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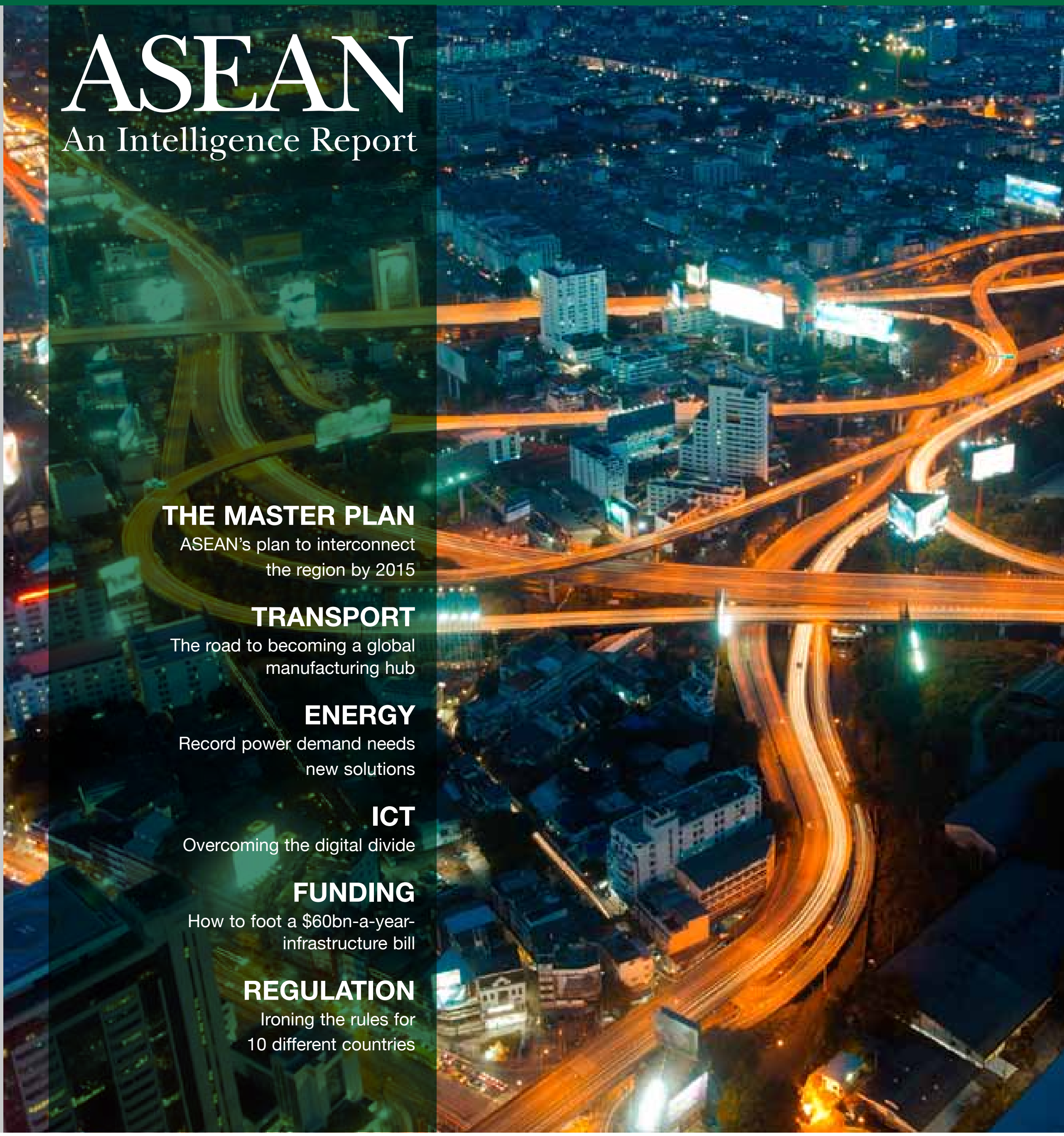

ASEAN
An Intelligence Report

THE MASTER PLAN
ASEAN's plan to interconnect the region by 2015

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The road to becoming a global manufacturing hub

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Record power demand needs new solutions

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Overcoming the digital divide

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Ironing the rules for 10 different countries

PEI Alternative Insight

INFRASTRUCTURE INVESTOR

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Published by PEI Ltd.
www.InfrastructureInvestor.com

THE QUEEN'S AWARDS FOR ENTERPRISE 2009

Foreword

Over the past few decades, we have seen how globalisation has connected the world, interlinking many aspects of our lives and businesses. The ASEAN region is no exception. In order to keep pace with the rest of the world, we realise that not only must ASEAN build a greater Community among our 10 Member States, we must also integrate ASEAN into the global community.

Infrastructure is one of the critical elements that make our connections within the ASEAN region and to the rest of the world possible. With ASEAN's trade and investment more than tripling in the last decade, we need to be able to sustain and enhance this growth by investing our resources more in quality infrastructure.

Thus, enhancing our infrastructure linkages is a cornerstone in the building of the ASEAN Community. Both the ASEAN Economic Community Blueprint and the Master Plan on ASEAN Connectivity, adopted by ASEAN Leaders in 2007 and 2010 respectively, provide the plans and programmes needed to link together various physical infrastructures in the region.

Specifically through ASEAN Connectivity, we are implementing mechanisms to coordinate how national infrastructure efforts would fit into the regional infrastructure needs and further connect the region.

We are also complementing our efforts in developing physical infrastructure with actions related to institutional connectivity, including pursuing various trade facilitation initiatives, land-based transport facilitation agreements, as well as three roadmaps for the integration of air and maritime transport and logistics services.

The greater challenge for us now is to be able to finance these infrastructure needs. ASEAN is a geographically diverse region with different levels of economic and infrastructure development. It was estimated that ASEAN would need around $600 billion over 10 years. Such massive financing requirements would require new sources of capital other than government resources.

Innovative and alternative approaches to infrastructure financing have to be explored. The Master Plan on ASEAN Connectivity identifies public-private partnerships (PPP) as one of the ways governments can work with the private sector in closing infrastructure funding gaps and delivering high-quality infrastructure services.

There are ongoing efforts by ASEAN Member States to create an enabling environment for PPPs. In Indonesia, PPP regulations were recently amended together with the establishment of the Indonesian Infrastructure Guarantee Fund. In Viet Nam, the Regulation on Public-Private Partnership Investment Piloting was also approved.

These are clear signals of our commitment towards attracting greater private sector investments. Collectively, all these efforts will hopefully address the infrastructure needs of our Member States and the region.

With greater connectivity within ASEAN, we hope to promote economic growth, narrow development gaps, enhance the competitiveness of ASEAN, and connect our Member States within the region and with the rest of the world.

The publication of this first ASEAN *Infrastructure Investor* report is part of our efforts to articulate the dream of building the ASEAN Community. It features ASEAN's priorities in infrastructure development and elicits insights from key stakeholders.

I would like to express my sincere gratitude to the ASEAN Connectivity Coordinating Committee, my predecessor, former Secretary-General Surin Pitsuwan, various contributors, *PEI*, and my staff at the ASEAN Secretariat for initiating and delivering this report.

I hope this report will stimulate more thoughts and generate more ideas on how ASEAN can move forward with various initiatives to enhance ASEAN Connectivity.

H.E.Mr. Le Luong Minh
Secretary-General of ASEAN

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ASEAN connectivity: the background

The Master Plan on ASEAN Connectivity will help ASEAN member states to preserve their competitiveness in a fast-growing and dynamic part of the world

The rationale for the creation of the Association of Southeast Asian Nations (ASEAN) is obvious. Put together, the 10 member states – Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei, Myanmar, Cambodia, Lao PDR and Viet Nam - form a global powerhouse.

The statistics to back up this assertion are numerous. Covering a land area of almost 4.5 million kilometres (3 percent of the planet's total land area) and with a total population of over 600 million (almost 9 percent of the world's population), the ASEAN nations had a combined nominal gross domestic product of $2.2 trillion in 2011. As a single entity, ASEAN ranks as the world's ninth-largest economy.

