

Road Map for ACD Regional Connectivity

Executive Summary

Creating a seamlessly and comprehensively connected region is vital to securing Asia's economic vibrancy, competitiveness, growth and security. This Road Map proposes 7 priority areas for ACD connectivity: Institutional Infrastructure, Telecommunications Connectivity, Energy Security and Connectivity, Food Security and Mobility, Financial Connectivity and Security, Tourism, and Human Development. A total of 16 projects under these 7 areas are proposed.

These priority areas and projects are presented to Member States for their consideration. It is envisaged that this Road Map would provide a platform on which ACD Member States could pursue their shared interests and achieve concrete results in enhancing regional connectivity. It is hoped that the Road Map and some of its priority projects would be endorsed as a key outcome of the 2nd ACD Summit, tentatively scheduled for October 2016, in Bangkok.

Proposed ACD Connectivity Initiatives
I. Transport and Telecommunication Infrastructure
1.1 Inter-Subregional Cooperation to Complete Missing Links in Asian Highway and Trans-Asian Railway
1.2 ACD Fiber Optic Company
II. Institutional Infrastructure
2.1 Framework Agreement on ACD Economic Integration
2.2 ACD Agreement on Trade in Goods
2.3 ACD Investment Agreement
2.4 ACD Agreement on Trade Facilitation
2.5 ACD Agreement on Trade in Services
III. Energy Security and Connectivity
3.1 ACD Power Grid
IV. Food Security and Mobility
4.1 ACD Food Supply Network
V. Financial Connectivity and Security
5.1 ACD Payment Network
5.2 ACD Infrastructure Bond Market
5.3 Study on ACD Exchange Rate System Stability
VI. Tourism
6.1 Visa Exemption / Special Visa Arrangement for Tourists
VII. Human Development
7.1 Financial Literacy
7.2 Digital Literacy
7.3 Joint Educational Programs

I. Rationale

Spurred by rapid socio-economic development and geopolitical shifts, Asia stands at a critical moment in history. The notion of the “Asian Century” has long arrived, underlining the ascendancy of Asia on the world stage. Asia’s international standing has risen, so has its role in fuelling global economic growth. However, to turn the vision of the “Asian Century” into reality, Asian countries cannot rely on past achievements alone. Asian leaders need to sustain the momentum of Asia’s growth by charting a clear and concrete course in which Asia can utilize its diverse strengths to tackle common challenges and fulfill shared aspirations. They need to create conditions in which Asia can consolidate its status as a vibrant and resilient player in the global economy - and an active and responsible member of the international community.

ACD is ideally and strategically positioned to lead the quest for this vision for Asia. In this regard, connectivity is one of the most important priorities that will secure Asia’s promising future. Connectivity is a vital underpinning of stability, prosperity, inclusive and sustainable growth in Asia. This study highlights the multifaceted nature of connectivity - and proposes cooperation strategies aimed at strengthening key dimensions of ACD regional connectivity. Fostering regional connectivity will reinforce Asia’s geopolitical standing, economic integration and sustainable development. Deepened regional connectivity will also alleviate economic and social disparities, both within countries and across Asia’s different sub-regions, thereby contributing to greater human security and regional stability.

A study by the Asian Development Bank (ADB) in 2010 points to the necessity of infrastructure investment to unlock the enormous potential of human and natural resources in this region. In addition to the economic benefits, social development and poverty alleviation can be achieved for over half of the world’s poor.

A large portion of infrastructure investment in Asia serves domestic demand. In the past decade, there have been a growing number of initiatives in Asia to link domestic infrastructure to form a regional network. The synergy from cross-border connectivity would create large economic value by opening up access to new markets between the adjacent countries and beyond. These ideas have garnered popularity and political support at the regional and sub-regional levels, e.g. **the Master Plan for ASEAN Connectivity (MPAC), the Greater Mekong Sub-region (GMS) and the Pan Beibu Gulf Economic Cooperation.**

In order to realize the synergistic capabilities of domestic and sub-regional infrastructure, the time is now ripe for the realization of pan-Asian connectivity. Among existing initiatives are the **Trans-Asian Highway and Railway and the Information Superhighway** both proposed by UNESCAP, and the **“Silk Road Economic Belt”** and **“21st Century Maritime Silk Road”** initiatives proposed by China. However, the pace of connectivity development has been quite slow because of compound challenges, both at the domestic and sub-regional levels. In this regard, the establishment of the Asian Infrastructure Investment Bank (AIIB) and similar financing mechanisms should facilitate the realization of connectivity projects.

II. Status of ACD Regional Connectivity

ACD consists of five sub-regional groupings and four additional countries. The total value of trade of the group is US\$12 trillion or 47.9% of its combined GDP in 2012. This suggests that trade is a vital engine of economic growth in ACD.

Transport connectivity remains a priority to achieve the sustainable and inclusive economic development of Asia. However, region-wide development is still slow due to gaps in transport infrastructure development as well as absence of regional legal frameworks for cross-border facilitation. The Asian Highway (AH) and Trans-Asian Railway (TAR) networks comprise 143,000 km of roads and highways, and 117,500 km of rail routes. According to UNESCAP, 11,915 km of AH still falls below minimum standard of road quality and 10,500 km of rail track in TAR still have yet to be constructed. There are at least 42 framework

agreements designed to facilitate cross-borders transport at the sub-regional level, i.e. ASEAN, GMS, and TRACECA, etc., and over 100 agreements made at bilateral level.

While financing has been cited as the major constraint for the implementation of cross-border infrastructure projects, it is only symptomatic of other underlying challenges that create uncertainty, increase risks and drive up costs. For example, the differences in rules and regulations for government procurement among countries have made the cost of implementation unnecessarily high. To circumvent these issues, innovative methods for organizing funding and distributing the benefits are necessary. More importantly, strong political support is required to harmonize laws and regulations governing the implementation of connectivity projects.

ACD can provide the political impetus for stronger region-wide efforts to undertake connectivity initiatives. The ACD Summit is the only forum that brings together national leaders from all of Asia's sub-regions. The objective of this study is to provide background and preliminary thoughts on plausible areas of cooperation that will serve to enhance regional connectivity within the ACD.

Intra-ACD trade accounts for half (50.74%) of its total trade (Table 1), indicating that region has strong commercial ties. ACD is the major trade destination for each sub-regional group. For example, ASEAN and GCC have more than 60% of their trade with ACD. Even the "Other ACD" group (Iran, Russia, Mongolia and Turkey), which has the lowest trade share with ACD, still has 32% of its trade with the group. However, ACD trade is concentrated in Northeast and Southeast Asia. This suggests that there is a large potential to expand intra-regional trade across sub-regions in ACD.

Table 1: ACD Trade Matrix, 2012.

