railway – Catalyst for Mining
Mining – the Catalyst for the Railway Link

- The "X" Factor – an intermodal/bulk market will develop on a Bangkok-Phnom Penh-Ho Chi Minh rail corridor
- However, bulk mineral & mining input transport makes it more feasible, sooner.
- "Free Ride" – upgrades for heavy bulk transport allows other users to benefit – i.e., heavier rail/increased axle weights, extra passing loops/double tracking, communications upgrades, economies of scale, etc
- Only rail can support the transportation of indicative mineral reserves – Ord River Resources Ltd inferred resources of 2 billion tonnes with 4 million refined Alumina to be exported p.a. 3 other bauxite tenements of similar potential, 200 million tonnes in iron ore & other base metals discovered.
- Up to 60,000t per day within a decade – only if rail is developed

Royal Cambodian Railway – the only alternative

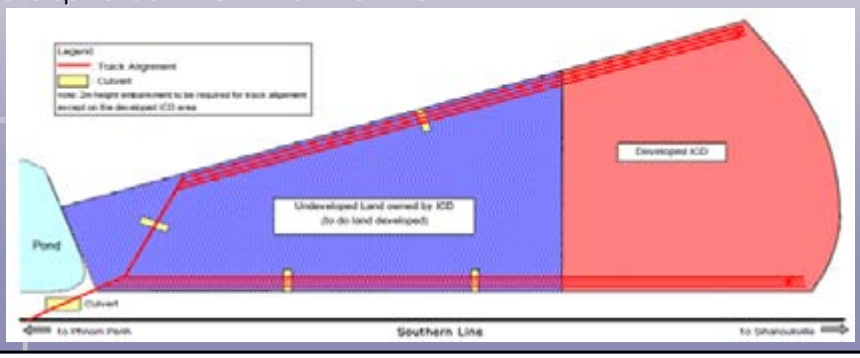
- Triple handling by truck - river barge - bulk carrier vs just rail to bulk carrier
- Chemicals such as cyanide not safe for river transport – also depth fluctuations, snags & rocks
- 2000km round trip via Thailand for Sth Lao minerals province – compare to 1200km via Sihanoukville
- Rail access to (congested) Ho Chi Minh Port was dismantled in 1980s
- Cambodian Port offers simplified customs/bureaucracy for domestically sourced minerals and reduces transport dependence on Thailand for land-locked Laos
- These tonnages will quickly destroy roads & are a hazard to communities & other users

Vietnam & Lao Links

- Leave the roads for light traffic and communities – reduce maintenance costs
- Unite the country by creating a northern transport corridor and bridging the divide – a Mekong rail bridge is inevitable
- Synergies for other freight, passenger & the upgrade of the Port of Sihanoukville with associated offshore oil & gas developments

Next.....

- **Working with our customers:**
  - Branch lines to cement plants and quarries
  - Extension to Stung Hav, Sre Ambel and Oknya Mong Ports?
  - Upgraded port access in partnership with the Port Authority of Sihanoukville (PAS) and customers at Phnom Penh River Port
  - Development of PAS' Phnom Penh ICD



Working With & Supporting our Partners – VR & SRT

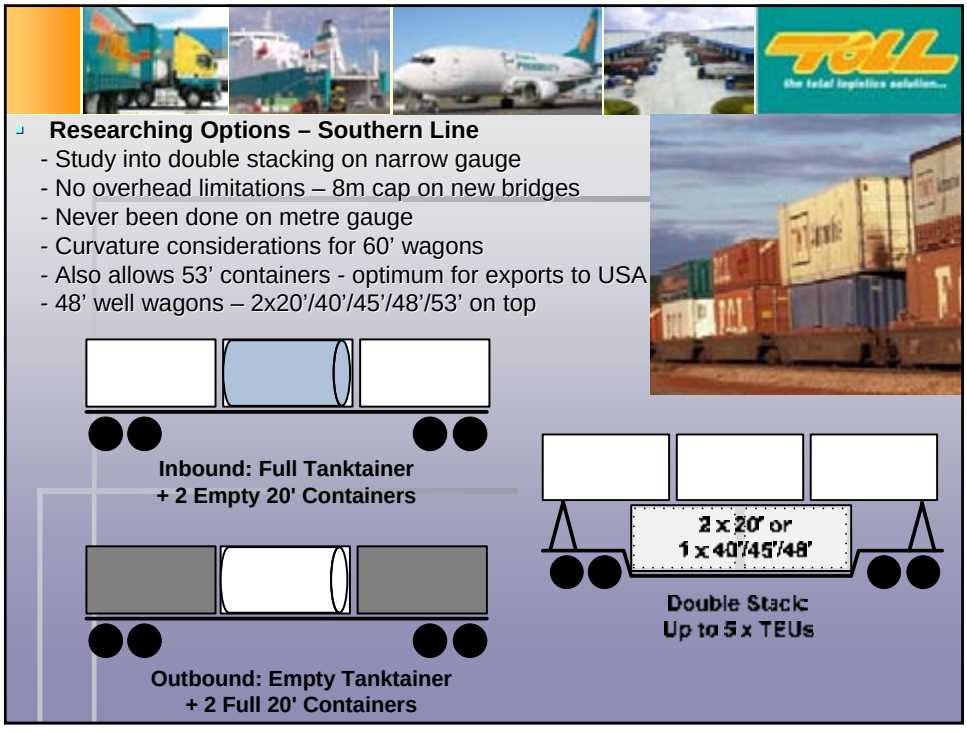
- Upgrades of Nth-Sth line & Loch Ninh extension construction in Vietnam
- Double tracking and chord lines in the State Railway of Thailand's Eastern Sector – our interface
- Rail upgrade to heavier rail/concrete sleepers on Aranyaprathet (Eastern) Line
- ICD & Port Developments in Thailand
- Singaporean, Malaysian & Lao Rail Developments

State Railway of Thailand – Eastern Sector

Aranyaprathet – Border - 5km Rebuild

- Vital – Full potential of Northern Line not realised if this short section not rebuilt & Eastern Line upgraded
- Costing scenarios for border bridge needs investigation/clarification – joint, 3rd party funding, etc
- Rebuild synchronisation ideal for both the border section and whole of Eastern Line from Klong Sip Gaew Junction – i.e. savings on concurrent construction with same tender