Since ASEAN was established in 1967, it has come a long way – growing from the five founding members to the 10-member grouping of today. But, if the ASEAN nations are to fulfil their ambition of building a true ASEAN community by 2015, it is vital that the region is as well connected as it possibly can be – and that's where the Master Plan on ASEAN Connectivity comes in.

ASEAN headquarters in Jakarta, Indonesia

PRINCIPLES

To take a brief step back, one of the purposes of the ASEAN Charter, which was agreed at the 13th ASEAN Summit in November 2007, was to create a single market and production base. It was recognised that better connectivity of transportation networks would help create a more competitive and resilient ASEAN – bringing people, goods, services and capital closer together. The Master Plan was seen as a key way of making this happen.

The Master Plan gained impetus at the 15th Summit in Thailand in October 2009 when ASEAN leaders drew up a statement on the subject. It said, for example, that "enhancing intra-regional connectivity within ASEAN and its subregional grouping would benefit all ASEAN member states through enhanced trade, investment, tourism and development".

The statement foresaw that the proposed transport linkages would have to go through the mainland countries of Cambodia, Laos, Viet Nam, Myanmar and Thailand and that these countries would therefore stand to benefit the most through infrastructure development. In opening up remote and less developed regions, it was determined that the development gap within ASEAN would be narrowed.

So what does connectivity involve? Two areas cited in the Master Plan are "institutional" connectivity – such things as trade liberalisation and cross-border procedures – and "people-to-people" connectivity, covering areas such as education, culture and tourism.

But a key third plank – and the one which forms the basis of this report – is "physical" connectivity. In the main, this aspect of connectivity is being applied to transport, information and communications technology (ICT) and energy. In the pages that follow, we will be looking at some of the individual projects that come under this category.

Take a look at a map of Asia and you will quickly see why it's imperative that the ASEAN nations come together in an optimal way. To the west lies India; to the north-east are China, Japan and the Republic of Korea; to the south, Australia and New Zealand. The potential synergy of such an economically vibrant and growing region is manifestly apparent.

In enhancing its connectivity, ASEAN is seeking to rise to the challenge of reducing the cost of investment and international trade in goods and services. Time for a Master Plan? You bet.

ASEAN connectivity: the priority areas

Progress is well under way in many of the key infrastructure projects designed to deliver ASEAN connectivity. But there is plenty more to be done

ASEAN has put in place numerous programmes and initiatives designed to build and enhance regional connectivity, and good progress has been made. However, by ASEAN's admission, "substantial work still remains to be done to achieve the goal of a seamless regional connectivity".

Below we reference some of ASEAN's physical connectivity priorities and progress made to date:

The ASEAN Highway Network (AHN): The AHN is an extension of the Trans-Asian highway network within the ASEAN region. The member states have already made significant progress increasing the length of the highway and upgrading road quality. There remain some "missing links", mostly located in Myanmar and which have a total length of 227 kilometres.

The Singapore-Kunming Rail Link (SKRL): This was proposed at the fifth ASEAN Summit in December 1995 and is targeted for completion by 2015. It covers several routes connecting Singapore, Malaysia, Thailand, Cambodia, Viet Nam and Kunming in China as well as spur (or branch) lines between Thailand and Mynamar and between Thailand and Laos. There are currently 4,069 kilometres of missing links or links in need of rehabilitation in Cambodia, Laos, Malaysia, Myanmar, Thailand and Viet Nam.

Inland waterways: The ASEAN region has some 51,000 kilometers of navigable inland waterways which have been identified as having an ability to play an active role in transport development. Such waterways, which currently have low utilisation, are seen to have large potential in reducing freight transport costs. Infrastructure issues that need to be addressed include: the underdeveloped waterways network, poor river ports and facilities and poor intermodal connectivity.

Maritime transport: The ASEAN nations have designated a total of 47 ports as the main ports within the trans-ASEAN transport network. These ports face a number of challenges in areas such as ship capacity, cargo handling capacity, land transport, logistics capacity and customs and administrative clearance procedures. Many ASEAN countries rank poorly on shipping connectivity compared with China and Hong Kong. Moreover, most of the gateway ports in ASEAN member states are fairly full and require capacity expansion.

Air transport: While the main airports of ASEAN member states are seen as sufficient in terms of runway lengths to accommodate existing aircraft operation, some of them face problems in terms of providing airport facilities, especially runways and warehouses. Attention is also being given to harmonising ASEAN's air navigation systems and planning for anticipated growth in air traffic in the region.

Trans-ASEAN Gas Pipeline (TAGP): TAGP aims to develop a regional gas grid by 2020 by interconnecting the existing and planned gas pipelines of member states and enabling gas to be transported across borders. By 2013, there will be a total of 3,020 kilometres of pipelines in place, with the completion of the M9 pipeline linking Myanmar to Thailand. Challenges of the project include obtaining an adequate supply of natural gas, increasing investment costs, synchronising national technical and security regulation requirements, and differences in the supply, distribution and management for natural gas across the countries.

ICT infrastructure: This is broadly defined as fixed, mobile and satellite communication networks, the internet and the software supporting the development and operation of the communication networks. As well as member states needing to improve the competitiveness of their national ICT sectors, a key challenge is the lack of financing schemes for infrastructure projects that involve the significant participation of private capital.

Singapore

Plenty to like

Investigating the opportunities and challenges for private sector investors in Southeast Asia

Every yin has its yang. And for every European economy labouring under high public debt, ballooning budget deficits, stalling or non-existent growth and the constant threat of runaway inflation, there are many examples in Southeast Asia where the opposite applies – debt under control, deficits limited, few worries about inflation and high growth. Those in the West could be forgiven for feeling a little envious.

As Johan Bastin, chief executive officer of Singapore-based fund manager CapAsia, which is raising a $350 million ASEAN-dedicated infrastructure fund, says: "The growth is remarkably consistent. Even in an advanced market like Malaysia you have growth of more than 5 percent. It's a very good climate for infrastructure investors to invest."

As well as these positive economic indicators, what you also have in Southeast Asia is a favourable demographic trend. "We look at a number of factors, when evaluating entry into a new infrastructure market. Demographics is a key driver of infrastructure spend and therefore an important factor," points out Steve Gross, a managing director in the Asia division at Macquarie Infrastructure & Real Assets.

"We like large populations where a lot of people are moving into working age and where there is an increasing group of middle-income earners. This has a double impact – not only do they have an increased ability to spend but the lower dependency ratio means there are not many pension liability issues. The Philippines is a great example of this but wherever you look in Southeast Asia, it knocks the ball out of the park on this measure."

FILLING THE GAP

Gross points out a number of other encouraging trends. One of the more obvious ones is that, as elsewhere in the world, governments in Southeast Asia simply can't meet the infrastructure investment requirement on their own. Hence, there is a gap waiting to be filled by the private sector.

In two other respects, it's clear that the situation is not optimal – but is improving. One of these is the priority being given to infrastructure in relation to all the other things that money needs to be spent on. There is something of a consensus that Southeast Asian nations should be spending somewhere around 5 percent of gross domestic product (GDP) on infrastructure in order to keep it up to an acceptable level. Traditionally, this figure has been more like 1 or 2 percent. Attitudes are changing, however, as more countries identify infrastructure as a facilitator of strategic goals – for example, in

China, the move from agriculture to urbanisation. Such shifts mean infrastructure has to become a priority.

The other is the 'ecosystem' around investment. In the words of Gross: "You need an institutional framework where the private sector is able to access public-private partnership (PPP) opportunities through a single window and appraise who are the responsible contracting parties, the PPP delivery method, the allocation of risk and the availability and form of guarantees if any. Investors need clarity and assurance that there is a level playing field." He says Indonesia, for example, has done exactly this through the establishment of the Indonesia Infrastructure Guarantee Fund (IIGF), which is an independent public body which enables a clear delivery method of PPPs and ring-fences the government's guarantees with respect to PPPs.

