

## The Mekong Industrial Development Vision

### ~Toward Becoming the Core of the Asian Value Chain Network and Beyond~

#### 1. Current Situation in the Mekong Sub-region

- The Mekong sub-region consists of five land-connected countries with diverse cultures and different levels of development. The Mekong sub-region has enjoyed sustained economic growth; the demographic dividend contributing to increases in labor supply, and rise in domestic consumption. Both physical and institutional connectivity has improved, driven by development in hard infrastructure and regional integration efforts towards the AEC. Against such a backdrop, the sub-region has attracted investment from all over the world, as a growing production site, export base and also as a consumer market.
  - The membership of the Japanese Chambers of Commerce and Industries based in Mekong countries has been rapidly increasing since 2012; in addition to the manufacturing industry, a wide range of Japanese service industries including retail, restaurants, and transportation are investing in the Mekong sub-region. Foreign investments including from China, the Republic of Korea and the United States have also increased since 2010.
  - The Mekong sub-region's geographical location has benefited its growth through growing trade with China and India (e.g. the increase in trade between the southern part of China and Vietnam).
- Regarding the Mekong sub-region as a single market, businesses carefully analyze the strengths and weaknesses of each country including quality and quantity of labor supply, market potential, availability of energy and natural resources, ease of accessibility and connectivity from within the Mekong sub-region and beyond, and select investment destinations with greater readiness to expand cross-border supply chains (strengths and weaknesses of each country are described in detail in supplementary volume).
- Thailand, the core of the Mekong sub-region, has a rich industrial accumulation with broad supporting industry, spanning upstream and downstream supply chains of major industries, consisting of large, small and medium sized enterprises. There is a "Thailand Plus One" trend in investment, which is beginning to take shape, with the upgrading of Thai industry, labor-intensive manufacturing processes transferring to neighboring Mekong countries. Together with the "China Plus One" trend, "Thailand Plus One" is accelerating the cross-border expansion of supply chains, and the primary industrialization of Cambodia, Lao PDR, and Myanmar.

These cross-border supply chains are expanding further, and have begun to connect with developing supply chains in North, Central and South Vietnam.

- Businesses aim to optimize supply chains not only across the Mekong sub-region, but rather across all of Asia, including China, India and other ASEAN countries. The current positive investment flow to the Mekong sub-region is not guaranteed in coming decades, but subject to change depending on the environment. With this clear recognition, a region-wide sustainable policy, specializing in areas of respective strengths and complementing weaknesses will be the key to achieving further economic growth.
- The Mekong sub-region connects emerging mega-markets, China, India and other ASEAN countries, together representing a population of over 3.3 billion people, half of the world's total. An industrial structure that is optimal and complementary with these growing markets could boost the Mekong sub-region as the junction between emerging Asian mega-markets. This could allow the Mekong sub-region to leverage the economic growth of Asia, by further stimulating inter-Asia trade growth, narrowing the development gap, and producing upgraded industrial structures. The vision for further development should therefore see the Mekong sub-region becoming“ the core of Asian and global value chains”.

## **2. Challenges and Opportunities for the Mekong Sub-region**

### <Trade Structures>

- Trade volume between the Mekong sub-region countries has been growing steadily with the Mekong-wide expansion and proliferation of production sites and increases in purchasing power. The proportion of intra-Mekong trade to total trade has doubled from 3% in 2002 to 6% in 2012. Nevertheless, the interdependence of trade within the Mekong sub-region still remains low when compared to interdependence within ASEAN, especially in food, electronics, and automobiles.

Cross-border production networks in the Mekong sub-region are still limited due to the relatively small number of production blocks transfers, represented by mostly labor-intensive processes. Development of higher value-added industries taking advantage of each country's strengths, a deeper cross-border division of labor in terms of production processes and deep interdependence of trade are yet to be seen.