At the same time as this

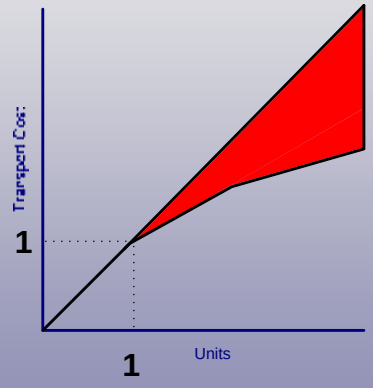

TOLL
the total logistics solution...
Researching Options – Southern Line
- Study into double stacking on narrow gauge
- No overhead limitations – 8m cap on new bridges
- Never been done on metre gauge
- Curvature considerations for 60' wagons
- Also allows 53' containers - optimum for exports to USA
- 48' well wagons – 2x20'/40'/45'/48'/53' on top
Inbound: Full Tanktainer
+ 2 Empty 20' Containers
2 x 20' or
1 x 40'/45'/48'
Double Stack
Up to 5 x TEUs
Outbound: Empty Tanktainer
+ 2 Full 20' Containers

Modeling Proposals/Options

- Working with former "competitors" – now partners

End Point Customs Clearance – Ignore the Border

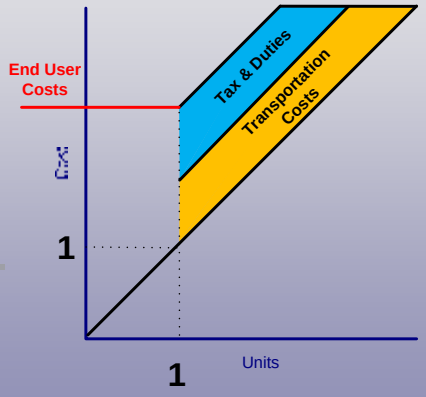
- Proposed clearance at the Bangkok & Phnom Penh ICDs – Why?
- Limited land & congestion at border - allow 24hr movements
- No economic justification for duplicating facilities, documentation, staff & procedures at border
- A hold up that takes up 15-20% of transit time (i.e. 2hrs) will require further investment in more equipment – i.e. 6 unit trains instead of just 5
- Less staffing & compliance costs
- Allow concurrent loading/stuffing & customs clearance



Customers benefit from bulk buying, but compliance & hold up costs remain constant – a worse distortion than tariffs & taxes

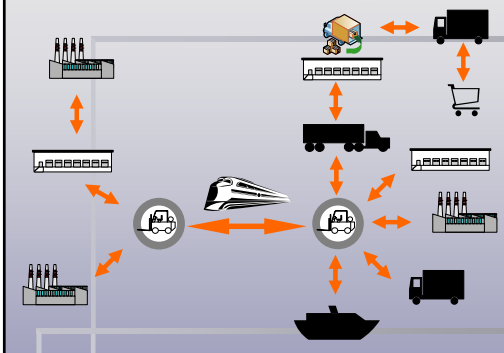
Hypothetical Free Zone

- The Phnom Penh Logistics Park can also be a cluster for industry, manufacturing and large-scale retail outlets
- A preferential tariff regime or even exemption can be used to replace sourcing of goods from across the border, encourage value adding & re-export and actually increase tax revenues and national income by redirecting spending to within Cambodia. This is achieved by not having to shop & pay taxes abroad and the cost of traveling to do so.



A Special Economic Zone can have one or both of the bands removed or minimised. National income is thus directed domestically.

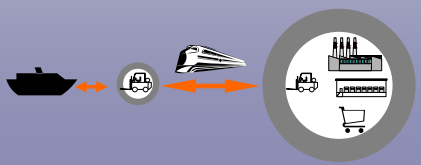
Phnom Penh Logistics Park



Our Model has an ICD, Customs Facilities, Special Economic Zone, Warehousing & Industry Cluster on one site.

It will still act as an multimodal hub to external users who need to use the classic intermodal model.

However, the greenfield development will allow partners significant cost savings & synergies via co-location and the minimisation of handling. Just lifting to door.



Don't Just Find Markets – Make them!

- **Project is a "fresh start" and comes at the "take off stage" in Cambodia's economic development.**

- Sister industries might include the development of agricultural corporations or cooperatives. The Northern Line passes through Cambodia's "Rice Bowl" region and the nation aims to again become an important rice exporter through rural development. The positioning of silos & mills along this line will form part of any comprehensive cereal logistics chain. Synergies can be developed with the growing sugar, tapioca, corn & biomass sectors and the importation of wheat/barley grain through shared bulk agricultural facilities at port.

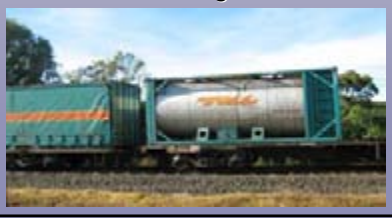
- Australia's GrainCorp provides a good example of farmers benefiting through shared marketing, warehousing, milling, technical advice, labor pooling, bulk procurement of inputs such as fertiliser & pesticides on top of shared transport infrastructure.

- Other potential agricultural products include: woodchips, palm oil & rubber

The watershed for the Southern half of the Great Lake is completely traversed by the Northern Line. The Railway will have to work closely with irrigators on hydrological issues such as above.

Toll has previous experience working with the Australian Wheat Board & GrainCorp.