With this clearly more favourable backdrop for investors, it's pertinent to ask why more investment is not happening. Johan Bastin says the problem is not a lack of capital supply – at least on the equity side. He does, however, think there is a lack of investable projects. Indonesia, for example, should be providing all manner of transport-related deal flow. The reality is that it's not really delivering on this because there is too much of an onus on investors to get involved in the planning process, such as obtaining rights of way and permits.

POLICY RISK

There are other problems too – though Bastin feels that the nature of these problems can be easily misunderstood. For example, rather than the political risk sometimes associated with this part of the world, he feels that the real issue is policy risk. When asked about political risk, he says: "Well, emerging markets certainly don't have a monopoly on political risk. There have been the episodes in Greece and in renewable energy in Spain and in the UK in the 1990s when a windfall tax was introduced in the water sector. Political risk is when a government adopts a populist stance and changes a tariff agreement or creams off profits that investors have made. I don't see that risk here."

He does concede that there is what he describes as policy risk, whereby governments take decisions that will have a negative effect for investors without meaning to cause that effect. For example, he points to a decision made by the Indonesian government to introduce a tax on coal exports which had the knock-on effect of creating an environment of uncertainty for investors in coal terminals.

Another risk – and again, by no means limited to this part of the world – is of corruption. There is a sense that, as time goes by, this will become less of a problem. "Rooting out corruption is a key thing," says one local fund manager. "And there are more high-profile cases now than we have seen previously. It's a product of things not moving quite as smoothly as they should. If processes are working well and are open and transparent and people are sharing in the wealth, you don't tend to get corruption. You need to punish those found guilty of doing illegal things but you also need to put in place the right frameworks."

In terms of competition to do deals, Gross's view is that this comes not so much from infrastructure funds or institutions investing directly – opportunities in Southeast Asia are often too high up the risk/return scale for the latter grouping – but more from local strategic investors. But as well as providing straight-out competition, these industrials also provide opportunities for partnerships, Gross reasons.

He says: "They have a pretty sophisticated ability to finance and implement deals but we look to partner with them. Not only do we bring infrastructure management skills, through teams of operating experts and a global portfolio that provides access to real-time benchmarks, but also our global footprint provides the ability to help these companies grow internationally."

WHERE'S THE EXIT?

The other side of the equation from doing deals is exiting them – and, in this respect, there is an existing platform of parties willing to acquire infrastructure investments in these markets, though history shows there are reasons to be hopeful that this will continue to deepen dramatically over the coming years.

"The question is how it [the exit market] will develop over the next five to ten years," says Gross. You start off with strategics and a few financial players doing deals but when the first funds come in then the market will start to mature as those pathfinders have provided an endorsement. You'll see more global and local infrastructure funds coming in and deregulation of the insurance and pension markets will see the institutions coming in and acquiring businesses as well."

In terms of sectors, there is already a lot of investment in power, while transport is not far behind. Telecoms infrastructure is also seen as interesting if a little more technologically complex, while the growing middle class in Southeast Asian nations should ensure that the relatively nascent social infrastructure sector should do a lot of catching up in the years ahead.

In sum, while there are challenges for private investors in Southeast Asia, the attractions are hard to resist. In a world beset by macro-economic concerns, we're talking fast growth, modest leverage, young populations and an overwhelming desire for better infrastructure. Not bad for starters. ■

SURIN PITSUWAN, FORMER SECRETARY-GENERAL OF ASEAN

'We need to bring ASEAN to the people'

Surin Pitsuwan, former Secretary-General of ASEAN, talks about ASEAN's remarkable trade achievements, the geographical and funding challenges infrastructure development faces, and why 2015 will be a critical year for the organisation

"We need a strengthened ASEAN Secretariat and an ASEAN Community that is connected, competitive and inclusive"

ASEAN was established in 1967 with clear objectives for enhancing regional cooperation. Forty-five years onwards, how do you assess ASEAN's progress vis-a-vis its objectives? What have been the highlights of ASEAN integration? And conversely, what are the most difficult obstacles ASEAN still faces?

As I approach the end of my five-year term as the Secretary-General of ASEAN, I have been mulling over the relevance and significance of ASEAN to our peoples. In addition to peace and prosperity, I am proud that we are making progress in people-centred activities such as education, health, agriculture, tourism, disaster management. These have helped to bring ASEAN closer to our people, and foster the feeling of one community.

Back in 1967, the five ASEAN leaders recognised that to drive economic development in their countries, they must first ensure peace and stability in the region, which is the foundation for ASEAN.

In the past 45 years, all 10 of our member states have made significant progress in building the ASEAN Community. We have evolved from a loose form of inter-governmental cooperation into a regional organisation with its own charter. We are now implementing the Roadmap for an ASEAN Community 2015 and connecting the region's infrastructure, institutions and peoples through the Master Plan on ASEAN Connectivity.

In the ASEAN Economic Community, one major achievement is that 99.5 percent of tariff lines are at 0 percent to 5 percent. Intra-ASEAN total trade almost quadrupled to $600 billion in 2011, a substantial jump compared to 2000, when all 10 member states joined the Common Effective Preferential Tariff Agreement for ASEAN Free Trade Area (CEPT-AFTA). There is great potential for further growth, as we work on trade facilitation measures.

The challenge now for ASEAN is to push for the timely implementation of its regional initiatives. The commitment is there, but we need to narrow the gap between plan and action and bring ASEAN to the people.

Infrastructure development is one of the classic building blocks of regional integration and connectivity. Whilst a necessary building block, one can think of three significant obstacles to developing intra-regional infrastructure, including: geography; disparities between member countries; and massive funding requirements. How is ASEAN working to overcome these?

Geography certainly has to be taken into account as we have a mainland Southeast Asia and an archipelagic Southeast Asia.

This is why ASEAN has made linking infrastructure one of its primary goals towards the ASEAN Economic Community 2015, and in our Master Plan on ASEAN Connectivity. For example, the ASEAN Highway Network project will link capitals, sea and air ports, and high potential areas for investment and tourism. This will facilitate access to an enlarged market, reduce transportation and trade costs, and link regional and global supply chains. Just imagine the opportunities for trade and tourism that greater connectivity will bring to the region.

Our ASEAN leaders have recognised the need to bridge the development divide between ASEAN member states. ASEAN wants to connect the dispersed and isolated parts of the region to promote growth and to connect them to the centres of economic activities. Key initiatives include the ASEAN Framework for Equitable Economic Development, Initiative for ASEAN Integration and the Master Plan for ASEAN Connectivity.

Mobilising resources is another major challenge. It is estimated that ASEAN countries will require infrastructure investments of $60 billion annually for this decade alone. There are many interested parties around the world who are keen to participate in the development, but we need to create a level-playing field and establish rules that are consistent and conducive [to this investment].

The diversity of ASEAN would be a critical strategic advantage, as connectivity allows it to create synergies among themselves. ASEAN member states must try to co-ordinate their national infrastructural development to achieve regional synergy.

The 1997 Asian financial crisis significantly impacted ASEAN member states' spending in infrastructure. Given the current decline in global demand, is ASEAN working towards increasing expenditure in infrastructure?

Despite the slowing down of the global economy, ASEAN continued to exhibit resilient economic growth. Because of this, much of ASEAN's power, water, information communications technology and transport systems have strived hard to keep pace.

Recognising its infrastructure deficit, it is estimated that over the next five years, governments in this region will spend between 1 percent to 3 percent of their GDP on infrastructure investment. Infrastructure spending will increase but it is not sufficient to plug the infrastructure funding gap.

Private sector has an essential role here but for them to participate we need sound, attractive and bankable infrastructure projects. Mechanisms such as private-public partnerships (PPPs) should be explored and this means the need for enabling frameworks and resources to support PPPs.

How does ASEAN work to help and make sure its member states are developing the required intra-regional infrastructure?

Some of the priority projects under the Master Plan involve national or bilateral efforts to establish critical cross-border links. The ASEAN Connectivity Coordinating Committee is working with appointed National Coordinators to facilitate the implementation of the Master Plan at the national level. We have also developed scorecards to keep track of the implementation of various initiatives.