- In terms of extra-regional trade, the Mekong sub-region has increased its exports to fast-growing markets like China and India at an annual growth rate of over 20% since 2000. In comparison, China to India export is reaching an annual growth rate of nearly 40%, and the proportion of import from China has increased from less than 5% of India's total import in 2000 to 27% in 2009. One of the major drivers of China's export expansion is that it has succeeded in complementing India's growing industries such as service and infrastructure industries, by supplying cost-competitive intermediate and final goods (e.g. ICT products including smart phones and PCs, automotive spare parts for repair and maintenance services, factory equipment and production machinery). It would also be beneficial for the Mekong sub-region to foster industries and develop value chains with India in a mutually beneficial and complementary manner.
- In order to prosper as an exporting base, another challenge lies in developing export infrastructure. Since all existing deep sea ports in the Mekong sub-region face the Pacific Rim, the advantage of geographical proximity to the Indian subcontinent is not fully exerted. The development of deep sea ports in Myanmar is therefore an important objective.

#### < Foreign Direct Investment (FDI) >

- The foreign direct investment (FDI) to the Mekong sub-region has been rapidly increasing from USD 4 billion in the early 2000s to over USD 10 billion in the 2010s. Driven by the economic growth from demographic dividends and upgraded industrial infrastructures, this sub-region has transformed into a global FDI destination.
- Nevertheless, it needs to be carefully examined whether the increased FDI will result in upgrades to industry in the sub-region in the long term. FDI to the Mekong sub-region is currently focused on natural resources (e.g. oil & gas, minerals, water and land), labor-intensive industries using low cost labor (e.g. cutting, making and trimming (CMT) of shoes and clothes), and large-scale assembly lines of manufacturing industries. FDI from Japan is characterized by investment by both large and small companies, from the upstream to the downstream of especially manufacturing value chains across the Mekong sub-region. This is attributable to the fact that Japanese businesses see the Mekong sub-region as one single production base, and aspire to build Mekong-wide industry clusters, expanding their existing value chains in Thailand and China, following the development of neighboring countries. Moreover, in pace with the development of manufacturing industries and local income growth, investment is spreading to diverse industries ranging from wholesale and retail to

manufacturing-related services.

- Setting the medium- to long-term development goal as a shift towards upgraded industry structure, formation of a wide variety of industrial clusters led by small and medium-sized enterprises that support high value-added industries (e.g. supporting industries including parts/semi-products manufacturing, design industries, ICT, retail and other service industries) should be promoted. Subsequently, processing the natural resources rather than simply exporting the unprocessed raw materials should nurture higher value-added industries.

#### < Local Business Collaboration >

- Along with the economic growth of the Mekong sub-region, local businesses have also grown to a considerable extent. This is especially true of Thailand, which has 11 businesses in the top 50 ASEAN companies by market capitalization, and is ranked 3<sup>rd</sup> after Singapore and Malaysia. Moreover, in the case of Thailand, it has not only been accepting inward investment but also plays a significant role in providing outward investment into other Mekong countries. As a result, by 2012, Thailand became a net provider of FDI. Cross-border business collaboration within the sub-region has gradually progressed, led by Thai businesses; a typical example is the 235-million-USD acquisition of Prime Group of Vietnam by Siam Cement Group of Thailand in 2013. Cross-border business collaboration in financial industries is also becoming increasingly prominent. One example is Mitsubishi UFJ Bank's acquisition of Bank of Ayudhya in 2013. Another example is the business expansion of Thai commercial banks into other Mekong countries in answer to the "Thailand Plus One" trend. Mekong-wide business collaboration is being accelerated.
- Nevertheless, there exist untapped opportunities for further cross-border business collaboration, especially when compared to the example of more extensive business collaboration in the neighboring region. Foreign businesses are eager to find local business partners for business development and local sourcing. However, they face difficulties due to the insufficient business presence and competitiveness of local businesses in the sub-region.
- The business presence of Mekong enterprises, especially Thai enterprises, is high in the ASEAN region, but is still limited compared with that of Chinese and Indian enterprises in Asia. There is room for improvement in regulatory or policy platforms in terms of encouraging business collaboration including business alliances or M&A. Also Mekong enterprises can seek the chances of investment to Japan in order to raise their competitiveness and corporate governance which could be acquired from Japanese enterprises' know-how.