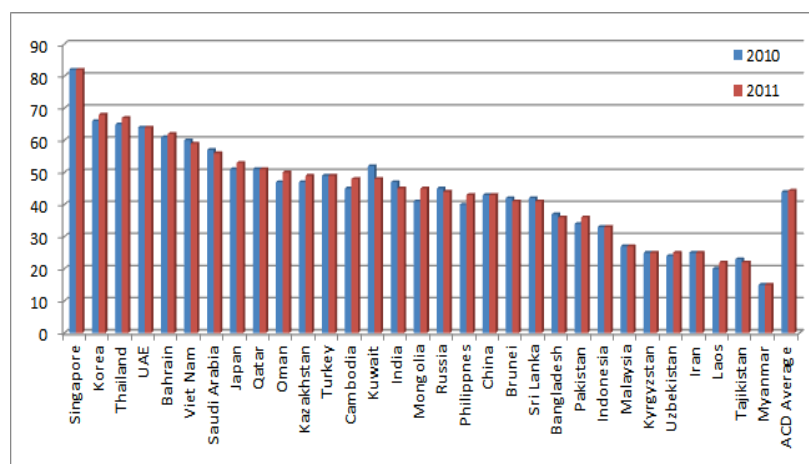
Total (Import+Export) Matrix							
	ASEAN	NE Asia	SAARC	GCC	CAR	Other ACD	ACD
ASEAN	24.43%	11.93%	9.81%	9.48%	0.42%	2.00%	12.88%
NE Asia	29.06%	22.39%	14.86%	31.83%	25.34%	14.77%	23.97%
SAARC	3.54%	2.09%	4.15%	12.77%	0.70%	2.13%	3.58%
GCC	5.39%	6.98%	17.65%	4.85%	0.15%	1.93%	5.71%
CAR	0.02%	0.77%	0.12%	0.02%	4.81%	2.85%	0.84%
Other ACD	1.23%	3.61%	3.54%	1.78%	22.05%	8.48%	3.77%
ACD	63.68%	47.76%	50.13%	60.74%	53.48%	32.15%	50.74%
US	8.11%	12.22%	8.13%	9.22%	1.85%	3.45%	9.84%
ROW	28.21%	40.02%	41.73%	30.03%	44.67%	64.40%	39.41%
World	100%	100%	100%	100%	100%	100%	100%
Total Trade*	2,484	6,619	936	1,364	183	1,425	12,075
%trade/GDP	106.39%	43.27%	40.50%	85.09%	60.18%	42.62%	47.93%
GDP*	2,335	15,297	2,310	1,603	304	3,344	25,192
* Note: unit is US\$ billion							

Source: calculated from Trade Map database, ITC.

Of relevance to ACD is the DHL's Global Connectedness Index 2012. The following key conclusions and implications can be drawn from the GCI:

- Global connectedness has declined since 2008 after the global financial crisis.
- Improvement is seen in recent years in emerging economies.
- In the next 5 years, there will be greater trade among developing countries.
- There will be greater investment demand in connectivity infrastructure in Asia.

Figure 2.1: Global Connectedness Index for ACD



Source: DHL Global Connectedness Index 2012

However, the pace of investment in infrastructure in Asia has fallen, especially in cross-border facilities. They are constrained by the lack of investment for these projects. Major problems of cross-border infrastructure projects are differences in regulations, country credit status, and the political economy of government concessions.

III. The Evolving Global Environment and the Future of the ACD

There are five major global developments that have important implications for the future direction of ACD.

a) ACD will be the major source of global growth in the future

From 2013 to 2019, the IMF predicts that global economy will grow by 36.31% (Table 3.1). ACD countries will contribute 41.66% to this total global growth. As a vital engine of global economic growth, the ACD as an economic entity carries additional roles and responsibilities beyond the welfare of its own region.

Table 3.1: Contribution to Global Economic Growth 2013-2019

	GDP (US\$bill.)		Growth	Weight of GDP	Weighted Rate	Contribution
	2013	2019				
ASEAN	2,406	3,608	49.944%	0.033	1.62%	4.47%
NE Asia	15,305	22,432	46.567%	0.207	9.63%	26.53%
SAARC	2,361	3,872	63.990%	0.032	2.04%	5.62%
GCC	1,642	2,102	28.011%	0.022	0.62%	1.71%
CAR	333	533	59.856%	0.005	0.27%	0.74%
Other ACD	3,355	4,049	20.684%	0.045	0.94%	2.58%
Total ACD	25,402	36,595	44.062%	0.343	15.13%	41.66%
Row	48,580	64,252	32.260%	0.657	21.18%	58.34%
World	73,982	100,847	36.312%	1.000	36.31%	100.00%

Source: World Economic Outlook database, IMF, April 2014.

b) Over half of global population growth will live in ACD countries

From 2013 to 2019, ACD's population is expected to increase from 4.2 billion to 4.46 billion (Table 3.2). This growth accounts for 55.28% of global population growth in the period. It also means that by 2019, almost 60% of the global population will be citizens of ACD countries. This demographic development means greater demand for food, housing, jobs, medical services, education, and other public facilities. At the same time, more labor, raw materials and consumers are required to sustain ACD's growth and economic dynamism. Improved connectivity that will bring these two forces together should be the priority for ACD cooperation.

Table 3.2: ACD Population and Growth

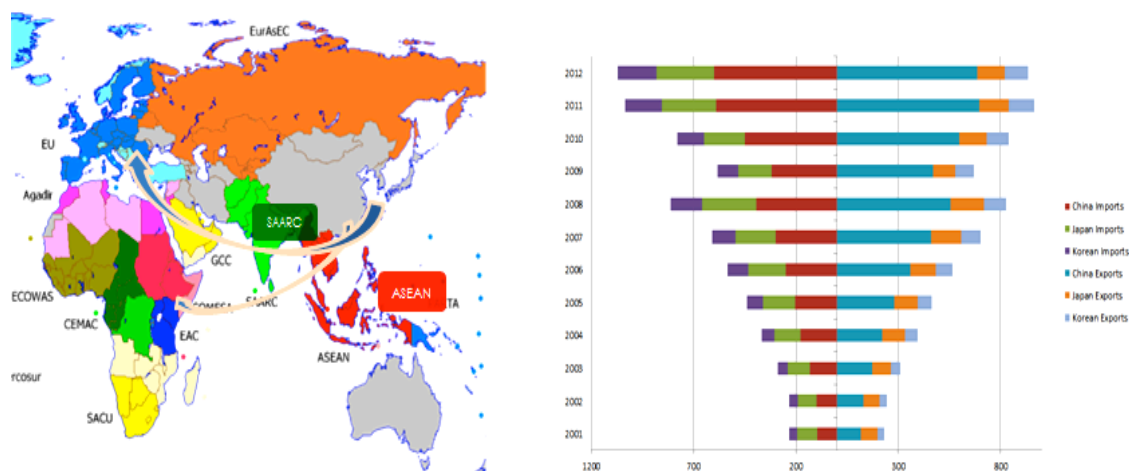
	Pop		Growth	Weight of Pop	Weighted Rate	Contribution
	2013	2019				
ASEAN	618	672	8.767%	0.088	0.77%	11.52%
NE Asia	1,532	1,572	2.609%	0.218	0.57%	8.50%
SAARC	1,640	1,780	8.553%	0.233	1.99%	29.85%
GCC	48	56	16.615%	0.007	0.11%	1.69%
CAR	66	72	8.871%	0.009	0.08%	1.24%
Other ACD	297	308	3.919%	0.042	0.17%	2.48%
Total ACD	4,200	4,459	6.186%	0.597	3.69%	55.28%
Row	2,836	3,046	7.411%	0.403	2.99%	44.72%
World	7,035	7,505	6.680%	1.000	6.68%	100.00%

Source: World Development Indicators Database, World Bank, 2014.

c) Future direction of global growth in trade will be in Asia

The recovery process in the USA and EU in the next few years will focus on their domestic markets. The global direction of trade has clearly moved to Asia, especially between Northeast Asia and other regions (South, Southeast and Central Asia, the Middle East, Africa and Europe).