In addition, ASEAN has recently established the ASEAN Infrastructure Fund, to help address the region's infrastructure needs. The Fund's total lending commitment through 2020 is expected to be approximately $4 billion, which can be used to leverage more than $13 billion of infrastructure financing by 2020. By establishing the ASEAN Infrastructure Fund, ASEAN is taking a major step towards investing more of its resources in its own development.

We are also working towards greater private sector support for our intra-regional infrastructure needs. Their knowledge and experience will bring to ASEAN greater complementarities, greater synergies and greater partnerships in translating the vision of our leaders into actual business opportunities.

The European Union has created the Trans-European Network body to deal with cross-border infrastructure. Is ASEAN thinking of creating a similar cross-border infrastructure body?

Despite the current euro crisis, the European Union (EU) remains an inspiration for us in ASEAN, but it is not quite a model. We are inspired by the achievements of the EU, but the structure and the way in which ASEAN does things is quite different. Through ASEAN, we coordinate, consult and agree our goals, without transferring our powers to any supranational entity like in the EU.

We have the Master Plan on Connectivity, various sector plans, as well as the ASEAN Infrastructure Fund. While we draw on various best practices and lessons from the Trans-European Network body, we will depend primarily on the collective effort of our member states, to implement cross-border infrastructure.

Looking beyond 2015, what can we expect from ASEAN integration?

Two thousand and fifteen will be a critical point for us. While the Community Blueprints have a 2015 timeline, the development of the ASEAN Community goes beyond 2015. We will continue to build on the work we have done as we evolve. The ASEAN Charter, ASEAN Community, and ASEAN Connectivity are important signposts of our development, but they are not the finishing points.

The process of reflection is already ongoing within ASEAN. For the last five years, I have always been optimistic about the future of ASEAN, but candid in my own assessment.

Before 2015, a serious evaluation will have to be done by our leaders to move ASEAN integration forward. ASEAN has responded and is still responding to new needs. We need endowed ASEAN institutions, a strengthened ASEAN Secretariat and an ASEAN Community that is connected, competitive and inclusive. ■

LUI TUCK YEW, MINISTER OF TRANSPORT, SINGAPORE

Opening up ASEAN's skies

Lui Tuck Yew, Singapore's transport minister, outlines ASEAN's transport infrastructure plans, highlighting the role of intra-ASEAN and international air transport in boosting regional growth

"At present, the MPAC's implementation rate lies below 50%"

What is ASEAN's vision for achieving physical connectivity, particularly in the area of seamless transport linkages?

Physical connectivity is an important enabler for ASEAN's integration efforts.

In the face of an uncertain global economy and changing geopolitical environment, ASEAN is working towards the formation of an ASEAN Community by 2015.

At the heart of this is the goal to develop an ASEAN Economic Community (AEC). Signed by ASEAN's leaders in 2007, the AEC Blueprint contains specific timelines for ASEAN as it sets out to achieve a single market and production base, with the free flow of goods, services, investments and skilled labour, as well as the freer flow of capital.

A key aspect of achieving such integration is the improvement of ASEAN Connectivity. In 2010, ASEAN adopted the Master Plan on ASEAN Connectivity (MPAC), which aims to integrate the region through extending physical infrastructure in road, rail, sea and air connectivity, as well as forging more institutional and people-to-people links.

The enhancement of ASEAN Connectivity will facilitate the flow of trade, investment, people and ideas among ASEAN member states and further ASEAN's goal of achieving an AEC by 2015.

How do you assess the MPAC's implementation?

ASEAN has made progress since the adoption of the MPAC in 2010.

However, the road ahead remains long. At present, the MPAC's implementation rate lies below 50 percent. We recognise that the implementation of large cross-border transportation projects will require significant investments.

According to the Asian Development Bank (ADB), the MPAC would require $596 billion of infrastructure investment from 2006-2015. To this end, in 2011, we launched the $485 million ASEAN Infrastructure Fund (AIF), with the aim of catalysing private sector financing for infrastructure projects. It is envisioned that the AIF's total lending commitment through to 2020 will be about $4 billion.

ASEAN also recognises that ASEAN Connectivity is an ambitious initiative that ASEAN cannot implement or fund on its own. Therefore, ASEAN is deeply appreciative of the resources and expertise shared by its Dialogue Partners (DPs).

Besides the challenging task of financing ASEAN's Connectivity efforts, the coordination required between multiple parties, including government agencies and the private sector, cannot be overlooked.

To address this, ASEAN set up the ASEAN Connectivity Coordinating Committee (ACCC) in April 2011. The ACCC has the mandate of coordinating and overseeing the implementation of the MPAC and works closely with the National Coordinators and relevant government agencies of each member state.

Other key challenges include harmonising member states' domestic laws, regulations, and market access criteria, and the availability of suitably trained manpower to support the projects.

What are some of the problems in attracting private sector financing for transport infrastructure projects in ASEAN?

A key challenge of financing transport infrastructure projects is that they may not yield healthy revenue streams to attract private investment, but yet are publicly necessary to provide.

The public-private partnership (PPP) approach offers a viable financing model for governments to implement such projects. There are many examples of PPPs in member states such as Malaysia, the Philippines and Singapore. PPP projects call for strong political commitment, and a sound policy and regulatory framework to mitigate the risks and make projects commercially viable for the private sector.

While some member states are more familiar with PPPs, there is a need to build up the knowledge and capacity of others to do PPPs. ASEAN is now looking to bridge this gap.

There are a number of ASEAN agreements on transport facilitation which focus mainly on goods transportation. What is being done to facilitate greater intra-regional tourism and people-to-people connectivity in the region?

First, it is important to recognise the importance of air transport services in ASEAN to facilitate greater intra-regional tourism, trade and people-to-people connectivity, which would in turn bring about wide economic benefits for the region. This cooperation is embodied in the ASEAN Single Aviation Market (ASAM) concept. Its timeline, to be established by 2015, was endorsed by ASEAN leaders at the 13th ASEAN Summit in November 2007.

An integral component of the ASAM concept is the ASEAN Open Sky Policy. Under this, ASEAN has concluded three multilateral agreements that have since entered into force, providing unfettered passenger and cargo market access among membe states that have ratified the agreements and the implementing protocols.

By putting in place liberal air services frameworks within the region, this would also provide ASEAN carriers maximum flexibility to respond to market opportunities, help promote their competitiveness, and stimulate demand.

Complementing efforts to facilitate greater tourism growth and people-to-people connectivity within the region, ASEAN has also embarked on air services engagements with Dialogue Partners, which would enhance connectivity beyond the region.

Of note, ASEAN concluded the first Air Transport Agreement with Dialogue Partner China in November 2010, which entered into force in August 2011. The agreement provides unrestricted market access for passenger and cargo carriers between China and ASEAN member states that have ratified the agreement and its implementing protocol.

More recently, ASEAN and China concluded an expansion of the agreement to include market access to points outside of ASEAN and China for Chinese and ASEAN carriers respectively. ASEAN is keen to conclude similar agreements with other Dialogue Partners including the Republic of Korea and India, to augment connectivity and grow tourism flows between these countries and the region.

The undertaking of ASEAN Connectivity takes place both at the ASEAN level, and through the establishment of links between the various sub-regions. In this light, the MPAC identifies the need to promote links and interfaces among the various sub-regions.

At present, the ACCC is in contact with sub-regional initiatives and is kept up to date with their work. The link between ASEAN and sub-regional initiatives is duly acknowledged, with reference to the MPAC made in the 2012-2016 Implementation Blueprint of the Brunei Darussalam-Indonesia-Malaysia-The Philippines East ASEAN Growth Area (BIMP-EAGA) and the 2012-2016 Implementation Blueprint of the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT).

As a global hub for trade and commerce, what is Singapore's perspective on what ASEAN must do to meet its transport connectivity targets in the MPAC and Brunei Action Plan on Transport?

As the member states work towards the establishment of the ASEAN Single Aviation Market in support of the realisation of the ASEAN Economic Community by 2015, it is crucial that they ratify the intra-ASEAN air services liberalisation agreements to fulfil post-signing obligations and come on board soon, in order to realise the full benefits of ASEAN open skies.