### < Research and Development (R&D) Activities >

- By attracting foreign investment from businesses that have cutting-edge technologies and that foster supporting industries, a world-class industrial cluster with knowledge-based industries such as automobiles and electronics has started to form in the Mekong sub-region.

Furthermore, the production base in Thailand has been upgraded in recent years. Major Japanese automotive and parts industries (e.g. tires and batteries) support such upgrades by announcing their intension to expand R&D function in the sub-region, especially in Thailand.

Nevertheless, when compared to China, Singapore and Malaysia, in proportion to the population, the numbers of researches and PCT (Patent Cooperation Treaty) application is significantly low even in Thailand and Vietnam, where there is higher potential to become centers of knowledge-intensive industries. R&D activities should be further explored to enhance their technological foundations.

### < Competitive SMEs >

- Since SME is a major bearer of national industry structure from corporate activities and employment perspectives, vitalizing SME should be essential for national economic growth. However, due to its limited access to human and financial resources, SME in Mekong region is facing difficulties in improving productivity due to lack of innovation and opening up new markets.
- To foster competitive SMEs, releasing the constraints in financial and human resources should be given the first priority, by enhancing entrepreneurship, labor participation of female and younger generation, access to traditional and untraditional finance. In addition, it is necessary to realize enhanced productivity and improved access to the market by participating into global supply chains and industrial clusters formed by MNCs and promote innovation. In particular, due to an symmetric information and the economics of scales issue, SME has tendency to face difficulty in access to finance rather than mega companies. Improving its access to finance is urgent issue.
- Considering global supply chains formed across Mekong countries, government-backed initiatives, including coordinated policies and regulations across the countries and simplification of various government procedures, are essential to effectively solve the issues above.

## <Regional Connectivity>

- Recently there has been steady improvement of Mekong Regional Connectivity. Typical Example is improvement in South Economic Corridor, including the opening of Tsubasa bridge, for which Japanese government provided its ODA grant aid, which has built up rapid export routes of Cambodian products, connecting inland Cambodia with CaiMep International Terminal., Issues for hard and soft infrastructure related to connectivity, however, still represent critical bottlenecks for facilitating region-wide supply chain development. Specifically, businesses claim that there is little improvement in road development in Myanmar and between its surrounding countries, compared to relatively steady improvement in the rest of the Mekong sub-region. In the new Tokyo Strategy 2015 adapted by the leaders of Japan and Mekong countries on 4 July 2015, Japan committed around 750 billion JPY in ODA to the Mekong Region for the next three years (2016-2018), with the aiming of ensuring regional stability and achieving “quality of growth” in the Mekong Region. In addition to that, in the new Tokyo Strategy, Mekong countries showed the intention to support ADB’s initiative for expansion of its lending capacity, and welcomed ADB’s consideration of its future capital increase, as well as Japan’s announcement of “Partnership for Quality Infrastructure” in collaboration with ADB, including through the consideration of a new collaboration mechanism between JICA and ADB to facilitate the use of PPP for infrastructure investment. By utilizing these initiatives, it is expected for Mekong regional connectivity to be strengthened further more. On soft infrastructure, necessary development of transport-related regulations and consistent enforcement must be encouraged to ensure the facilitation and transparency of regional logistics systems.
- Especially in logistics, modernization through increasingly sophisticated and diversified services will be the crucial factor for reducing logistics costs. These efforts include introduction and steady operation of the bond system, facility development for consolidated cargo services as well as cold-chain. Also, unofficial cross-border cargo transport should be appropriately regulated in order to develop modern cross-border transport services. At the same time, steady enforcement of existing traffic rules (e.g. regulations on weight of cargo loads) should be further strengthened to ensure the longevity of roads and other hard infrastructure quality at an industrial use level, and hard infrastructure should be recognized and maintained as “common goods” of all Mekong countries.
- The Cross-Border Transport Facilitation Agreement (CBTA) and its relevant bilateral and trilateral MOUs have not made a great contribution to intra-regional transportation. Mekong countries need to implement CBTA more pragmatic. Swift

introduction of Single Window Inspection (SWI) as well as introduction of Single Stop Inspection (SSI) at Common Control Areas (CCA) at major borders should be considered. Also, proper operation in accordance with the terms of these agreements, as well as dissemination to the public of information on new regulations and operation pertaining to the agreement should be ensured. Furthermore, on several MOUs, increasing the number of cross-border licenses should be flexibly considered corresponding to business demand for cargo.