Figure 3.1 Growth of Trade between Northeast Asia and South, Southeast and Central Asia, the Middle East, Africa and Europe.

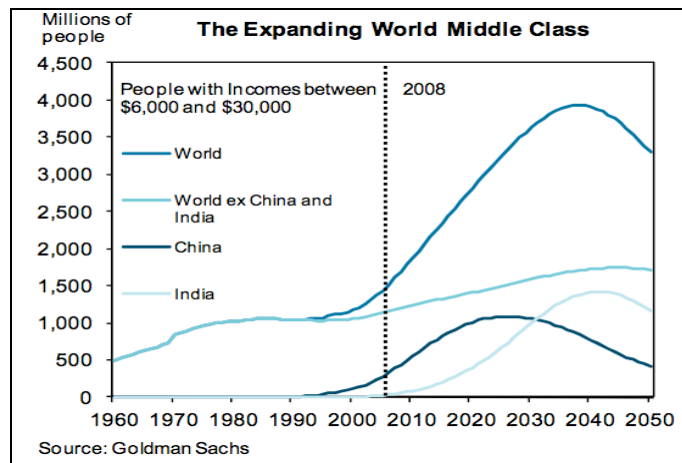


Source: Trade Map Database, ITC, 2014.

d) More than half of the global middle class will be in Asia by 2030

Many studies predict that over 50% of global middle class will be in Asia. Even if the forecast misses the mark by 10 - 20%, growth of the Asian middle class is still a major phenomenon. ACD needs to take advantage of these emerging market opportunities. Asian firms must tap into the expanding middle class market by offering products and services of a higher quality. This requires a strong emphasis on innovation in product technology, which will underpin Asia's competitiveness and growth. The increased value and productivity will help many Asian countries overcome the "Middle Income Trap".

Figure 3.2: Global Middle Class in ACD



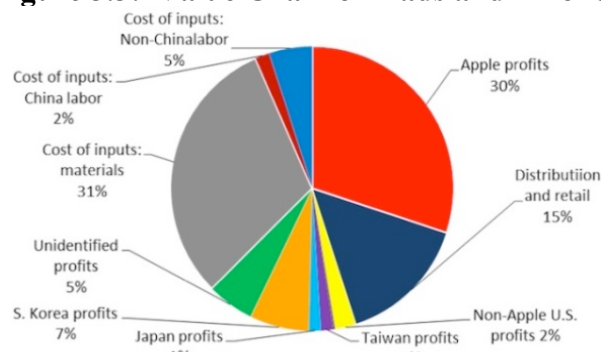
e) Global businesses are moving to Asia

Industries continue to move into Asia as the Asian market continues to expand. At the same time, investment opportunities in developed economies are still limited during the recovery period.

While the presence of transnational corporations in the region helps generate jobs, local players involved in the production network have often received limited benefits. The existing cross-border business mode means that local players in developing Asia are getting a relatively small share of the total value of the final output, as shown by the value chain of iPads and iPhones (Figure 3.3).

ACD should promote greater allocation of benefits to local businesses and workers. ACD needs to explore and formulate new business models in order to derive more benefit from the new global value chains. It should aim to move up the supply chain by investing in the developed countries and improve the distribution of the benefits generated by regional value chains.

Figure 3.3: Value Chain of iPads and iPhones



f) Consumer behavior is changing and will determine future marketing and production

ACD has seen rapid increase in the number of internet users (Table 3.4) and highest growth in the number of mobile phone subscribers in the world (Figure 3.5). In the near future, more consumers in ACD will be obtaining information, both business and social, from their smartphones. The new generation of consumers, who enjoy higher levels of income and greater access to product information, will demand new ways of trade and payments.

Study by UNESCAP, however, reveals that Asia and the Pacific remains the most digitally divided region in the world. The high cost of international bandwidth has made internet access unaffordable for much of the region – roughly 30% of people in the region use the internet, while only 7.4% are believed to have access to high-speed fixed broadband.

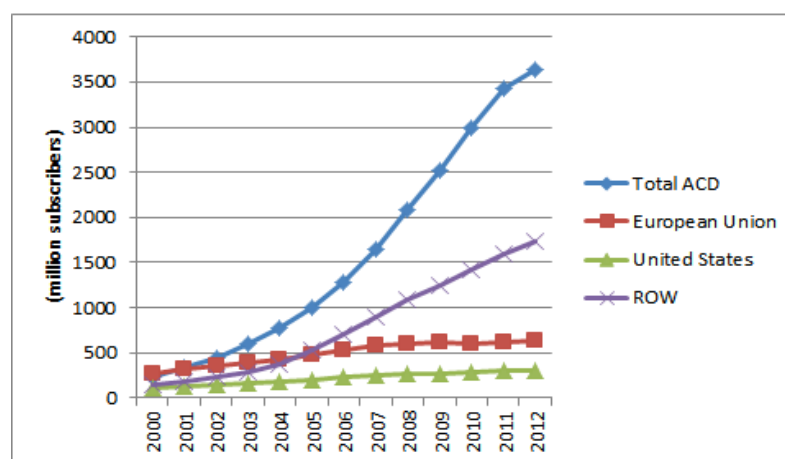
ACD needs to create a new business environment to satisfy the needs and aspirations of the new generation of consumers, who are increasingly connected to the online and digital worlds. The retail trade and logistics services will be directly affected by this change.

Table 3.4: Internet Users in ACD (per 100 people)