At the same time, regional integration will enable ASEAN to be on a stronger footing as a bloc in advancing our air services engagements with Dialogue Partners.

There must be continued cooperation and coordination at both policy and operational levels among member states. One such example would be the sharing of best practices to aid each other to build up institutional capacity and knowledge base.

ASEAN must also partner with the private sector through a continuous dialogue on the developments under the MPAC and the opportunities available. This will not only lay the ground for future PPP collaboration, but will also foster the beneficial sharing of technology and expertise between the public and private sector. ■

The Singapore Kunming Rail Link

Tauch Chankosal, Secretary of State, Ministry of Public Works and Transport, the Kingdom of Cambodia, tells the story behind the Singapore Kunming Rail Link and explains why funding is the project's biggest obstacle

The former Prime Minister of Malaysia, Mahathir Mohammed, first raised the idea of a connected rail network from Singapore to Kunming, the capital of China's Yunnan Province. He believed that such a rail network would facilitate regional economic integration and serve as a catalyst for economic development.

The Fifth ASEAN Summit in Bangkok endorsed the Singapore to Kunming Rail Link (SKRL) project in December 1995, with the goal of connecting all railways in the region by completing the missing physical links between them.

The Special Working Group on the SKRL was formed in 1996, under the initiative of the ASEAN- Mekong Basin Development Cooperation (AMBDC). Its membership includes all the countries of the Greater Mekong Subregion (GMS), plus Malaysia and Singapore.

The SKRL Working Group provides a forum for representatives of member countries to review progress on closing the missing links and to discuss problems in achieving regional railway integration between ASEAN and the Mekong countries.

To date, the main missing links include:

- Thailand – Cambodia;
- Cambodia – Viet Nam;
- People's Republic of China (PRC) – Myanmar;
- Myanmar – South Asia;
- Thailand – Myanmar;
- Thailand – PRC through Lao PDR and / or Myanmar; and
- Thailand – Viet Nam through Lao PDR.

A feasibility study for the SKRL project was started in March 1997 and completed in August 1999 by the Malaysian government. The study examined six routes to link Singapore with Kunming. All the six routes include a common stretch from Singapore to Bangkok via Kuala Lumpur.

Among the six routes, Route 1 was chosen, as it has the highest social and economic impact. A recommendation was also made for the development of part of Route 2 and a spur line that would integrate Myanmar and Lao PDR into the regional rail network.

The Sixth ASEAN Transport Ministers meeting in October 2000 in Bandar Seri Begawan, Brunei Darussalam, supported the above route recommendations. Subsequently, ASEAN leaders at the Fourth ASEAN Informal Summit in Singapore, in November 2000, endorsed the broad thrust of the feasibility study and instructed the project should be moved forward.

However, while the Working Group has been in existence for over 16 years, it remains unfunded and largely voluntary. As a result, progress on completing the missing links has, until lately, been slow.

Recent progress on the "Cambodia route" (Route 1) is very positive, though. Cambodia expects to complete a 48-kilometre section of railway to the border with Thailand in 2013. Thailand also plans to complete a 6-kilometre section to the border in the same year. That leaves the connection from Cambodia to Viet Nam outstanding. This will require construction of a 256-kilometre rail line in Cambodia and the construction/upgrading of 129-kilometres of rail in Viet Nam.

Not surprisingly, the main obstacle to completing the link is cost, which has been estimated at more than $1 billion.

Given the size of the investment, special effort and assistance will be needed from ASEAN. Since the SKRL is a key initiative under the Master Plan on ASEAN Connectivity, the SKRL Working Group needs to coordinate closely with the ASEAN Connectivity Coordinating Committee to find solutions to the funding requirements.

So far, the SKRL has concentrated on removing the physical barriers to regional rail connectivity rather than on institutional issues. But the SKRL now needs to begin building the framework for a streamlined regulatory environment to harmonise cross-border processing and define standards for the interoperability of the region's railway network.

Some of these issues are now also being addressed by the Asian Development Bank's GMS programme. The emphasis of the GMS programme is on transforming the region's transport corridors into economic corridors and ensuring the optimal use of transport infrastructure. This requires, among other things, establishing the appropriate policy, regulatory, and institutional frameworks.

GMS member countries are also now considering the formation of a GMS Railway Association (GMRA), which was one of the key recommendations of the Strategic Framework for Connecting GMS Railways, approved by GMS Minister in Hanoi in 2010.

A charter for the association is being developed by GMS Members. It is anticipated that the GMRA, when constituted, will work closely with ASEAN and the SKRL Working Group to achieve these common objectives. ■

The ASEAN Power Grid

Peter Chin Fah Ku, Malaysia's Minister of Energy, Green Technology and Water details the country's role in developing the ASEAN Power Grid

The ASEAN Power Grid (APG) is one of the flagship initiatives under the framework of the ASEAN Ministers of Energy Meeting (AMEM) and was mandated by ASEAN Leaders in 1997.

The project aims to help ASEAN member states meet their increasing demand for electricity and improve access to energy services by enhancing trade in electricity across borders, optimising energy generation, as well as developing and encouraging possible reserve sharing schemes.

The table below details the APG interconnections involving Malaysia, followed by a progress update on each of the eight sections.

Peninsular Malaysia – Singapore

In the south of Peninsular Malaysia, the national grid is connected to the transmission system of Singapore Power Limited (SP), at Senoko, via two, 230-kilovalt (kV) submarine cables with a transmission capacity of 200 megawatts (MW). The connections were built in 1985 purely for system stabilisation purposes, particularly for Singapore.

However, due to recent gas supply shortages, Malaysia was forced to initiate a short-term power import agreement. A new transmission line has been proposed due to increasing power demand in both countries.

Thailand – Peninsular Malaysia

The original 117 MVA, 132kV Single Circuit Line HVAC interconnection of 80MW with the Electricity Generating Authority of Thailand (EGAT) was commissioned in 1981 for power exchange purposes.

But a new transmission line intended for power purchasing purposes – linking Bukit Ketri, in the state of Perlis, with Sadao, in Thailand – was built in 2000. The second project was made via the Thailand-Malaysia high-voltage, direct current (HVDC) interconnection, rated at 300kV with a transmission capacity of 300MW.

From 2002 to 2011, a total of 8.6-terawatt hours (TWh) of power were sold to Thailand, while Malaysia bought 230-gigawatt hours (GWh) of power, particularly in 2011, due to gas supply shortages.

	Interconnections	Expected Completion Date
1	Peninsular Malaysia - Singapore	
	Existing	1985
	New	2018
2	Thailand – Peninsular Malaysia	
	Sadao - Bukit Keteri	1981
	Khlong Ngae - Gurun	2001
	Su Ngai Kolok - Rantau Panjang	2014
	Khlong Ngae – Gurun (2nd Phase, 300MW)	2016
3	Sarawak - Peninsular Malaysia	2015-2021
4	Peninsular Malaysia - Sumatra	2017
5	Sarawak - West Kalimantan	2015
6	Philippines - Sabah	2020
7	Sarawak – Brunei	2012-2016
8	East Sabah - East Kalimantan	Newly Proposed

Sarawak – Peninsular Malaysia

This is the only interconnection within Malaysia that has been promoted through the APG. However, this project requires significant investment and has yet to materialise.

Peninsular Malaysia – Sumatra

This project was first mooted in the mid 1990's, but was thwarted due to insufficient local demand. *Tenaga National Berhad* (TNB-Malaysia) and *Perusahaan Litrik Negara* (PLN-Indonesia) are currently conducting a joint study on this issue.

Sarawak – West Kalimantan

The Asian Development Bank (ADB) concluded a feasibility study on the line in 2009, deeming the project feasible and cost effective. The transmission line is expected to cost $99 million, with $21 million to come from Sarawak and the rest to be funded by Indonesia.

Sabah – the Philippines

Again, lack of demand has slowed down progress on this interconnnection.