#### <Energy Supply and Environment>

- Another challenge lies in the lack of stability in electricity supply in the Mekong sub-region. There is not much investment targeted to improving the stability and efficiency of regional energy supplies through the development of the inter-regional power grid. An optimal energy mix should be developed taking into account the fact that the existing energy supply is highly dependent on hydro-electric generation and needs to be complemented in dry seasons. Of the 5 countries in the region, only Thailand has a better reputation than China in terms of maintaining electric supply stability to production bases. The unit price of electricity in Cambodia is higher than in China while the prices have begun to surge in Vietnam and Myanmar.
- Japanese businesses have been engaged in power generation projects in Cambodia, Lao PDR, Myanmar, Thailand and Vietnam. In countries where power generation is liberalized, independent power providers (IPP) tend to build small and inefficient power plants.
- As further increase in electricity consumption is expected along with economic growth in the Mekong sub-region, there is an urgent need for power-related infrastructure and inter-regional electric power interchanges. In addition, development of oil and gas should be further promoted in order to cope with the expected surge in energy demand, with due attention to the climate change effect.
- Energy efficiency and conservation (EE&C) also need to be promoted in order to avoid rapid increases in energy demand. Developing EE&C policies and legal frameworks are especially important for Cambodia, Lao PDR and Myanmar.
- In parallel with the economic growth and demand hike of electricity in the Mekong sub-region, various environmental challenges have been brought forth, including air/ water pollution, deforestation, soil erosion, water scarcity, and hazardous waste issues.
- Japanese government had been facing the similar challenges during the period of

its high economic growth and developing wide variety of mitigation measures from regulation and technology perspectives. The collaboration between Mekong countries and Japan in this arena will be conducted through providing the knowledge and technology which Japanese government had been accumulating.

#### < Human Resources and Development (HRD) >

- Despite the recent wage increase of workers and managers in Cambodia, Lao PDR, Myanmar and Vietnam, the wage cost remains competitive compared to China, India and other ASEAN countries.
- Nevertheless, businesses caution that wage hikes without productivity improvements, high turnover of labor, and frequent labor disputes may decrease the Mekong sub-region's attractiveness as a production base. It is also pointed out that the "Thailand Plus One" trend and further cross-border expansion is not as vibrant as it could be due to the serious shortage of labor in the border regions. Moreover, businesses also claim that insufficient basic education and vocational training mean a scarcity of skilled labor, resulting in little improvement in quality and only limited enhancement of productivity in the sub-region. These challenges are seen as the primary challenge to upgrading industry for the medium- and long- term development of the sub-region.

As outlined in the AEC blue print, the free flow of skilled labor is essential for effective utilization of scarce skilled labor resource in the Mekong sub-region. As for the unskilled labor, while flexible and smooth movement of labor within the region is attractive to businesses, it is a concern that the wage gaps due to different levels of national industrial development in the sub-region may lead to a massive migration of labor force. This could bring about irreversible relocation of industries within the sub-region.

### **3. Future Mekong-wide Industry Structure**

- Thailand, as the leading economy in the Mekong sub-region, should lead the way in industrialization and promote technology transfer to other Mekong countries. By leveraging existing automotive and electronics clusters, and by taking advantage of its position as the leading investor with the largest capital accumulation, Thailand can upgrade domestic industries and technology, while expanding its supply chains across the sub-region. For instance, in addition to final assembly and parts manufacturing processes, higher value-added processes and R&D bases could develop in Thailand (e.g. development and mounting of ECU software in auto industry, grinding of general parts and fine chemical



polishing in electronics industry).