	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	Qatar	4.86	6.17	10.23	19.24	20.70	24.73	28.97	37.00	44.30	53.10	81.60	86.20	88.10
2	Bahrain	6.15	15.04	18.05	21.55	21.46	21.30	28.24	32.91	51.95	53.00	55.00	77.00	88.00
3	UAE	23.63	26.27	28.32	29.48	30.13	40.00	52.00	61.00	63.00	64.00	68.00	78.00	85.00
4	Korea, Rep.	44.70	56.60	59.40	65.50	72.70	73.50	78.10	78.80	81.00	81.60	83.70	83.80	84.10
5	Kuwait	6.73	8.55	10.25	22.40	22.93	25.93	28.79	34.80	42.00	50.80	61.40	74.20	79.18
6	Japan	29.99	38.53	46.59	48.44	62.39	66.92	68.69	74.30	75.40	78.00	78.21	79.05	79.05
7	Singapore	36.00	41.67	47.00	53.84	62.00	61.00	59.00	69.90	69.00	69.00	71.00	71.00	74.18
8	Malaysia	21.38	26.70	32.34	34.97	42.25	48.63	51.64	55.70	55.80	55.90	56.30	61.00	65.80
9	Brunei D.	9.00	12.92	15.33	19.60	29.72	36.47	42.19	44.68	46.00	49.00	53.00	56.00	60.27
10	Oman	3.52	5.89	6.87	7.26	6.76	6.68	8.30	16.68	20.00	26.80	35.83	48.00	60.00
11	Saudi Arabia	2.21	4.68	6.38	8.00	10.23	12.71	19.46	30.00	36.00	38.00	41.00	47.50	54.00
12	Kazakhstan	0.67	1.01	1.67	2.00	2.65	2.96	3.27	4.02	11.00	18.20	31.60	50.60	53.32
13	Russian Fed.	1.98	2.94	4.13	8.30	12.86	15.23	18.02	24.66	26.83	29.00	43.00	49.00	53.27
14	Turkey	3.76	5.19	11.38	12.33	14.58	15.46	18.24	28.63	34.37	36.40	39.82	43.07	45.13
15	China	1.78	2.64	4.60	6.20	7.30	8.52	10.52	16.00	22.60	28.90	34.30	38.30	42.30
16	Vietnam	0.25	1.27	1.85	3.78	7.64	12.74	17.25	20.76	23.92	26.55	30.65	35.07	39.49
17	Uzbekistan	0.48	0.60	1.08	1.91	2.59	3.34	6.39	7.49	9.08	17.06	20.00	30.20	36.52
18	Philippines	1.98	2.52	4.33	4.86	5.24	5.40	5.74	5.97	6.22	9.00	25.00	29.00	36.24
19	Thailand	3.69	5.56	7.53	9.30	10.68	15.03	17.16	20.03	18.20	20.10	22.40	23.70	26.50
20	Iran.	0.93	1.48	4.63	6.93	7.49	8.10	8.76	9.47	10.24	11.07	14.70	21.00	26.00
21	Bhutan	0.40	0.86	1.68	2.44	3.16	3.85	4.52	5.92	6.55	7.17	13.60	21.00	25.43
22	Kyrgyz Republic	1.04	3.00	3.00	3.91	5.09	10.53	12.31	14.03	15.70	17.00	18.40	20.00	21.72
23	Sri Lanka	0.65	0.79	1.05	1.46	1.45	1.79	2.54	3.88	5.80	8.78	12.00	15.00	18.29
24	Mongolia	1.26	1.65	2.04					9.00	9.80	10.00	10.20	12.50	16.40
25	Indonesia	0.93	2.02	2.13	2.39	2.60	3.60	4.76	5.79	7.92	6.92	10.92	12.28	15.36
26	Tajikistan	0.05	0.05	0.06	0.06	0.08	0.30	3.77	7.20	8.78	10.07	11.55	13.03	14.51
27	India	0.53	0.66	1.54	1.69	1.98	2.39	2.81	3.95	4.38	5.12	7.50	10.07	12.58
28	Lao PDR	0.11	0.18	0.27	0.33	0.36	0.85	1.17	1.64	3.55	6.00	7.00	9.00	10.75
29	Pakistan		1.32	2.58	5.04	6.16	6.33	6.50	6.80	7.00	7.50	8.00	9.00	9.96
30	Bangladesh	0.07	0.13	0.14	0.16	0.20	0.24	1.00	1.80	2.50	3.10	3.70	5.00	6.30
31	Afghanistan		0.00	0.00	0.09	0.11	1.22	2.11	1.90	1.84	3.55	4.00	5.00	5.45
32	Cambodia	0.05	0.08	0.23	0.26	0.30	0.32	0.47	0.49	0.51	0.53	1.26	3.10	4.94
33	Myanmar		0.00	0.00	0.02	0.02	0.07	0.18	0.22	0.22	0.22	0.25	0.98	1.07
	European Union	20.56	25.30	35.14	41.82	46.83	50.97	54.55	60.30	64.19	67.21	70.63	73.20	75.32
	United States	43.08	49.08	58.79	61.70	64.76	67.97	68.93	75.00	74.00	71.00	74.00	77.86	81.03
	World	6.77	8.10	10.59	12.29	14.18	15.80	17.62	20.55	23.27	25.85	29.46	32.55	35.51

Source: World Development Index database, 2014, World Bank

Figure 3.5: Number of Mobile Phone Subscribers (million)



Source: World Economic Outlook database, 2014.

IV. Key Challenges and Implications for ACD

The following challenges have important implications on Asia's long-term security and growth.

i) Food security

In the coming decade, there will be important changes in the global food market. Economic growth in large countries like China and India will induce workers to leave the farming sector and food production to manufacturing and service industries. Agricultural land is dwindling, making way for non-agricultural purposes, and suffers from fertility depletion and climate change. Production will be concentrated in irrigated areas. Food trade will be essential to maintain food security in Asian countries. Yet, food is the most protected commodity. International trade in food and agricultural products is restricted. Given the imperative of enhancing trade in food and ensuring food security in the near future, ACD should look for ways to facilitate the freer movement of food and agricultural products in the region and use the advantage of connectivity transportation as economic corridor to enhance the commercial food production, improve goods inspection system, disease prevention of crop and animal by the SPS tools.

ii) Energy security

Securing an adequate and uninterrupted supply of energy is a challenge for many ACD Member States. The situation will be more serious in the coming decade. ACD has some major importers and exporters of energy as its members. During the past 10 years, energy consumption in ACD countries has increased at a faster pace than the increase in energy production, resulting in a general increase in energy dependency. Four countries, Singapore, Japan, the Republic of Korea and Turkey, have over 70% dependency on energy imports. At the same time, some countries, particularly China, have moved from being net energy exporters to net importers, while Viet Nam and Malaysia are likely to follow the same path in the near future (See Table 4.1). No country has switched from being a net energy importer to net energy exporter.

Moreover, the price of energy is volatile. It has been increasing rapidly during the 1990s through direct manipulation of the supply. The uncertainty in the 2000s was caused by political instability in some of the exporting countries. During the past few years, the price was on a downward trend because of sluggish global economic growth and an increase in energy supply brought about by new technology. As a consequence of these trends, the IMF predicted that the price of crude petroleum would be reduced from US\$104 in 2013 to US\$88/barrel by

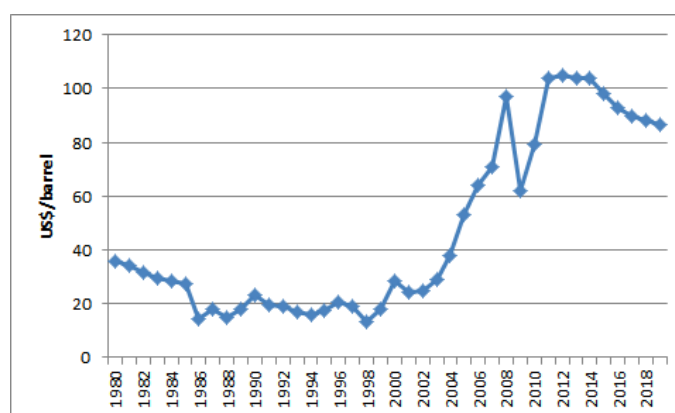
2019 (Figure 4.1). Given these market developments, there is a large potential for joint investment in energy infrastructure and for a regional arrangement that will contribute to adequate, reliable and efficient energy supply in ACD.