Sarawak – Brunei

An agreement has been signed between the Sarawak Electricity Board (SEB) and its Bruneian counterpart. Sarawak is expected to export 100MW to Brunei by 2013.

East Sabah – East Kalimantan

This project aims to address power shortages in the East Coast of Sabah. A study is being conducted by the relevant parties, with the cost to supply yet to be determined. ■

The Trans-ASEAN Gas Pipeline

Malaysia's Minister of Energy, Green Technology and Water, Peter Chin Fah Ku writes how the Trans-ASEAN Gas Pipeline project has expanded beyond pipelines to become a Trans-ASEAN Gas Partnership

Another of ASEAN's flagship energy projects, the Trans-ASEAN Gas Pipeline (TAGP) was first conceptualised in 1994, when ASEAN commissioned a regional study on the Master Plan on Natural Gas Development and Utilisation.

The study showed that trade in gas by pipeline could bring high returns on investment and recommended development of a trans-ASEAN gas transmission network of 8,000 kilometres to 10,000 kilometres from 2000 to 2020.

Once completed, the TAGP will have the potential of linking almost 80 percent of ASEAN's total gas reserves. In addition, the availability of gas made possible through the TAGP would reduce the region's dependence on crude oil.

In 1997, the TAGP was mooted as part of ASEAN Vision 2020. It was endorsed under the Hanoi Plan of Action for Energy Cooperation (APAEC) 1999-2004 and adopted by the 17th ASEAN Ministers on Energy Meeting in Bangkok on July 3, 1999.

Essentially, the project aims to interconnect the gas pipeline infrastructure of ASEAN member states to ensure energy security through reliability of gas supply; encourage the use of environment-friendly fuel; attract multinational companies to invest in the region; and spur investment in gas exploration, thus reducing the region's reliance on crude oil.

The ASEAN Council on Petroleum (ASCOPE) has been entrusted with the responsibility of developing TAGP through the auspices of the ASEAN Ministers on Energy Meeting. ASCOPE was directed to form the TAGP Task Force to implement the TAGP project in collaboration with national focal points and relevant institutions.

Malaysia was then appointed as the permanent Lead Coordinator of this task force.

A memorandum of understanding on TAGP implementation was subsequently drafted in 2000 and ratified in 2004. The Task Force came up with the Conceptual TAGP Master Plan 2000 that serves as the blueprint in undertaking the gas pipeline projects in the region. To expedite its implementation, the ASCOPE Gas Centre was formed, with Malaysia hosting it from 2003 to 2009.

PROGRESS

There are currently 11 bilateral gas pipeline interconnection projects in operation, spanning approximately 3,020 kilometres. They include:

- Malaysia-Singapore, 5 kilometres (1991);
- Myanmar-Thailand, 470 kilometres (1999);
- Myanmar-Thailand, 340 kilometres (2000);
- West-Natuna-Singapore, 660 kilometres (2001);
- West Natuna-Malaysia, 100 kilometres (2001);
- CAA-Malaysia, 270 kilometres (2002);
- South Sumatera-Singapore, 470 kilometres (2003);
- Malaysia-JDA, 270 kilometres (2005);
- Singapore-Malaysia, 4 kilometres (2006);
- CAA-Viet Nam, 330 kilometres (2007);
- JDA-Thailand, 100 kilometres (2009);
- Myanmar-Thailand, 250 kilometres, under construction (2013).

In addition, there are close to 3,000 kilometres of interconnection links under consideration, although they are greatly dependent on the East-Natuna gas field development, in the South China Sea.

In 2010-2011, taking into consideration the changing regional gas market landscape, the TAGP Task Force conducted a strategic assessment. This led to an expansion of TAGP's scope beyond physical connectivity and pipelines and now includes re-gasification terminals with a focus on liquefied natural gas (LNG) cooperation and strategic buffer management.

A number of re-gasification terminals are being built in the region, with two already in operation (Thailand and Indonesia).

However, the realisation of a regional gas grid like TAGP is likely to encounter substantial financial and legal complexities. The challenges include increasing investment costs, synchronizing national technical and security regulation requirements, and differences in the supply, distribution, and management procedure of natural gas across countries.

CONCLUSION

In the end, ASEAN gas demand is expected to grow and continue to play a central role as one of the region's primary energy sources.

Gas security is a growing concern and LNG has become the natural choice to address the shortfall. Considering the changing gas landscape of the region, TAGP strategic direction has been enhanced to encompass the LNG Terminals as part of TAGP connectivity, thus moving beyond pipeline interconnections.

The project has expanded from a Trans-ASEAN Gas Pipeline to a Trans-ASEAN Gas Partnership. The new focus areas now include strategic gas buffer supply management as well as LNG cooperation by establishing virtual connectivity between re-gasification terminals in member countries, thus increasing energy security for the region. ■

LUTIKA TUWO, VICE MINISTER FOR NATIONAL DEVELOPMENT PLANNING, INDONESIA

'Integration is like evolution'

Lukita Tuwo, Indonesia's Vice Minister for National Development Planning, talks about the challenges of building cross-border infrastructure and argues that integration is a 'step-by-step' process

"The main challenges we face are related with alignment of regulations and greater coordination"

Indonesia has announced a big increase in spending on infrastructure. What sectors will you be targeting and how will this spending fit in with the Master Plan on ASEAN Connectivity (MPAC)?

The big push on infrastructure spending actually began two or three years ago, but the government is continuing to increase the budget allocation for infrastructure. While government spending on infrastructure has increased to 10-11 percent of the total budget, over the last few years we have also pushed for greater participation from the private sector and state enterprises.

In terms of sectors, Indonesia is a big country and an archipelago – that is the country's defining characteristic. For instance, roads are important on each big island; then we need more seaports and airports; and electricity is another sector. We are also talking of promoting more rail transport connectivity.

Integrating our national agenda with the ASEAN connectivity agenda is not only important in terms of documents, but also in terms of organisation. For this purpose, I am responsible for implementing the MPAC in Indonesia and am the chairman of a committee which deals with other stakeholders, including line representatives from several ministries.

The implementation of the agenda is driven by a main theme, which we call 'locally integrated, globally connected'. You can see that in our plans: the infrastructure is locally developed, but then connects globally through ASEAN Connectivity.

You already have a strong growth rate. How much could developing your infrastructure add to your GDP and are you in a position where you need to further develop your infrastructure if you want further GDP growth?

Clearly, investment is very important for industry and other economic activities, and also to promote competitiveness in terms of increasing productivity and in lowering logistics costs. Business people always say that our transportation and logistics costs are quite high, so if we improve our connectivity, then the private sector will gain real competitiveness.

We believe that if we can remove the constraints to infrastructure development, then what we have already targeted in our master plan on economic acceleration and expansion (7-8 percent growth), will be easy to achieve.

Are you happy with the level of private sector participation in Indonesian infrastructure?

I want to see much more private participation. Private participation is already high in the electricity sector mainly in the form of IPPs [independent power producers]. We have also made a little progress on airports and sea ports. We want to push private sector investment in these areas.

In addition, we would like to promote more road public-private partnerships (PPPs). We already have some road concessions. There are 24 sections in Java that have been awarded since 1996, but only some are moving forward. Pushing this forward is important.

However, PPPs need more preparation in terms of government guarantees, land acquisition, and also in terms of preparing good, bankable projects. I think these are common issues with PPP projects in many countries. We just started this in 2006 and have gradually laid out all the necessary regulations in order to promote such projects. I would say that we are now ready for a big push on PPPs.

As the national coordinator in charge of implementing the MPAC, how would you evaluate Indonesia's progress toward meeting its goals in terms of physical, institutional and people-to-people connectivity?

Considering where we started from and what we have right now, I would say that we have made quite significant progress.

We had the crisis in 1997-1998 and that was followed by big bank reforms. Certainly, we have faced challenges in terms of financing and we had a backlog for the first five years following the crisis. Gradually, since 2005, we have tried to improve our backlog in infrastructure and have really accelerated the process.