- Although Vietnam is a middle income country, a strong base of supporting industries has not yet developed in the nation, but the country should leverage its potential as the most populous nation in the sub-region with a long coastline and deep sea port facilities providing good access to US and EU markets, and geographical proximity to the southern part of China which represents the world's largest electronics cluster. Consistent industrial policies ranging from demand boosting, HRD, trade liberalization and investment promotion policies may facilitate FDI from Japan, China and Korea into industries including the automotive and electronics industries. Vietnam has started to attract Japanese and Chinese FDI in upstream processes such as spinning yarn or precision processes in manufacturing. Vietnam could foster such upstream industry by introducing policies utilizing advanced EPA efforts such as TPP, RCEP and with EU.
- Cambodia, Lao PDR and Myanmar are in the early stages of industrialization and thus the priority is to nurture industries that leverage abundant labor and/or natural resources, such as agriculture and fisheries, food processing and tourism. In the short term, another priority is participation in the global production network by inviting production blocks from other countries including labor-intensive processes, and reducing service link costs. This could raise the competitiveness of local companies and reinforce the level of labor by leveraging the technological spill-over from the global production networks.

However, labor-intensive process locations are changeable; so in the long run, nurturing industries that are complementary with neighboring region/countries and that take advantage of inherent strengths of each country is important.

For example, with the existing CMT capabilities, Cambodia and Myanmar could attract higher value-added processes such as spinning yarn and weaving or product planning. Moreover, for long-term growth in medium and high value-added industries, the development of logistics services as the core of all industries, including transportation industries incorporating packaging and inspection, expansion of maintenance services and component manufacturing, and infrastructure development, is essential.

With abundant water resources, fertile soil and low-cost labor, Lao PDR may have a comparative advantage in creating a precision machinery industry(e.g. lens polishing processes), mineral processing industry, agro processing industry,

electricity appliance and electronic assembly industry. Abundant natural resources not only offer potential to export raw materials, but also the chance to upgrade the industry by processing resources in the region and producing added value. In addition, better efficiency in electricity generation and transmission could empower the manufacturing industry in the Mekong sub-region.

- Accompanying the above industrialization and change in industrial structure, it is predictable that challenges will arise from development gaps between urban and rural areas, such as decreases in rural population and expanding income gaps. To address this challenge, it is important to also position agriculture and food industries, main industries of rural areas, as strategic industries that form the food value chain, and promote upgrading them to higher value-added industries. Considering the increase in food demand in East Asia and the natural and geographical advantages of the Mekong sub-region, encouraging farming and processing of distinctive vegetables/fruits as strategic export industries with attention to food safety may have a good potential. The development of agriculture and food processing will improve manufacturing (agricultural machine manufacturing, food processing machinery) and relevant service industries (cold-chain logistic services, food retail shops and food services) of related value chains. Moreover, integrating agriculture and food related industries will help agriculture to become the so-called “Sixth industry (combination of the primary industry, secondary industry and tertiary industry)” and add value to the agricultural industry. This can lead to the establishment of a food value chain in the Mekong sub-region, and to joining the global food value chain.

For example, further mechanization of agriculture in the Mekong sub-region would encourage localization of machine manufacturing, compliment the lack of agricultural labor by enhancing productivity, and also support transfer of labor from the primary industries to the secondary and tertiary. In addition, the development of transportation service industries providing cold chain logistics would improve export competitiveness of agricultural products as well as improve traditional distribution systems of agricultural products. Furthermore, farmers and SMEs can obtain other economic benefits such as increased income for farmers and development of rural economy, by having direct access to the markets as the result of realization of the “Sixth Industry”.

- Through the realization of this Mekong-wide optimal industry structure, the vision that Japan and the Mekong countries share is a society where every citizen in the Mekong sub-region can enjoy “prosperous lives”, where respective culture, tradition and the natural environment are inherited and maintained, and

industrialization brings a higher quality of life and maturity in consumption.