Table 4.1 Net Imports of Energy (% of consumption)

	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	Qatar	-446.77	-408.75	-396.40	-410.25	-406.06	-436.84	-406.98	-389.94	-468.72	-471.18	-515.55	-534.60
2	Mongolia	18.69	19.08	17.97	18.98	19.70	-32.44	-35.35	-49.31	-67.35	-140.84	-325.17	-435.29
3	Brunei D.	-725.51	-799.20	-839.33	-746.20	-803.84	-849.99	-608.14	-542.87	-496.51	-522.43	-473.19	-387.83
4	Kuwait	-507.89	-458.14	-388.57	-449.94	-460.62	-456.35	-485.65	-456.71	-431.10	-323.72	-313.22	-374.57
5	Saudi Arabia	-373.03	-340.87	-276.60	-324.48	-284.72	-298.90	-264.08	-284.75	-276.00	-200.77	-180.23	-221.66
6	Oman	-654.75	-676.03	-618.32	-547.38	-513.07	-459.43	-306.22	-244.06	-239.62	-267.63	-211.51	-190.82
7	United Arab Emi	-360.76	-307.67	-267.13	-306.40	-304.43	-303.30	-303.25	-256.89	-220.52	-178.22	-179.39	-187.59
8	Kazakhstan	-120.23	-143.39	-129.85	-136.80	-126.00	-133.38	-107.78	-99.48	-106.29	-133.29	-110.56	-105.05
9	Bahrain	-153.39	-145.00	-137.36	-131.54	-127.06	-119.99	-103.84	-89.88	-79.01	-87.89	-87.13	-90.21
10	Indonesia	-52.89	-51.96	-50.42	-54.13	-50.29	-55.99	-70.90	-74.05	-73.43	-76.11	-80.52	-88.78
11	Russian Federati	-57.93	-61.05	-67.92	-73.47	-81.08	-84.63	-82.95	-84.23	-82.13	-84.05	-84.12	-79.88
12	Iran, Islamic Rep	-106.25	-86.12	-84.02	-97.09	-88.15	-80.04	-78.94	-76.82	-65.16	-60.00	-66.19	-66.71
13	Myanmar	-20.07	-26.41	-26.84	-30.40	-36.81	-49.79	-50.77	-50.95	-50.27	-54.24	-60.96	-59.32
14	Uzbekistan	-8.29	-8.72	-5.74	-9.73	-14.36	-20.10	-19.68	-22.75	-22.80	-26.51	-25.97	-19.92
15	Malaysia	-57.71	-52.86	-53.77	-49.50	-50.52	-43.90	-39.63	-27.12	-25.87	-23.21	-18.21	-11.01
16	Vietnam	-38.92	-36.33	-33.32	-30.32	-47.75	-46.57	-45.82	-37.95	-25.55	-24.33	-12.69	-8.80
17	China	2.72	-0.17	0.81	2.03	4.69	4.18	6.47	6.33	5.91	8.45	10.12	10.82
18	Bangladesh	18.54	19.90	19.37	19.22	18.44	19.27	16.71	17.48	16.67	15.88	16.24	16.63
19	Pakistan	26.80	24.92	24.25	20.10	20.83	20.34	23.07	24.31	24.23	23.50	23.73	23.31
20	India	19.86	19.37	19.66	19.03	21.04	21.42	22.42	23.79	24.51	26.36	26.59	27.82
21	Cambodia	20.34	21.64	18.64	19.57	24.48	27.36	29.68	33.50	35.16	26.58	27.92	28.88
22	Tajikistan	41.15	39.29	36.06	32.41	36.42	33.98	37.07	39.06	39.83	35.58	36.31	35.64
23	Philippines	50.97	51.92	48.14	46.96	45.96	44.79	44.37	42.52	42.58	38.41	42.20	40.95
24	Thailand	39.20	42.03	44.11	44.65	46.76	44.35	43.25	42.33	39.17	39.79	39.91	42.30
25	Kyrgyz Republic	40.97	40.04	52.24	50.09	45.38	46.56	47.47	51.47	60.15	52.25	54.62	47.71
26	Sri Lanka	42.98	43.31	44.58	46.38	45.84	45.34	43.25	45.19	43.28	43.76	43.68	48.86
27	Turkey	66.13	65.32	67.52	69.69	70.18	71.64	71.68	72.73	70.58	68.99	69.35	71.49
28	Korea, Rep.	81.69	81.71	82.43	81.26	81.60	79.55	79.51	80.82	80.29	80.66	82.03	81.96
29	Japan	79.61	79.48	81.01	83.39	81.80	80.69	80.48	82.41	82.10	80.10	80.06	88.80
30	Singapore	99.10	98.47	98.45	98.67	98.93	98.50	98.60	98.46	98.57	97.10	97.54	97.21
31	Afghanistan	na	na	na	na	na	na	na	na	na	na	na	na
32	Bhutan	na	na	na	na	na	na	na	na	na	na	na	na
33	Lao PDR	na	na	na	na	na	na	na	na	na	na	na	na

Source: World Economic Outlook database, 2014.

Figure 4.1: Price of Crude Petroleum



Source: World Economic Outlook database, 2014.

iii) Financial stability and security

Deepened financial linkages across countries, marked by freer and larger flows of capital, have raised concerns over regional financial stability. ACD as a group holds over 64% of global international reserves (Table 4.2). However, that is not a sufficient guarantee that there will not be a financial crisis in the region, or that a financial crisis elsewhere will not affect regional financial system. ACD needs a stronger financial system to ensure financial security. This needs to be done as a group. Any single economy is too small to do it alone.

By 2020, ACD should have a more efficient way to manage the financial sector and play a more important role in the international financial policy platform. For example, there could be mobilization of large international reserves to form an emergency ACD reserve or expansion of the Chiang Mai Initiative Multilateralisation or other similar activities. Moreover, given the need for infrastructure development, ACD should also consider establishing a regional bond market to fund infrastructure projects.

Table 4.2: International Reserves in ACD in mid-2014

No.	Rank	Country	Foreign exchange reserves (Millions of US\$)	Figures as of
1	1	China	4,009,553	Mar 2014[1]
2	2	Japan	1,283,921	Jun 2014[2]
3	3	Saudi Arabia	738,817	Jun 2014[3]
4	5	Russia	478,250	Jun 2014[5]
5	8	Korea	366,546	Jun 2014[8]
6	9	India	319,390	Aug 2014[10]
7	10	Singapore	277,967	Jun 2014[11]
8	14	Thailand	168,207	Jun 2014[15]
9	19	Turkey	133,534	Jun 2014[20]
10	20	Malaysia	131,865	Jun 2014[21]
11	22	Indonesia	107,678	Jun 2014[22]
12	26	Philippines	80,733	Jun 2014[26]
13	29	Iran ^[2]	68,060	Dec 2013[14]
14	35	UAE	58,040	Dec 2013[14]
15	43	Qatar	41,468	May 2014[39]
16	47	Kuwait	34,350	Dec 2013[14]
17	48	Vietnam	32,490	Dec 2013[14]
18	51	Kazakhstan	26,500	Jun 2014[44]
19	54	Bangladesh	21,467	Jun 2014[46]
20	62	Oman	17,700	Dec 2013[14]
21	63	Uzbekistan	17,000	Dec 2013[14]
22	69	Pakistan	14,304	July 2014[57]
23	74	Myanmar	8,278	Dec 2013[14]
24	80	Sri Lanka	6,452	Dec 2013[14]
25	83	Afghanistan	5,983	Dec 2013[14]
26	84	Bahrain	5,933	Dec 2013[14]
27	87	Cambodia	5,415	Dec 2013[14]
28	111	Kyrgyzstan	2,126	Jun 2014[72]
29	115	Mongolia	1,318	Jun 2014[76]
30	120	Laos	846	Dec 2013[14]
		Total ACD	8,464,191	64.40%
		World Total	13,143,998	

iv) Information and communications security

The increasing capability of smart phones and growing demand for Internet broadband access result in higher demand for more efficient and affordable communication and internet services. To meet such demand, better broadband infrastructure is necessary. This presents an investment opportunity where ACD has the potential to meet this demand efficiently by building a regional fiber optic superhighway. Each country can connect to the core facility without the need to build this facility themselves. Small countries can enjoy a

much more efficient Internet service from a joint regional facility. This regional fiber optic superhighway can be jointly owned by ACD Member States and the private sector as a regional project. Funding may be contributed on a voluntary basis.