And then we have our commitment to ASEAN Connectivity. I would say that in each of the three pillars – physical, institutional and people-to-people connectivity – we have recorded significant achievements. I could mention highways – around 90 percent of our national highways are ready and now we are about to provide our commitment in terms of signing off these road contracts.

Regarding marine roll on-roll off, we have a feasibility study that is almost completed and three sub-regional routes that can start being operated once it is finalised. So I do hope that in 2015, this can be completed.

We are also developing two projects in the context of the ASEAN Power Grid. We have signed the agreement for the Kalimantan project and we should be able to sign the agreement for the Sumatra project by the end of the year.

In terms of institutional connectivity, we are talking about the implementation of single windows. We have already implemented a national single window in nine major ports with 18 agencies joining the system.

Finally, concerning people-to-people connectivity, we are seeking a relaxation of visa requirements, which is important to promote human mobility between ASEAN countries.

Would you say Indonesia's national infrastructure agenda completely integrates with ASEAN's needs?

In the end, the entire agenda needs government support on policy regulation and budget. In my position, I will be able to check on whether the plans of our respective ministries help build on our commitment to ASEAN. If not, then I will push for it and help coordinate the effort.

As the head of the connectivity agenda, I have a team of people from related line ministries and I'm supported by vice ministers such as those for public works, transportation and trade. These ministers lead their respective meetings and then I check their reports.

All of this has to factor into our planning documentation in order to get government support and my position here is to ensure that those projects will be included by the respective ministries as part of their activities.

What has been the most challenging aspect of developing cross-border infrastructure?

The most challenging part has been the alignment of regulations. In maritime roll on-roll off, providing a route is easy. But taking care of permits and licenses so that when goods land somewhere they can be transported smoothly is a challenge. So, I think the main challenges we face are related with alignment of regulations and greater coordination.

Do you think ASEAN would benefit from having a dedicated cross-border infrastructure agency?

We have a coordinating forum, and while this is only a forum, we believe that an agency can have a positive role and should be encouraged. This agency could play a strong part in planning, in seeking funding sources and in implementing infrastructure development across ASEAN. But I think right now its establishment would be really challenging.

We are different from Europe in the sense that we have different political and economic backgrounds. In the longer term, the possibility of institutions such as those found in Europe should be discussed.

Do you feel ASEAN is on track to achieve its 2015 target for the establishment of an ASEAN Economic Community?

Our leaders have committed to integration and an ASEAN Economic Community by 2015 is a top priority. If we look at the experience of Europe, it took them 50 years to integrate and even now it is not fully integrated. I would say that integration is like evolution. There is a direction that we have to go in and by 2015, full integration, or the implementation of one market may not be fully achieved, but we are optimistic that we can achieve some goals.

We have to realise that to have one ASEAN community makes us bigger. But we have to do it step-by-step and I hope we can achieve some important goals by 2015. ■

PORAMETEE VIMOLSIRI, DEPUTY SECRETARY GENERAL, OFFICE OF THE NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD, THAILAND

'We will all benefit if we are connected'

Porametee Vimolsiri, Deputy Secretary General of Thailand's Office of the National Economic and Social Development Board, argues that the devil will be in the practical details of implementing ASEAN Connectivity

"People are now aware of the opportunities and the benefits of an ASEAN Economic Community"

How much does Thailand spend on infrastructure and what are the key focus areas at present?

Normally, every year we have a budget from the central government with an investment budget that mainly goes into infrastructure. The second component of infrastructure spending comes from state enterprise investment, which is also an important part.

Between the government and state enterprises, they probably spend about THB600 billion (€15 billion; $19.6 billion) or sometimes up to THB700 billion on infrastructure each year. But we feel that this is probably too low because in the past several years there weren't that many big infrastructure projects that we have finished. This was largely due to political instability and disruption of government, so we were not able to push through several large infrastructure projects.

Presently, we have a plan to refocus investment and public policy to prioritise infrastructure. We have outlined a preliminary pipeline of infrastructure projects for the next several years worth more than THB2 trillion, which we aim to prepare and start implementing as soon as possible.

Rail investments will be a major component of our future investment – both in improving and expanding the existing rail network – including high-speed rail. We are also looking to expand Bangkok's Mass Transit Rail system. These schemes cover a significant part of the pipeline.

Other areas of infrastructure spending include energy and some ICT programmes.

Are you at a point now where infrastructure bottlenecks are hindering your economic growth, or is that not yet the case?

I think to a certain extent we need more capacity in specific sectors, although the shortfall is not as severe as it was some 15 years ago. For instance, we need to expand Suvarnabhumi Airport [in Bangkok] in order to serve more passengers and we also need to better utilise our second airport. In terms of energy security and supply, we need more capacity.

Another objective which is equally important is the proactive development of infrastructure that expands opportunities for Thailand and enhances our national development. For example, connectivity with neighbouring countries and other countries in the region has been a key aspect of our national development plan from the very beginning.

One of our main objectives is to reduce logistics costs – we have a high spending on logistics and the ratio of logistics costs to gross domestic product (GDP) is about 15 percent of GDP. One way to reduce these costs is to reduce reliance on motor transport – shifting from road to rail is very important to reduce transportation costs.

How would you evaluate Thailand's progress towards meeting the three pillars outlined in the Master Plan on ASEAN Connectivity (MPAC)?

In terms of physical infrastructure, I'd say we are quite ready. For the highways network, the target in the MPAC is to upgrade all the roads to at least Asian Standard level 3 by 2012, but this has already been done across our roads network, which is mainly level 1 and 2, with only 7 percent at the lower level 3.

For the Singapore Kunming rail link, Thailand's participation is crucial to complete the missing link at the Thai-Cambodian border, where we still have six kilometres of rail to connect. The rail authorities have started to set-up the budget for this investment, so we should be able to finish this by 2014, as planned.

Regarding the software to support this connectivity, we have been quite active in pushing for this cooperation for a long time through our involvement in the Greater Mekong Subregion (GMS). We are more or less ready – we have six more protocols and laws to ratify and four of these are in process. We are rushing to get these ratified as soon as possible.

What have you found easier to implement from the MPAC and what has been the toughest?

Since our network is more or less in good shape and of good standard, we haven't had many problems in terms of physical connectivity. We are even assisting neighbouring countries in trying to improve their connectivity. We provide them with grants, soft loans and sometimes help build their infrastructure.

The bigger challenge lies in aspects related to legal processes, because governments here keep changing and this requires interaction between government and parliament, which has turned out to be quite difficult for us in the past.

Even when all of this is achieved we will face challenges in the future in terms of the actual implementation. When we have the hardware and the software ready, in terms of the actual implementation, there will be a lot of details involving officials, people, communications data systems, and even how to train truck drivers and the like. That will be the most difficult part.

How do you coordinate subregional agreements like the GMS with the MPAC?

I don't think that is an issue at all because the MPAC is an extension of the GMS connectivity plan, so whatever we are doing and planning right now is an integral part of realising ASEAN connectivity. GMS connectivity has been ongoing for the last 20 years and there have been no coordination problems.

Cross-border infrastructure sometimes raises security issues, especially when it comes to energy. Has this happened across ASEAN?

I don't think we have had any problems in the energy sector in terms of cross-border cooperation. There are local problems, as usual, but in terms of intraregional cooperation, we have the GMS and ASEAN networks and we are working on further tightening energy cooperation in the future. To date, I don't think security has been a concern from an energy perspective.

Security mostly comes into play when we talk about opening up borders. Most of the border provinces and the private sector in the border provinces want open borders, but there is a security issue. In some areas where security is not an issue, we can easily negotiate with our neighbors to set-up a new border crossing, for instance.

You have countries at different levels of development. How do you make sure cross-border projects aren't delayed?

I think we are lucky in that we have the Asian Development Bank as a member and an honest broker trying to support our cooperation. I think all the members have to be aware of and believe in the mutual benefits that this connectivity and cooperation can bring to the region as a whole and to all of the members individually.

This requires building trust and this is the job of the members and the ASEAN Secretariat: to help foster this understanding and cooperation. It's required that all members realise that as a region, we will all benefit if we are connected.