- Bulk Steel – Australia's Steel Link as an example – same users such as BlueScope present in Asia
- Gas – NGV, LPG
- Chemicals
- Cement, Bricks, Tiles, Sand & Aggregate
- Cold Chain – 100% complementary – No empty returns – apples from China; bananas return
- All conducive to intermodal – flexibility & less investment in rolling stock



- Automotive – finished units & parts – factory to factory
- "Piggy Back" – Loading gauge allows this from Bangkok to border and all of Cambodia – no immigration hold ups, excess staffing, just hook & pull
- Louvre Vans/Containers – FMCG, spare parts/components, courier & mail

Other Development Scenarios

- High End Luxury Travel
- Possible extension of Eastern & Orient Express
- A dedicated Bangkok – Angkor Wat – Phnom Penh Service
- Combined with Phnom Penh – Angkor Wat – Return Via Great Lake allows full utilisation of passenger consist

Action Plan

- Establishment of a Mining Working Group in the GMS-BF - Coordination between the mining & transport sectors
- Tripartite Working Group: SRT, the ADB & Toll Royal – Eastern Line Upgrade & Missing Link joint reconstruction
- FAO/UNESCAP – funding, planning & prioritising for transport, industry, agriculture & the environment

GMS-BF


Together we can do it


Toll Royal
– making an ICON
Thank you
TOLL ROYAL
GROUP CAMBODIA

Restructuring of the Railway in Cambodia TA 4645-CAM

"Process and Lessons Learned"

SOK NATY

Ministry of Public Works and Transport
Concession Management Committee

Agenda

- **Background**
- Strategic Challenge – Strategic Choice – Time for Decision
- Railway Restructuring Project in Cambodia
- A Strategy for Successful Reform
- Process Of Cambodian Railway Concession
- Managing The Concession Agreement
- Securing Long-Term Success of the Concession

Background

- The Royal Railways of Cambodia (RRC) - a state-owned company, operated the railway since 1979
- The condition of the railway steadily deteriorated
- The Government identified the need to reform RRC and requested ADB to provide assistance to develop and implement a reform strategy
- ADB TA 4645 – CAM – Restructuring the Railway in Cambodia started in January 2006.
- TA determined that railway had potential if rehabilitated and recommended that it be concessioned to a private operator

Background

- Legal Frameworks to attract an investor and to authorize concessioning the Railway:
  - July 17, 2006 MPWT Policy Letter
  - Sub-Decree N**o**. 124 Date 12 September, 2007 on Concession of the Royal Railway of Cambodia
- On March 5, 2007, the Government signed a $55 Million loan agreement with ADB for rehabilitation of the railway and re-construction of rail connection to Thailand. (Total project cost: $73 M, $15.2 M in funding from RGC and $2.8 M donated by Government of Malaysia (provided rail to be used in rehabilitation)

Background

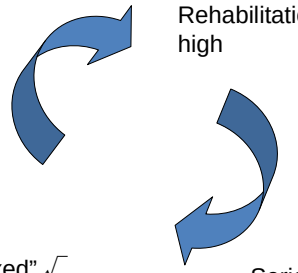
- Loan was conditional upon signing a concession agreement with a private operator to be selected through international competitive bidding
- Concession Management Committee (CMC) created by Sub-Decree No 119 December 13, 2006 and No 124 September 12, 2007 responsible for bidding process, negotiations and management of the Concession Agreement
- Concession Agreement signed between Government and Toll (Cambodia) Co. Ltd. on June 12, 2009 after almost 18 months of negotiations.

Background

- As part of Concession Agreement ($68.6 M) Supplementary Financing for construction of new rail facilities at Samrong and additional upgrading is now under review by ADB/AusAid and RGC.
- Concession agreement became effective on October 22, 2009. Toll (Cambodia) Co Ltd. Is now responsible for operation, maintenance and development of the railway. Rehabilitation of track is proceeding concurrently.
- Recently, by Sub-decree No 163 dated October 01, 2009 , RGC created Railway Department within the Ministry of Public Works and Transport. Assets and staff of RRC are to be transferred to this Department. Among other responsibilities, this Department will take over functions of CMC.

Strategic Challenge – Strategic Choice – Time for Decision

1. Cambodia Railway Dilemma

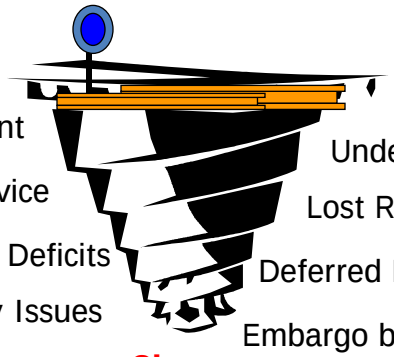


Rehabilitation investment requirements high

Traffic & Revenue
Low ($1.5 Million)
Good Potential if "fixed" √
Commitment from Government √

Serious Run down of Assets
Institutional Constraints
Poor Governance Issues

2. Railway Doom Spiral



Retrenchment
Poor Service
Operating Deficits
Safety Issues

Underinvestment
Lost Revenue
Deferred Maintenance
Embargo by Clients

Closure

3. The Need for Reform

- declining traffic and service levels;
- a deteriorating safety record, with a potential for catastrophic accidents;
- operation based on ad hoc procedures and an undue reliance on the resourcefulness of the staff to keep the railway running;
- abdication of the marketing function to outside agents;
- substantial financial losses.

4. A Strategic Choice for Cambodia

1. The Do Nothing Option – Spiral of Doom
2. Minimalist Change – Outcome is not sufficient to solve the problem.
3. Radical change – the Chance to Lead – to follow best practice experience, with a Business Model which reflects Cambodia.
4. Policy Statement sets the tone – to fine tune to reflect consensus.

Railway Restructuring Project in Cambodia

- TA 4546-CAM
- Guiding Principles for Private Sector Development Reform
  - Ease the burden on business
  - Empower markets and competition
  - Do not go beyond the limited capacity of public institutions
  - Focus on reforms which improve competitiveness and productivity
  - Implement policy changes
  - Focus on reduced risk and transaction costs.
  - Strengthen the Rule of Law

Railway Restructuring Project in Cambodia

- **Key elements for successful reform:**
  - Strong supports and commitment of the Government
  - Governance reform essential component
  - Policy reform vital
  - Best PPP process and procedures

Railway Restructuring Project in Cambodia

- **A Strategy for Successful Reform**

1. **Policy Statement –** Clear and Visionary (Policy letter No 197 MPWT, date 17 July 2006on Restructuring of Cambodia Railway)
2. **Reform Strategy**
   - **Process:**
     - CMU (later CMC) created to represent RGC in all concessioning arrangements
     - Concessioning via ADB Pre-qualification and Bidding Rules - absolute transparency mandated.
     - Concession focuses on freight operations only.
   - **Products:**
     - Concession - vertical, exclusive and protected.
     - Concession Agreement to regulate health, safety, labour and environmental norms (Road competition regulates prices charged)

Railway Restructuring Project in Cambodia

3. Legal Framework to Attract an Investor and Authorize Concessioning the Railway

- Sub-Decree No 119 December 13, 2006 and No 124 September 12, 2007 on establishment the Concession management committee (CMC).