Regional initiatives are being discussed, e.g., the Asia-Pacific Information Superhighway (APIS) project under UNESCAP and UNESCAP – UNECE collaborated Trans-Eurasia Information Superhighway (TASIM) project. To reduce cost of construction, UNESCAP also promote the concept of co-deployment of regional fiber optic superhighway with other cross-border infrastructure projects such as road, rail, electricity transmission lines and gas pipelines.

v) Human security

The allocation of benefits from economic growth is one of the most important challenges facing ACD. Income disparity in ACD is growing. One of the most important barriers hindering distribution of wealth is gap in human development especially in the inequality of professional education and skill in Asia. According to the OECD research, the East and South East Asia are among the most financially involved in the development of education in the world while investment in education development is much lower in Central and South East Asia and the Middle East.

To address this weakness, workers have to be more involved in the management and allocation of benefits. Multi-level collaboration is also essential in promoting inclusiveness and equality in education development. For ACD citizens to gain a higher share of the potential profits to be earned, they should have better access to quality educational services especially to improve their skills demanded by today's increasing transnational business activities. The ACD citizens should be equipped with basic business skills, financial literacy, computer literacy, language skills and an open mindset.

V. Priority Areas

To advance ACD's collective effort in advancing regional connectivity, 7 priority areas are proposed for consideration. These were chosen based on their importance and viability of success - and could serve as examples for subsequent work. This section provides the rationale for selecting these priority areas. Their proposed implementation plan appears in the next section.

5.1 Transport and Telecommunication Infrastructure

The 2012 United Nations Conference on Sustainable Development, or Rio+20, recognized the importance of the efficient movement of people and goods, and access to environmentally sound, safe and affordable transportation as a means to improve social equity, health, resilience of cities, urban-rural linkages and productivity of rural areas. A study by ADB estimated that by 2020, developing Asian countries could gain 6% of real income, or close to \$1 trillion, if the estimated transport investment needs in Asia were met and appropriate infrastructure were constructed.

Global Connectedness Index by DHL averages connectedness of ACD members at 44.32% in 2012, a slight increase from 43.87% in 2010. While some countries in East Asia are among the most connected, South and Central Asia remains the least connected in the world.

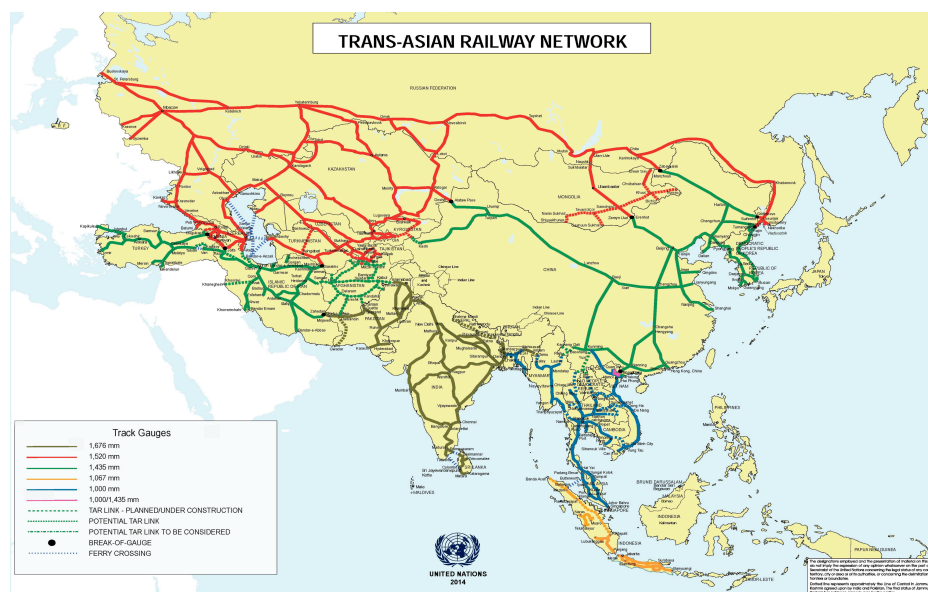
Principal regional approach to complete and connect transport infrastructure namely Asian Highway (AH) (Figure 5.1) and Trans-Asian Railway (TAR) (Figure 5.2) have been introduced and facilitated by UNESCAP since 2003 and 2006 respectively.

Figure 5.1 Asian Highway Route Map



Source: UNESCAP

Figure 5.2 Trans-Asian Railway Network Map



Source: UNESCAP

Much work has been done at sub-regional and regional levels, through inter-states mechanism and collaboration with international organisation – as well as the ADB, including,

- Central and West Asia - CAREC,
- East Asia and South East Asia - GMS, IMT-GT, BIMP-EAGA, ASEAN,
- South Asia - SASEC, BIMSTEC, and SAARC, etc.

There is a need for a cooperation platform focusing on creating pan-Asia connectivity. The ACD could play a major role in synchronizing existing connectivity frameworks by building upon what has already been done, i.e., physical infrastructure, investment, and cross-border transport regulation.

This Road Map recommends that **ACD builds on existing regional transport connectivity frameworks**, taking into consideration the progress made at sub-regional level, to

complete missing links within and between sub-regions in order to achieve a seamless pan-Asian transport network.

The ACD may seek cooperation from various sub-regional groupings and explore possibility to create platform for **inter-subregional cooperation to complete the AH and TAR** and to promote standard quality transport network in Asia. Focus may be placed on stock taking on transport infrastructure development and connectivity progress made at sub-regional level to create platform for information and experience sharing, and linkages between sub-regional fora and development banks aiming to address missing links and promote pan-Asia transport connectivity.

Enhanced transport network provides basis telecommunication connectivity. To reach its full potential and ensure cost saving, it is recommended that transport infrastructure be synergized with project to enhance telecommunication connectivity. The importance of telecommunications connectivity in Asia in the next decade will surpass other modes of connectivity in reducing the cost of business transactions, creating new opportunities for the poor, and redefining social and economic relationships. Despite its fast growing and increasing demands, the digital divide remains high in many parts of Asia and the cost of internet access in the ACD region is one of the highest because each country operates its own system. This is due to infrastructure gaps, policy weakness, and lack of synergies in cross-border infrastructure projects for regional fiber-optic deployment.

A study by UNESCAP recommends that regional telecommunication infrastructure be constructed together with other types of infrastructure, notably transport. UNESCAP and International Communication Union (ITU) have jointly produced interactive maps of the Global Information Superhighway featuring territorial transmission network and missing links along the AH and TAR (Figure 5.3)

Asians will gain from a more efficient regional management structure. This study recommends an establishment of an **ACD Fiber Optic company**, taking into consideration the current arrangement in each country and the possibility of co-deployment of fiber optic networks along with other cross border infrastructure facilities such as rail, electricity transmission lines and gas pipelines.