- The Japanese government and businesses will continuously collaborate with the Mekong countries and businesses to bridge the existing gaps among countries and cities, based on the belief that it is equitable and balanced growth which contributes to the development and prosperity of both Japan and the Mekong countries.

#### **4. Policy Direction**

- Towards the further deepening of mutually beneficial cooperation and expansion of supply chains in the Mekong sub-region, 1) Partnering with neighboring countries, 2) Building a footing for more advanced industrial structure, and 3) Strengthening infrastructure and resources that support regional value chain are necessary. These region-wide efforts will be implemented by 2020, and GDP increase is expected to attain USD 20 billion in Mekong as the outcome of this vision (i.e. 2.0% of Mekong's GDP) thereby. The sub-region can then play a key role as the core of the Asian Value Chain Network, and establish a foundation for further economic growth with economic benefits of the two neighboring fast-growing mega-economies, China and India.
- Japanese Government continues to provide support and promote cooperation with the governments in Mekong countries in development of industrial policies to realize the Vision and solve individual issues that each country is facing (e. g. Vietnam's Industrialization strategy).

#### **(1) Partnering with neighboring countries**

##### < Improving Trade Structure >

The industrial competitiveness of the Mekong sub-region should be further enhanced in comparison to other regions in order to become the production site and export base of the entire Asia region, empowered by the AEC and RCEP.

Regional policies about cross-border trade should be unified across Mekong countries in order to establish regional value chain towards the global value chain, supporting the flow of goods smoothly between countries in the sub-region.

Enforcing policies which attract industries that utilize the inherent strength of each country should be a priority in order to strategically foster exporting industries, region-wide integration of value chains, and construction of complementary

relationships between each country (e.g. standard development and certification, construction of global-standard cold chains and capacity building)

In addition, comprehensive effort should be made to nurture “new industry” (e.g. healthcare, contents industry, green and energy, and resilience) that help to meet the social challenges Mekong countries are facing.

#### < Promoting FDI through SEZ >

To promote the attractiveness of both metropolitan and border SEZs to Japanese investors, detailed information will be provided, along with a support desk, in partnership with related parties such as JETRO and ASEAN-Japan Centre.

Regarding the development of border SEZs, specialization and collaboration of Thailand SEZs and SEZs in Cambodia, Lao PDR and Myanmar should be carefully considered and thoroughly discussed between those countries to achieve a “Win-win” strategy for all related parties. For example, at the Government-Industry Dialogue in Cambodia and Lao PDR, the Thai government was asked to mitigate congestions on the border by improving logistic centers, or to improve quality of life in border areas by establishing commercial and resident facilities.

#### < Local Business Collaboration >

Business collaboration should be improved by establishing and enforcing transparent M&A rules and accounting principles, encouraging collaboration to foster both credit and stock markets, and by building other common platforms between the sub-region and Japan in accordance with the existing laws and regulations of respective country. Capacity building and transfers of information should be encouraged towards this goal. Trade fairs, trade missions and mutual investment seminar should be promoted to provide business-matching opportunities for foreign investors including Japanese SME and local enterprises in the sub-region.

## **(2) Building a footing for more advanced industrial structure**

#### < Fostering R&D >

Extensive R&D efforts should be spent on the product development in which Mekong countries utilize its comparative advantage of “adjacent to the production site”, the demonstration that challenges realization of sustainable society and

advancing industries utilizing the characters in Mekong, or the issues that Mekong countries are currently facing, including natural disasters, climate changes, inefficient use of energy / water, and dependency on fossil fuel.

Courses and internship programs should be developed in collaboration with Japanese universities and industries in order to foster highly skilled workforces and managers in science and engineering. Product development investment should be reinforced so that product development meets the needs of the high-end and mass market and is in line with manufacturing industries.

#### < Competitiveness of SMEs >

Through the steady implementation of “ASEAN Strategic Action Plan for SME Development (2016–2025)”, enhancing SME’s capabilities for innovation and internationalization should be promoted.