- Sub-Decree No. 124 Date 12 September, 2007 on Concession of the Royal Railway of Cambodia permitted the RGC to concession the railway in Cambodia.

Railway Restructuring Project in Cambodia

4. Business Case for three "Clients" - the Government, the People and the Investor

- Information Memorandum is the lead for investors
- Policy Statement is the catalyst (Policy letter)
- Sub-decree on Railway Concession and Concession Agreement are the vehicles.
- Concessionaire and Properties Development are the financial drivers
- Web site and Media/Public Relation will maintain continuity.

Process Of Cambodian Railway Concession

- Signing of the RRC Concession Agreement was the condition for the loan agreement with ADB for the Railway Rehabilitation Project (Loan : 2288-GMS), included primary loan and supplementary loan of $141.6 Million.
- **Financers:**
  - Asian Development Bank $ 84.0 Million
  - Government of Australia $ 21.5 Million
  - OFID $ 13.0 Million
  - Government of Malaysia (grant in kind) $ 2.8 Million
  - Royal Government of Cambodia $ 20.3 Million

Process Of Cambodian Railway Concession

- **The process of concession of the Royal Railway of Cambodia**
  - **Procurement:** Pre-qualification and Bidding process, Toll Holdings Ltd. (Australia) was selected as the preferred bidder in November 2007.
  - **Contract Negotiations:** commenced in January 2008 and was partially completed on October 15, 2008
  - **Signing** of the Concession Agreement on June 12, 2009
  - **Effectiveness** of the Concession Agreement October 22, 2009.
  - The concession process is currently in a transitional period. **Formal closing** is to be completed in the (...?) quarter of 2010.

Managing The Concession Agreement

- The Concession Management Committee (CMC) is responsible for Managing of the Concession Agreement
- For the long-term period of the concession the Railway Department will take over the functions of the CMC.

Secure Long-Term Success of the Concession

- Strong support and commitment from the Government
- Full completion of the rehabilitation work according to prescribed standard
- Support to CMC and Railway Department on institutional strengthening and Capacity building
- Railway Cross Border Agreement between Cambodia and Thailand to be accomplished

THANK YOU

Greater Mekong Subregion Transport Forum

Presentation by Paul Power

Siem Reap, Cambodia October 27, 2009

GMS Rail Strategy Study Draft Final Report

- Part 1
- *Current Status of the Railways and International Railway Transport in the GMS and Key Findings of the Study*

Author's Note

- When this presentation was prepared, the trade and rail traffic projections for the GMS were not yet completed. As a result, the findings of economic analysis are also not available. Therefore:
  - SOME OBSERVATIONS ARE PROVISIONAL; AND
  - RECOMMENDATIONS ON INVESTMENT PROJECT PRIORITIES ARE SUBJECTIVE

Introduction

- Studies projecting significant increases in GMS intraregional trade and trade between the GMS on other regions are numerous
- Assuming that this trade growth will result in more business for railways, the question is - are the GMS railways ready to meet the challenge? The answer is yes and no
- As we have seem from the country reports, there is a significant focus in all GMS countries on building and upgrading rail lines

Developments in GMS Railways

- **PRC**
  - Completing new double track standard gauge lines to Lao PDR, Myanmar & Vietnam borders
  - Upgrading lines line linking Kunming-Nanning
- **Vietnam**
  - Upgrading Yen Vien-Lao Cai (ADB Loan)
  - Upgrading Ha Noi to Ho Chi Minh City
  - Assessing scope for high speed rail for passenger services
  - Assessing feasibility of line from Ho Chi Minh to border with Cambodia (upgrading and construction)
  - Assessing feasibility of line to Lao PDR
  - Has implemented some restructuring by separating infrastructure from services

Developments in GMS Railways

- **Cambodia**
  - Rehabilitating the entire railway and re-constructing the link to the border with Thailand (ADB loan)
  - Has concessioned the railway to Toll Cambodia Co. Ltd. and is restructuring the management and regulation of railway development
  - Is assessing feasibility of line to link with Vietnam
- **Lao PDR**
  - Now has a rail link to Thailand, but no line to Vientiane
  - Is considering options for rail connections to Vietnam and China

Developments in GMS Railways

- **Thailand**
  - Extensive double tracking and line upgrading is in progress
  - Is reviewing scope for upgrading line to Lao PDR, re-construction of link to Cambodia and line to PR China via Chiang Mai.
- **Myanmar**
  - Extensive upgrading and re-building of national rail network is underway

Problems & Needs

- Aside from the need to construct the missing links, which I will discuss in Part 2, the GMS railways are focusing on expanding capacity through track construction and upgrading
- Building an efficient rail network means more than just building lines
- **Locomotives & rolling stock (wagons & coaches)**
  - With exception of PRC, locos & rolling stock :
    - is old (average 15-20 years) & needs upgrading or replacement
    - is insufficient in quantity and availability to meet current demands
    - Locos are not fuel efficient (and polluting)
  - Critical to ensure that equipment is available to meet the expected demand – regional rolling stock investment requirements need to be determined

Problems & Needs

- **Communications , signalling & train control**
  - other than in PR China "manual systems prevail, modern systems lacking
  - modern systems can increase track capacity (reduce bottlenecks)
  - new systems can improve rail safety – region wide problems with encroachments and road crossings
- **Interoperability**
  - Need to set minimum technical standards (structure gauge, axle loads & speeds) so equipment can be used throughout GMS
  - Track gauge differences not an impediment

Problems & Needs

- **Railway organizations**
  - Over-staffed, low productivity
  - Staff need skills upgrading for new technology - training needs assessment
  - Management information systems lacking
  - Rarely any commercial focus – need to generate sufficient revenue to relieve investment burden on the state
  - Organizational change necessary:
    - in Thailand & Myanmar
    - in progress in Cambodia and Vietnam – but help needed to continue