Figure 5.3 Transmission Links along AH and TAR / UNESCAP Asia-Pacific Information Superhighway Map



Source: ITU Interactive Transmission Map

UNESCAP's technical expertise and its extensive work done in this area could feed in to political process of the ACD. Various regional platforms have also been established by UNESCAP to facilitate information sharing and promote implementation of pan-Asia transport and telecommunication connectivity frameworks with which the ACD could seek formal engagement, i.e. inter-governmental committee and ministerial conference on transport,

committee on information and communications technology, ministerial conference and forums on PPP and infrastructure investment, as well as other intergovernmental platforms to promote cross-border facilitation such as United Nations Network of Experts for Paperless Trade in Asia and the Pacific, etc. This will, in turn, be an opportunity to garner a political mandate to push forward these initiatives that UNESCAP has been working on.

5.2 Institutional Infrastructure

There are scholarly sources that show large economic gains from increasing the flow of trade in Asia. For example, an ADB study showed that an FTA between East Asia and South Asia will increase GDP by US\$261 billion.

This Road Map recommends that ACD creates a ***Framework Agreement on ACD Economic Integration*** to serve as a platform for advancing regional economic cooperation and integration. The Framework will provide guiding principles for economic cooperation activities between ACD Member States.

Four fundamental areas may be considered under the Framework Agreement: Agreement on Trade in Goods, Agreement on Trade Facilitation, and Agreement on Trade in Services and ACD Investment Agreement. Given the differences in economic structure and levels of economic development of ACD Member States, participation in these initiatives should be voluntary. Flexibility should be allowed in acceding to these agreements.

To move forward, a feasibility study should be undertaken to analyze the current status of ACD's economic integration and cooperation - and examine ways in which we can deepen regional economic linkages, promote inclusive growth, and expand production network across the region. The feasibility study should examine existing legislation in ACD Member States related to trade and investment promotion and protection. It should make practical policy recommendations on future institutional harmonization within the ACD region.

- ***Agreement on Trade in Goods***

This Agreement could be built on existing initiatives at the sub-regional level, in particular the Regional Comprehensive Economic Partnership (RCEP) of ASEAN plus 6, and the Asia-Pacific Trade Agreement (APTA).

- ***ACD Investment Agreement***

As cross-border investment is an important element in the development of infrastructure, ACD needs a strong investment agreement to provide specific concessions and protection investment in the development of regional and cross-border infrastructure as such Agreement will increase the level of certainty of investment activities. However, this will not affect Member States' entering into investment agreements independently based on other bilateral or multi-lateral arrangements.

An appropriate definition of public-private-partnership (PPP) and its governing principle should be set to promote mutual understanding and facilitate planning of multilateral infrastructure projects within the ACD region.

- ***Agreement on Trade Facilitation***

This Agreement could be built on, among others, the Trade and Transport Facilitation Agreement of ESCAP, GMS Cross-Border Transport Agreement (CBTA), and ASEAN Single Window.

- ***Agreement on Trade in Services***

This Agreement could be built on the ASEAN Framework Agreement on Services (AFAS) and could place emphasis on transport, logistics and tourism. The area of financial services may also be considered in order to enhance banking relations among ACD Member Countries.

5.3 Energy Security and Energy Connectivity

Energy demand in Asia is rising, propelled by Asia's dynamic growth. To secure the supply of energy requires intensive cross-border linkages. Because of the energy-trading nature of the region, efficient, rapid and secure energy transportation is required. The challenge is that there has been limited development in creating an energy grid between the ACD Member States.

The ACD Energy Action Plan endorsed at the 12th ACD Ministerial Meeting provides a framework for Energy Cooperation in ACD that aims to enhance energy security through development of and investment in renewable energy resources and environment-friendly energy technologies, as well as promotion of energy access, establishment of a regional energy infrastructure network and energy trade facilitation.

Considering the growing importance of energy security in Asia, ACD should prioritize one or two pilot projects to gain a better understanding of the constraints and explore possible template/s for future projects.

ACD should explore the possibility of establishing an **ACD Power Grid** to provide electricity linkages across the region, particularly the installment of power grids within each subregion in which the ACD Member States are located. Such project will strengthen the local connection of electricity and prepare the ACD Member States for the future expansion of electrical network. In this regard, compatible technology, essential infrastructure, and harmonization of energy legislation should be promoted in order to create an environment that accommodates potential participants and supports implementation of the project.

5.4 Food Security, Safety, and Mobility

Asia's food market is changing. Change is driven by the growing population and evolving pattern of human settlement in Asia. The security of food supply and the ability to transport food across borders are a major challenge for Asia. ACD needs to improve connectivity in food supply to guard against both economic and social problems of food security.

This Road Map proposes the establishment of an **ACD Food Supply Network** that provides guarantees for the supply, safety, and quality of main food items, such as rice, wheat, and chicken meat and takes into consideration the connection of production network at all levels: primary, intermediate and final levels. This would include the adjustment of rules and regulations to allow for freer food trade, greater investment, and improved cross-border transportation and other services for food products.

ACD should also consider establishing a regional platform on food security and mobility. This forum should deliberate on viable strategies and collaborative projects for upgrading transport and logistics services that would facilitate better movement of food across the region. Establishment of "Regional Food Bank" may also be considered to ensure availability of food relief and supply in case of natural disaster or drought.

5.5 Financial Connectivity and Security

Regional financial stability provides an environment conducive for long-term economic development in Asia. Today's global financial markets are increasingly sophisticated and intrinsically volatile. Freer flow of cross-border capital and greater

integration of financial markets open up new opportunities for business growth and investment. However, they also bring greater risks of financial instability. In order to prevent the economic, political and social costs of financial crises, ACD needs a regional financial architecture that not only supports international trade and investment, but also protects the region against financial turbulence in the global financial market.

In the near future, ACD could serve as a platform that motivates discussions on financial connectivity and security of the region. This Road Map suggests the establishment of financial forums that will allow the ACD Member States to exchange their views on financial issues such as payment network, bond market, and other mechanisms that will bring about the financial integrity and stability in Asia. The forums may learn from the experience and good practice in the current achievements in some sub-regions, including the development of payment transactions in ASEAN+3 and the Asia Clearing Union (ACU).

5.6 Tourism

Intra-ACD tourism will benefit from enhanced regional connectivity and reduced cost of transportation. With an improved transport network and greater access to online tourist information, demand for travel will increase. ACD has rich tourism destinations, many of which can be further developed or improved through joint investment consortia or funding from regional bond markets.

This Road Map proposes that in order to facilitate the movement of people and tourism, a **visa exemption or special visa arrangement for tourists** should be extended to visitors from ACD countries.

5.7 Human Development

For the future generation of ACD citizens to take full advantage of enhanced multidimensional connectivity, they need to be trained and equipped with key capabilities, particularly financial literacy, digital literacy, language skills, and a better perspective of their role and responsibility as global citizens. Moreover, promoting of standardized knowledge and professional skillset can also address inequality in education and bridge the gap in human development.