### **(3) Strengthening infrastructure and resources that support regional value chain**

#### < Regional Connectivity >

Connectivity should be improved, especially through the development of the West-East Economic Corridor, Southern Economic Corridor, and connectivity of northern and southern part of Vietnam in the Mekong sub-region. In particular, a higher priority needs to be set on improving connectivity of the West-East Economic Corridor and the Southern Economic Corridor to Myanmar, with facing the issue of requiring deep sea ports which will help India and the Middle East to become more accessible.

The establishment of cross-border supply chains will require the reduction of trading cost not only in terms of money but also of time and reliability of logistics. Based on the recognition mentioned above, a comprehensive effort should be made including the following items:

- To meet the demand for an immense amount of infrastructure development in Mekong countries, Japan promote “quality infrastructure investment” in collaboration with other countries, international organizations including Asian Development Bank (ADB) and other financial institutions, not only by public finance but by developing and enhancing the mechanism that attract private funding to infrastructure investment under “Partnership for Quality Infrastructure: Investment for Asia’s Future” which Prime Minister Abe announced in May 2015.
- Jointly hosting workshops with officials of related parties to hear investor views on issues in Mekong-wide logistics and discuss how to address such issues, including

the practical challenges of CBTA,

- Promoting trade facilitation through customs modernization,
- Investigating to identify optimal use of multimodal transportation options (e.g. land, ocean, air transportation) from cost/ energy efficiency perspectives.

#### <Energy Supply and Environment>

- Appropriate energy and electricity plans that consider the energy portfolio mix, and attain high efficiency and environmental conservation should be established, in order to reach a stable equilibrium between energy supply and demand at each national level. Co-operative cross-border electricity supply based on the ASEAN Power Grid may be an option; realization of the power grid interconnection plan as promoted by HAPUA (The Head of ASEAN Power Utilities/Authorities) should be put forward as an option.

As for the regional power supply, power plants should be developed to achieve the best possible mix of the regional energy portfolio. Implementation of energy projects defined in GMS Regional Investment Framework (RIF) and the establishment of Regional Power Coordination Center (RPCC) are the key content to ensure energy security for the region. In terms of individual power plants, it is essential to promote investment in high quality, higher performance infrastructure, such as high-efficiency coal-fired power plants, for the purpose of enhancing energy security, contributing to fuel cost reduction and mitigating climate change.

- The investment environment should be improved to stabilize the development of oil and gas, through expeditious procedures and stable management of domestic institutions.
- Strong policy measures promoting EE&C, renewable energy and smart community/grid should be further promoted.
- At the same time, fostering various industries should support sustainable and eco-friendly industrial development.
- Efforts in disaster prevention should be considered to establish resilient supply chains.

#### <HRD>

Thailand has the Mekong sub-region's largest industrial cluster, and could become a potential HRD hub, and contribute to regional HRD by providing best practices. In order to continuously provide necessary human resources for the industrialization of each country, the following efforts should be made:

- In order to effectively develop HRD policies, current stages of human resource

development of each country should be properly assessed, based on which comprehensive HRD policies to solve issues in each country should be developed

- Efforts should be made on the part of governments to improve basic education and higher education including support to leading universities (mainly in engineering field) and AUN/SEED-Net (ASEAN University Network/Southeast Asia Engineering Education Development Network).

Vocational training including acceptance of international trainees from neighboring countries by governments and industries in leading countries in the sub-region (e.g. Thailand) should be strengthened, while on-the-job training of business skills and ethics by foreign investors should be given appropriate attention as the most effective manner for HRD.

- Higher-vocational-training networks should be constructed to supply highly-skilled human resources by utilizing Japan's experience under the APEN (Asia Professional Education Network).

- In collaboration with related institutes such as JICA, JETRO, ASEAN- Japan Centre, ADB, and ERIA, the Mekong- Japan members will cooperate to formulate a "Work Programme", including specific activities and timelines for the realization of the Mekong Industrial Development Vision. The Work Programme will be submitted to the Mekong- Japan Government Industry Dialogue and Mekong- Japan Economic Minister Meeting in 2016. Annual progress on the implementation of the Work Programme will be reported to the Economic Minister Meetings thereafter.