Problems & Needs

- **Regulatory environment**
  - Reform needed to:
    - facilitate organizational change
    - to encourage private investment
    - To permit pricing freedom
- **Cross Border Issues**
  - CBTA successful for trucking & road travel
  - Most countries have little experience with rail cross border
  - Rail shippers and travelers in Vietnam & China experiencing delays
  - GMS railways need to agree on technical protocols for rail and then to harmonize cross border procedures.
  - Develop an EDI approach for rail freight

Problems & Needs

- **Intermodal**
  - Network needs to be connected to road – investment in ICD's will be needed
  - Determine requirements with participation of private sector
- **Data Needs**
  - Has been very difficult to obtain cross border trade data
  - Good information essential for planning and monitoring progress
  - Need a linked rail database accessible to all GMS countries – with a common statistical reporting framework
  - GMS rail annual statistical report

Private Sector Perspective

- Private sector largely unaware of plans to build a GMS rail network – or many see as something often discussed but never realized
- Dissatisfied with railway services in Thailand, Cambodia & Myanmar
- Freight shippers interested in investing in locos, rolling stock, ICD
- Interest in forming companies to lease locos and rolling

Private Sector Perspective

- Not interested in investing in new lines or running private trains unless regulatory environments are reformed
  - Price disclosure – access charge regimes
  - Pricing freedom – RoI
  - Defined technical & operating standards
- Possible exception to above is private sector interest in Lao PDR. There is an opportunity to develop:
  - Rail lines financed by private sector
  - A model regulatory environment in Lao PDR

GMS Rail Strategy Study
Draft Final Report

- Part 2
- Proposed Goals and Strategy for the Development of an Integrated GMS Railway Network

CANARAIL

Goals

1. To ensure all GMS countries are connected by rail within 10 years
2. To promote development of a seam less rail network by:
   - Achieving technical interoperability
   - Streamlining and harmonizing procedures for cross border movement of goods and people
   - Implementing regional operating rules and safety standards
   - Fostering cooperation between GMS railways
3. To ensure railway infrastructure and equipment is modern and sufficient to meet the demand for rail services

Goals

4. To support the development of GMS railway organizations
5. To develop best practice in the regulation of GMS railways
6. To involve the private sector in the planning and development of the GMS railway network

Strategy

- *1:Make investments to construct missing links to ensure that there is at least one GMS rail route is completed by 2015 (?)*
  - Imperative that at least one complete route is connected
    - Important to Governments, private investors and public
  - Investment required is considerable > $1 Billion++
  - Requires decision on which route should be the priority
  - 3 Potential routes (are there others?)
    - Bangkok-Phnom Penh-Ho Chi Minh City-Kunming
    - Bangkok-Vientiane-Kunming (via Boten/Mohan)
    - Bangkok-Chiang Rai-Jinghong (via Myanmar)-Kunming
  - SEE Handout 1

Strategy 1

- Route selection criteria
  - Relation to GMS Economic Corridors
  - Traffic potential
  - Investment required & economic feasibility (EIRR)
  - Level of interest and marketability
  - Connectivity
  - Environmental/social impacts
- Discussion – what "weight" should apply to each criteria?
- Selecting priority route does not mean others won't be built

Route/Principal Nodes	Relation to GMS Economic Corridors (EC)	Traffic Potential (Freight & Passenger)	Investment Required & Economic Feasibility (EIRR)	Perceived Level of Marketability	Connectivity (Rank)	Environmental/Social Impacts
Bangkok-Phnom Penh-Ho Chi Minh City-Kunming	Links North South and Southern EC's by rail		$1.2 Billion	High	4	Low
Bangkok-Phnom Penh-Ho Chi Minh City-Kunming (+ Vung Anh-Vientiane-Thanalaeng)	Links North South and Southern EC's by rail		Need cost estimate for Vung Anh-Tan Ap-Mu Gia-Vientiane	Medium	2	Low
Bangkok-Vientiane-Kunming (via Boten/Mohan)	Links North South EC by rail		Need cost estimate for Vientiane-Boten-Mohan	Low	5	Unknown
Bangkok-Vientiane-Kunming (via Boten/Mohan) (+ Poipet-Aranyaprathet)	Links North South and Southern EC's by rail		Need cost estimate for Vientiane-Boten/Mohan	Medium	3	Unknown
Bangkok-Chiang Rai-Jinghong-Kunming	Links North South EC by rail		Need cost estimate for Den Chai-Chiang Rai-Jinghong	Medium	4	Negative reaction to Chiang Rai routing in Thailand
Bangkok-Chiang Rai-Jinghong-Kunming (+ Thanalaeng-Vientiane-Boten/Mohan + Poipet Aranyaprathet)	Links North South EC, part of East West EC and part of Southern EC by rail		Need cost estimates for: Den Chai-Chiang Rai-Jinghong and Vientiane Boten/Mohan	High	1	Negative reaction to Chiang Rai routing in Thailand

Strategy 1

- Missing some information needed to determine priority (EIRR, capital costs)
- Connectivity is important – adding a link increases connectivity of existing lines
- Would like forum's input on connectivity assessment

Strategy 2

- INVEST IN UPGRADING THE CAPACITY OF SUPPORTING LINES
- There is no point in investing in construction of links if supporting railway lines (and railways themselves) are inadequate
  - Infrastructure
  - Locos and rolling stock
  - Railway organizations
  - Intermodal connections

Strategy 3

- PROVIDE SUPPORT TO TECHNICAL ASSISTANCE INITIATIVES VITAL TO ACHIEVING AN EFFICIENT RAIL NETWORK
- Supports development of efficient, seamless and integrated network
- Requires Technical Assistance support for
  - determining infrastructure upgrading needs on existing lines
  - determining loco and rolling stock needs
  - implementing organizational change and development
  - Regulatory reforms
  - Developing common standards
  - Building cooperation among GMS railways

Strategy 4

- ESTABLISH A GMS RAIL COORDINATION OFFICE IN THE GMS
  - Building an interconnected and seamless rail network is a massive undertaking on a regional scale
  - Role is to
    - Assist in mobilization of public & private capital investment
    - Coordinate and monitor progress of a diverse array of activities
    - Provide information and communicate with
      - Government
      - Public
      - Private sector
      - GMS railways

GMS Rail Strategy Study
Draft Final Report

- Part 3
- Proposed Action Plan for the Next Ten Years

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Preliminary List of Proposed Projects