New training programs should be created to serve these purposes. Participation of the private sector in such programs should be encouraged, whereas the public sector should focus on providing the suitable environment for program implementation. This Road Map proposes that ACD Member States to participate in the implementation of these programs, especially:

- a) Financial literacy – deepening of knowledge about banks, financial institutions, stock markets, and financial markets in general;
- b) Digital literacy – promoting computer and Internet skills, both hardware and software issues; and,
- c) Joint educational exchange and training – promoting exchange and training programs between schools, universities, vocational colleges, and research institutions in ACD countries with special emphasis on significant areas such as medicine, agriculture, and tourism.
- d) Joint universities, vocational colleges, and research institutions activities and networking – through direct collaboration of universities and research institutions in ACD countries to promote standardization of educational services in order to better facilitate student mobility as well as technology and knowledge sharing in ACD countries.

In summary, there are 7 areas and 16 projects proposed:

Proposed ACD Connectivity Initiatives
I. Transport and Telecommunication Infrastructure
1.1 Inter-Subregional Cooperation to Complete Missing Links in Asian Highway and

Trans-Asian Railway
1.2 ACD Fiber Optic Company
II. Institutional Infrastructure
2.1 Framework Agreement on ACD Economic Integration
2.2 ACD Agreement on Trade in Goods
2.3 ACD Investment Agreement
2.4 ACD Agreement on Trade Facilitation
2.5 ACD Agreement on Trade in Services
III. Energy Security and Connectivity
3.1 ACD Power Grid
IV. Food Security and Mobility
4.1 ACD Food Supply Network
V. Financial Connectivity and Security
5.1 ACD Payment Network
5.2 ACD Infrastructure Bond Market
5.3 Study on ACD Exchange Rate System Stability
VI. Tourism
6.1 Visa Exemption / Special Visa Arrangement for Tourists
VII. Human Development
7.1 Financial Literacy
7.2 Digital Literacy
7.3 Joint Educational Programs

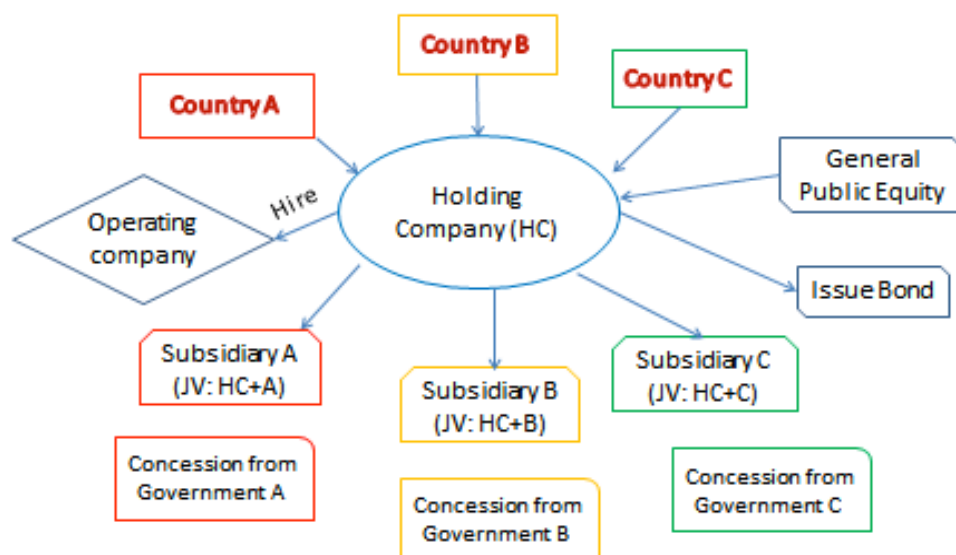
VI. Strategies

There are many constraints for cross-border projects. A key challenge is the way projects are organized and managed. In order to address the key constraints, this Road Map suggests four strategies.

6.1 Cross-Border Infrastructure Business Model

An infrastructure project that goes across many countries should be considered as one project. A joint ownership structure should be established and agreed by the government in all countries involved in the project. A professional operator should be engaged to run and operate the facility.

To clarify this proposal by way of an example, suppose a rail project involves 3 countries, A, B and C. Each country will give a concession to a local company (i.e., more than 51% local ownership). The rail project is conceived as one project owned and operated by a Holding Company (HC). In each country, the HC will form a joint venture (JV) Subsidiary with the local investor (government plus private sector). HC will hire the contractor to build the rail and hire a professional company to operate the service. HC can generate funds by selling equity and issuing bonds for the project.



For this model to work, it may need some changes in the rules and regulations in the participating countries. If all the governments agree to the project, these barriers should be eliminated for the project in the respective country. This model is, of course, a suggestion. Depending on specific conditions, different models may be employed for different projects.

6.2 A Project Approach

Each cross-border infrastructure project has its own technical, legal, social and security issues. It will be difficult to design a legal structure that will fit each specific requirement. Therefore, each sizeable cross-border project should be studied and promoted. Participation in each project will be on a voluntary basis.

Policy and regulations concerning cross-border infrastructure projects also differ in each countries and sub-regions. A broad study on political economy or each of the priority areas could serve well for future cooperation and implementations of the Road Map.

6.3 Roles of private and public sectors

The right combination of government and private sector participation from each country would be important for these projects. While the government is important in providing a conducive legal and investment environment, the construction and operation should be carried out by the private sector. Given these arrangements, the ACD government interested in a project should prepare a tender document with advice from the expert consultant for the project.

6.4 Regional funding arrangement

There are many possible sources of funding, such as:

a) *Government from capital surplus countries*

Some capital surplus countries may wish to invest in certain infrastructure facilities in other countries in order to establish a long-term position in certain areas. For example, oil exporting countries may want to invest in oil and gas pipelines that would allow their exports to move to other countries more efficiently. Lack of resources and need of access in many countries should also be taken into consideration. A “G-to-G” arrangement should be arranged to enable these transactions in the context of ACD cooperation arrangement.

b) Enhancement of the regional capital market

The capital market in most ACD Member States is not yet fully developed. As a consequence, savings in these countries are trapped in the domestic or local market. Development of a fully integrated capital market would take time. However, arrangements should be made to facilitate investment in infrastructure projects in the region. For example, a special arrangement could be made to allow for bonds of a regional rail-link project to be bought and sold by people in the area where the railroad is passing through. Aside from raising funds, it will increase the sense of ownership and awareness of the people around the project areas. However, other possible sources of infrastructure funding shall also be further explored.

6.5 Project Champion

In the European experience, a common characteristic of successful cross-border project is the existence of a “Project Champion”. This could be a country or a respected individual who is determined to accomplish said project.

VII. Timeline and Tentative Road Map for Priority Areas

Given the priority areas and the strategies, the following timeline is proposed for each of the seven priority areas:

Timeline for this initiative

- The revised draft of the Road Map will be submitted for deliberation at the ACD Foreign Ministers’ Breakfast Meeting on the sidelines of the UNGA70 in New York in September 2015. The Meeting may welcome and take note of the Road Map. The proposed priority areas and projects shall be considered by relevant authorities of ACD Member States.
- A high-level forum may be held prior to the 2nd ACD Summit to finalize the draft of the Road Map.
- The final draft of the Road Map may be submitted for deliberation at the next ACD Senior Official and Ministerial Meeting and subsequently endorsed by the 2nd ACD Summit in 2016. Based on the Road Map, key priority projects may be agreed upon and included as one of the outcomes of the Summit.
- Implementation of the priority projects should be monitored by the ACD Secretariat and their progress reported to the ACD Ministerial Meeting.