- Line construction priorities dependant on
  - Selection of priority routing

(Additional information needed to complete evaluation - economic analysis, traffic forecasts)

- Project list depends on input from Forum – your additions , deletions and priorities
- SEE Handout #2 which will be basis for discusssion

List of Possible Projects

Reference #	Rail Line or Project	Country	Brief Project Description	Estimated Capital Cost ($ Million)	Comments	Consultant's Recommendations on Priority
1	Aranyapathet-Cambodia Border	Thailand	Line restoration	5		
2	Thanalaeng-Vientiane Extension	Lao PDR	New line construction	25	Feasibility study completed	
3	Thanalaeng-Lak Sao-et (20 Km extension)	Lao PDR	New line construction	20	Potential PPP - Feasibility Study	
4	Phnom Penh-Loc Ninh	Cambodia	New line construction	600	Feasibility Study in progress	
5	Loc Ninh-Di Anh (HCMC)	Vietnam	New line construction & restoration	570	Feasibility Study	
6	Nam-Tok-Three Pagoda Pass-Thanbyuzayat	Thailand	New line construction		Determine Thailand's plans	
7	Thanbyuzayat-Three Pagoda Pass	Myanmar	New line construction	250		
8	Vung Anh-Tan Am-Mu Gia	Vietnam/Lao PDR	New line construction		Feasibility Study	
9	Vientiane-Mu Gia	Lao PDR/Vietnam	New line construction		See project # 28	
10	Menghzi-Hekou	PR China	New line construction	1200	Construction in progress	
11	Vientiane-Boten-Mohan	Lao PDR/PR China	New line construction		See project # 28	
12	Yuxi-Mohan	PR China	New line construction		Construction in progress - extent of construction depends on Lao PDR plans	
13	Dali-Ruili	PR China	New line construction	2200	Construction in progress - extent of construction depends on Myanmar plans	
14	Lashio-Muse-Ruili	PR China/Myanmar	New line construction	480		
15	Savannakhet-Bao Lao-Dong Ha	Lao PDR/Vietnam	New line construction		See project # 28	
16	Bua Yai-Mukdahan-Savannakhet	Thailand/Lao PDR	New line construction			
17	Den Cai-Chang-Rai-Mae Sai	Thailand	New line construction		Feasibility study	
18	Mae-Sai-Jinghong-Kunming	Thailand/Myanmar/PR China	New line construction		Feasibility study	
20	Bangkok-Nong Khai	Thailand	Capacity upgrading		Supporting Line - study in progress	
21	Klong Sip Kao-Aranyaprathet	Thailand	Capacity upgrading	60	Supporting Line - study complete	
22	Bangkok-Den Chai	Thailand	Capacity upgrading		Supporting Line	
23	Lashio-Mandalay	Myanmar	Capacity upgrading	700	Supporting Line - study needs updating	
24	Kunming-Nanning	PR China	Capacity upgrading		Supporting Line	
25	Hanoi-Ho Chi Minh	Vietnam	Capacity upgrading	620	Supporting Line - upgrading in progress	
26	Dong Dang-Hanoi	Vietnam	Capacity upgrading		Supporting Line	
27	Yen Vien-Hanoi-Haiphong	Vietnam	Capacity upgrading		Supporting Line	
28	Comprehensive assessment of proposed rail developments in Lao PDR	Lao PDR	Railway Sector Strategic Plan		Will aid in determination of preferred/feasible routings	H
29	ICD Development Study	Regional	Determine scope for and investment required in ICD		Involves private sector	L
30	GMS Railway Minimum Technical Standards	Regional	Establish & support regional working group to decide on standards		Common standards essential for network connectivity & interoperability	H
31	GMS Railway Rolling Stock Needs	Regional	Long term investment needs assessment & strategy			H
32	GMS Railway Training Needs	Regional	Long term investment needs assessment & strategy			M
33	Rolling Stock Leasing	Regional	Determine potential for development of private leasing companies		Involves private sector	L
34	GMS Railway Transshipment/Exchange Facility Needs		Investment needs assessment & strategy		To facilitate logistics chains and smooth functioning of network	M
35	Cross Border Rail Technical Protocols	Regional	Establish & support regional working group to define and resolve issues		To facilitate logistics chains and smooth functioning of network	H
36	Harmonization of Cross Border Procedures	Regional	Establish & support regional working group to define and implement a process for harmonizing customs procedure for rail		To facilitate logistics chains and smooth functioning of network	M
38	GMS Rail Database & Information Network	Regional	Establish & support regional working group			M
39	Railway Organizational Restructuring	Vietnam	Develop blueprint for next stages of restructuring		Supports efforts already accomplished	M
40	Railway Organizational Restructuring	Thailand	Assistance on public/private/employee consultation & development of strategy		Necessary first step if restructuring to be considered	H
41	Regulatory Reform	Regional	Assessment of need for Regulatory and Legislative Reforms		Lack of reforms are a barrier to private sector participation	H
42	Assessment of Safety Issues in GMS Railways	Regional	Assess safety issues and develop model standards and regulations			M
43	GMS Rail Coordination Office	Regional	Establish & support regional coordination/liaison office		Essential for coordination of major regional undertaking	H

Greater Mekong Subregion (GMS)

Review of Transport Projects Along the GMS Corridors

James P. Lynch
Director, Transport and Urban Development
Southeast Asia Department
Asian Development Bank
and
Ronald Antonio Q. Butiong
Senior Regional Cooperation Specialist
Regional Cooperation and Integration Group
Southeast Asia Department
Asian Development Bank

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Presentation Outline

- The GMS Transport Corridors Network
- The Vientiane Plan of Action for GMS Development (2008-2012) – Transport Sector
- Review of Individual Countries' Transport Projects Per Corridor
- Possible Reprioritizations and Directions for Future Projects (Open Discussion)

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Vientiane Plan of Action (VPOA) for GMS Development, 2008-2012

- Endorsed and adopted by the Third GMS Summit (March 2008, Vientiane, Lao PDR)
- Enhancing economic competitiveness and accelerating our economic and social development process through the greater use of improved and expanded connectivity
- In the Transport Sector, among the key Summit directives are:
  - accelerate the completion of GMS transport corridors;
  - develop other transport modes, particularly railways;
  - develop a road system that supports subregional tourism;
  - extend subregional transport connectivity to the poor and remote areas.

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Transport Projects in the VPOA

Code/ Number	Project Name	Corridor
1	GMS Cambodia Northwest Provincial Road Improvement Project *(Cambodia)*	**Southern Corridor**
2	Border Crossing Facility at the Cambodia/Lao PDR Border (road linking National Road 7 in Cambodia and National Road 13 in Lao PDR) *(Cambodia and Lao PDR)*	**Southern Corridor**
3	Phnom Penh-Neak Loueng Road and Mekong Bridge at Neak Loueng *(Cambodia)*	**Southern Corridor**
4	Nakhon Phanom-Khammouane Mekong Bridge *(Lao PDR and Thailand)*	**Central Corridor**
5	Highway 1020, 1152: Chiang Khong-Chiang Rai Section 1 Highway 1020, 1152: Chiang Khong-Chiang Rai Section 2 *(Thailand)*	**North-South Corridor**
6	North-South Economic Corridor International Mekong River Bridge (with financial assistance from the People's Republic of China and Thailand) *(PRC, Lao PDR, and Thailand)*	**North-South Corridor**
7	Highway 1016: Mae Chan-Chiang Saen, including Chiang Saen bypass *(Thailand)*	**North-South Corridor**

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Transport Projects in the VPOA

Code/ Number	Project Name	Corridor
8	Highway 1290: Mae Sai-Chiang Saen *(Thailand)*	**North-South Corridor**
9	GMS Ha Noi-Lang Son Expressway Project *(Viet Nam)*	**Eastern Corridor**
10	GMS Ha Long-Mong Cai Expressway Project *(Viet Nam)*	**Eastern Corridor**
11	Ben Luc-Long Thanh Expressway *(Viet Nam)*	
12	Second GMS Northern Transport Network Improvement: Louangphrabang-Thanh Hoa *(Lao PDR and Viet Nam)*	**Northeastern**
13	Western Yunnan Roads Development Project II *(PRC)*	**Northern Corridor**
14	GMS Southern Coastal Corridor (SCC), Phase II *(Viet Nam)*	**Southern Coastal Corridor**

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Transport Projects in the VPOA

Code/ Number	Project Name	Corridor
15	Central Mekong Delta Transport Connectivity *(Viet Nam)*	**Eastern Corridor**
16	Dali-Lijiang Road Upgrading *(PRC)*	**Northern Corridor**
17	Baise-Debao-Longbang Expressway *(PRC)*	**Northern Corridor**
18	Hechi-Baise Expressway *(PRC)*	**Northern Corridor**
19	Route 14A: Junction Route 16-Lao PDR/Cambodian Border *(Lao PDR)*	**Central Corridor**
20	Route 16A: Junction Route 16-Junction Route 11 *(Lao PDR)*	
21	East-West Corridor: Thingannyinaung-Kawkareik *(Myanmar)*	**East-West Corridor**

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Transport Projects in the VPOA

Code/ Number	Project Name	Corridor
22	Mae Sot-Mukdahan Upgrading *(Thailand)*	**East-West Corridor**
23	GMS Highway Expansion Project *(Thailand)*	**East-West Corridor and Southern Corridor**
24	Bridge over Mekong between Xieng Kok and Kyaing Lap including Access Road from Tarlay-Kyainglap *(Lao PDR and Myanmar)*	**North-South Corridor**
25	Bien Hoa-Vung Tau Expressway *(Viet Nam)*	**Eastern Corridor**
26	Dau Giay-Lien Khuong Expressway *(Viet Nam)*	**Eastern Corridor**
27	GMS Dau Giay-Phan Thiet-Nha Trang Expressway (Viet Nam)	**Eastern Corridor**

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Transport Projects in the VPOA

Code/ Number	Project Name	Corridor
28	Nanning-Kunming Railway Capacity Expansion *(PRC)*	**Northern Corridor**
29	Thanaleng-Nong Khai Railway Extension to Vientiane *(Lao PDR and Thailand)*	**Central Corridor**
30	Dali-Ruili Railway Line *(PRC)*	**Northern Corridor**
31	Mengzhi-Hekou Railway Line *(PRC)*	**Eastern Corridor**


PROOF ONLY
YUNNAN PROVINCE AND
GUANGXI ZHUANG AUTONOMOUS REGION
GREATER MEKONG SUBREGION
TRANSPORT CORRIDOR PROJECT
(as of September 2009)
IN THE
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YUNNAN
GUIZHOU
HUNAN
GUANGDONG
Gulf of Tonkin

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CHINA
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GREATER MEKONG SUBREGION
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THAILAND
Bay of Bengal
Gulf of Martaban
Gulf of Thailand
ANDAMAN SEA


THAILAND
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(as of September 2009)
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LAO PEOPLE'S DEMOCRATIC REPUBLIC
CAMBODIA
ANDAMAN SEA
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Gulf of Thailand
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PEOPLE'S REPUBLIC OF CHINA
Gulf of Tonkin
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GMS Subregional Transport Forum

Siem Reap, 27-28 October 2009

Developing Connectivity in the ESCAP region

Pierre Chartier

UNESCAP Transport Division

Economic context

Figures and forecasts

2008

- *World container handling activities at 508 million TEU*
- *5% growth*
- *20 of the world's top 30 container the ESCAP region*

- **Asia's emerging economies could grow by at least 5% in 2009**
- **annual growth of 7 to 8 per cent over the next five years**
  (i.e. at least three times the rate expected for developed countries in Europe and North America)
- **increasing share of intra-Asian trade in overall exchanges**
  (e.g. India-China trade multiplied by 13 over 2000-2007 and India-ASEAN trade grew at 27% p.a. over same period)

World trade forecasts

- **Prosperous coastal areas**

  Establishment of manufacturing centres and logistics activities

  Developed communities

  Higher income

  Better access to health and education services

- **Forgotten hinterland areas**

  Unbalanced spatial development

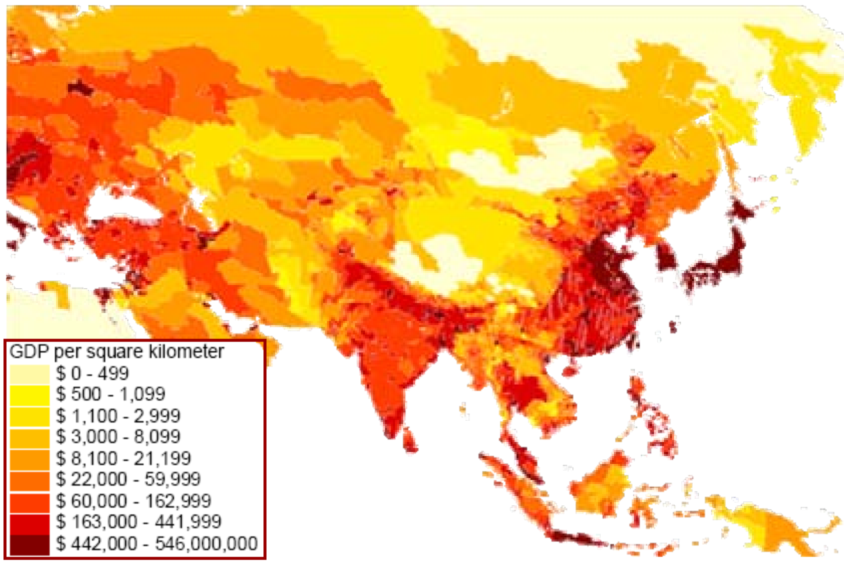
  Social inequalities

  Over-exploitation of resources in certain areas

ESCAP

Economic development in ESCAP region

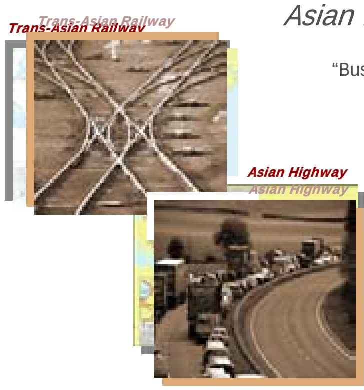
GDP density map



Ministerial Conference on Transport / *Intermodal transport corridors* / *Intermodal transport system*

Asian Highway & Trans-Asian Railway Networks

Containerisation & Globalization



“Busan Declaration on Transport Development in Asia and the Pacific”

Issues

Flexibility and speed in the transport of manufactured goods and agricultural ...

World population will continue to increase

Greater ...

Extension of the markets over which ... can be traded

Existing modes are being stretched to capacity

Transport CO2 emissions continue to rise

Opportunities

Land acquisition (real and provision for future extension

Wide availability of skilled manpower for industry within a core strip of land

Greater employment opportunities

Mode integration at interfaces (optimizing use of each mode and reducing the carbon footprint of transport sector)

- **Intergovernmental Agreement on Asian Highway Network** *(141,000 km)*
  - 28 signatories, 24 Parties
- **Intergovernmental Agreement on the Trans-Asian Railway Network** *(114,300 km)*
  - Entry into force on 11 June 2009
  - 22 signatories, 11 Parties

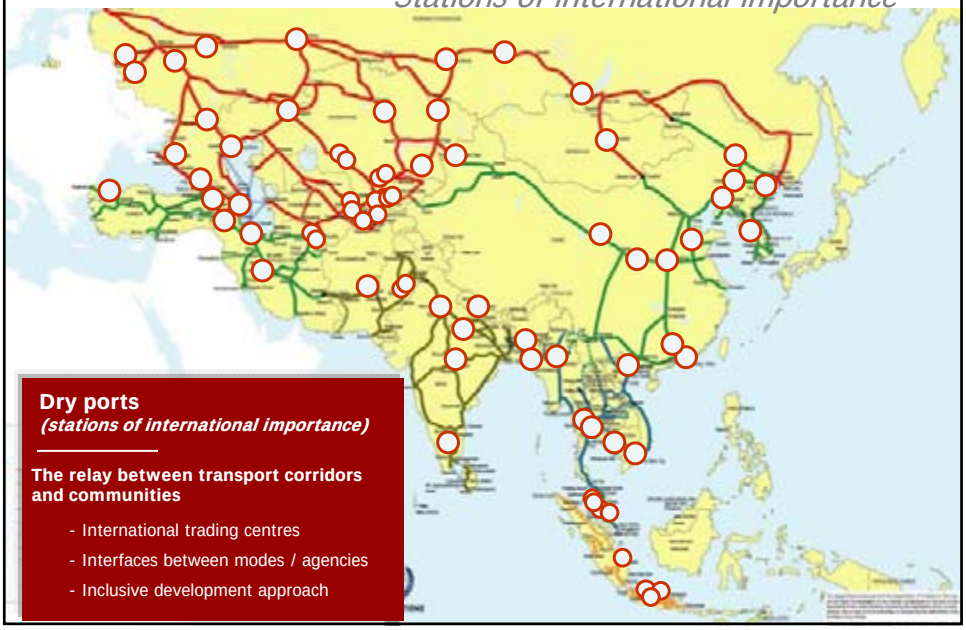
- ***giving priority to investment in Asian Highway and Trans-Asian Railway*** networks, including intermodal interfaces to link them with water and air transport networks
- ***promoting the development of economic and logistical activities at intermodal interfaces***, particularly at production and consumption centres and around seaports
- developing an ***international integrated intermodal transport system*** that contributes to long-term objective of regional cooperation in support of international trade

Working Groups

- **a common vision**
- **joint programme of actions**
- **identification of investment requirements and sources**

Serving sustainable development

Stations of international importance



Dry ports
(stations of international importance)

The relay between transport corridors and communities

- International trading centres
- Interfaces between modes / agencies
- Inclusive development approach

Way forward

the ESCAP's agenda

UNITED NATIONS ESCAP

- **1st Meeting of the Working Group on the Trans-Asian Railway Network**
  (15 December 2009)
- **1st Forum of Asian Ministers of Transport**
  (14 to 18 December 2009)

www.unescap.org/ttdw

Info :

Major issues to be reviewed

Transport impact on development, poverty, environment and society, including facilitation

Seeking government commitments on

- *Intergovernmental Agreement on dry ports*
- *Minimum standards and codes of conduct for freight forwarders, multimodal transport operators and logistics services providers*

Th@nk you