What do you think will be achieved by 2015 in terms of the ASEAN Economic Community?

I think we may not experience as much success as we would like in the area of regulations and practices because countries want to adopt these changes gradually and avoid anything drastic. But awareness of the objectives of the community is very important, even without these changes to the rules and regulations.

I think many people are now aware of the opportunities and the benefits that can accrue from the creation of an ASEAN Economic Community. In Thailand, all over the country, people are talking about the ASEAN Economic Community and this can also create important changes through 2016 – even without many agreements being realised. ■

MYANMAR

Population (2011 estimate): 60.3m
Capital city: Naypyidaw (0.9m)
GDP growth (2011 estimate): 10.4%
Inflation (CPI, 2011 estimate): 1.5%
Main industries include: Agricultural processing, wood, cement, pharmaceuticals

LAO PDR

Population (2011 estimate): 6m
Capital city: Vientiane (0.8m)
GDP growth (2011 estimate): 8.0%
Inflation (2012 estimate): 4.3%
Main industries include: Copper, timber, agricultural processing, construction

THAILAND

Population (2011 estimate): 67.5m
Capital city: Bangkok (8.3m)
GDP growth (2011): 0.1%
Inflation (2012): 3.0%
Main industries include: Automobiles/automotive parts, financial services, electrical components, tourism

CAMBODIA

Population (2011 estimate): 14.5m
Capital city: Phnom Penh (2.3m)
GDP growth (2011 estimate): 6.4%
Inflation (2012): 4.0%
Main industries include: Construction, cement, fishing, textiles

VIET NAM

Population (2011 estimate): 87.8m
Capital city: Hanoi (6.5m)
GDP growth (2012): 9.0%
Inflation (2012): 9.2%
Main industries: Rice, coffee, rubber, cotton

National Geographic Indonesia for ASEAN Tourism Map

MALAYSIA

Population: (2011): 28.9m

Capital city: Kuala Lumpur (1.6m)

GDP growth (2011): 5.1%

Inflation (2012): 1.6%

Main industries include: Rubber and palm oil, light manufacturing, pharmaceuticals, timber processing

SINGAPORE

Population (2011): 5.1m

Capital city: Singapore

GDP growth (2011): 4.9%

Inflation (2012): 4.6%

Main industries include: electronics, chemicals, financial services, oil drilling

INDONESIA

Population (2011): 237.6m

Capital city: Jakarta (10.2m)

GDP growth (2011): 6.5%

Inflation (2012): 4.3%

Main industries include: Petroleum/natural gas, textiles, mining, cement

BRUNEI

Population (2011): 0.423m

Capital city: Bandar Seri Begawan (0.1m)

GDP growth (2011): 2.2%

Inflation (2012): 0.5%

Main industries include: Petroleum, petroleum refining, liquefied natural gas, construction

PHILIPPINES

Population (2011): 95.8m

Capital city: Manila (1.6m)

GDP growth (2011): 3.9%

Inflation (CPI, 2012): 3.2%

Main industries include: electronics, garments, chemicals, food processing

TRANSPORT

Linking a global manufacturing hub

ASEAN stands a fair chance of becoming the world's manufacturing hub, capitalising on increased labour and productivity costs in China. But for that to happen, it needs to give the region an adequate transport network

ASEAN has one of the most complex production networks in the world. Member states trade extensively in not just finished goods, but also raw materials and several intermediate goods. Greater transport connectivity in the form of roads, rail, air and maritime links is essential for the region to maintain its status as a manufacturing hub and as a key cog in the global supply chain.

Underlining the importance of greater transport connectivity in ASEAN is the rapidly rising value of intra-ASEAN trade. Trade between member states has grown more than four-fold from $121 billion in 1998 to about $520 billion in 2010, according to ASEAN. This growth has been faster than trading activity as a whole and intra-ASEAN trade as a percentage of all ASEAN trade has increased to 25.4 percent from 21 percent in the same period. In short, ASEAN is ASEAN's largest trading partner today.

For a region as dependent on trade as ASEAN is, enhanced connectivity is of paramount importance. Ha Dong-Woo, Director of Transport Division at the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), spoke about the importance of connectivity:

"Without connectivity, you cannot do anything. You cannot trade with neighbours; you cannot travel to neighbouring countries; tourism will not develop. Even if you have social infrastructure, without transport links, people cannot access that social infrastructure." Dong-Woo went as far as calling transportation the "most basic infrastructure required".

As a result of increased labour and other production costs in China, there has been a southward shift of production hubs into countries like Viet Nam and Cambodia. Myanmar's return to the fold-will likely see many multinationals set up manufacturing units there to capitalise on cheaper production costs. Moreover, within ASEAN, a number of countries are manufacturing intermediate goods that are being used in the production of other finished products.

Oudet Souvannavong, a member of the ASEAN Business Advisory Council, speaking at the ASEAN Connectivity Symposium in Phnom Penh, Cambodia, stressed the need for greater connectivity in order for ASEAN to be able to compete as a production base with countries such as China and India.

He added that manufacturing activity has been shifting from China to ASEAN, "but we don't have the connectivity to help increase the pace of this shift and this affects the competitiveness of the region". He added that ASEAN has to bridge the gaps between the CLMV countries (Cambodia, Laos, Myanmar and Viet Nam) and the rest of the region to be able to really enhance its connectivity.

Streamlining transportation and related transaction costs will benefit manufacturers based in the region in two ways. Firstly, it will lower the cost of transporting goods from producers to consumers. And secondly, it will also help to directly reduce production costs, since all intermediate goods will be transported cheaper.

Japan has been supporting a wide array of transport infrastructure projects in Southeast Asia. Kimihiro Ishikane, Ambassador Extraordinary and Plenipotentiary, Mission of Japan to ASEAN, argues that connectivity enhancement in ASEAN is important not only for ASEAN countries, but also for countries such as Japan.

"ASEAN is quite important for Japan, first of all as a market and second as a production base for Japanese industries. For those Japanese industries which are operating across the region, connectivity enhancement is critically important because of transaction costs, which are currently still much higher than in Europe," he said.

ASEAN still lags behind the rest of the world (with the exception of Africa) in terms of its road and rail coverage. The organisation wants to address these shortfalls in addition to establishing an integrated inland waterways network; a competitive maritime transport system; and a seamless multimodal transport system to make ASEAN East Asia's transport hub.

PRIORITY PROJECTS

Of the 15 prioritised projects in the Master Plan for ASEAN Connectivity, four are related to transport, with the ASEAN Highway Network (AHN) and the Singapore-Kunming Rail Link (SKRL) arguably getting the lion's share of attention. Two other prioritised projects include a study on the roll-on/roll-off network and short-sea shipping, and the operationalisation of various ASEAN agreements on transport facilitation.

The AHN is expected to reach its target by the end of 2014, Lukita Dinarsyah Tuwo, Indonesia's Vice Minister of National Development Planning and National Coordinator for the Implementation of the MPAC, said at the ASEAN Connectivity Symposium. He added the highways network is generally in good condition and that more than 92 percent of roads can be used at any time and in any weather conditions.

The SKRL aims to create seamless connectivity between ASEAN and China. The rail line has a target of 3,900 kilometres, with some 1,200 kilometres still to be built, mostly in Laos and Cambodia.

When complete, the rail link is expected to shorten travel time from Kunming, in the south of China, to Singapore to just over 10 hours. It will boost tourism, and more importantly provide an efficient means for inland transportation of goods. The completion of the link will provide a major fillip to trade with China, which is easily ASEAN's fastest-growing trading partner, with trade between the two regions having multiplied more than ten-fold from 1998 to 2010.

The biggest challenge in the implementation of SKRL is resource mobilisation. Sun Chanthol, Senior Minister and Vice Chairman of Council for the Development of Cambodia, and Chair of the ASEAN Socio-Cultural Community Council, acknowledged that "it is up to us now to really promote that project [SKRL]," adding that each ASEAN member state has to work on its own to promote certain pirority projects to potential private investors and donors.

Still, while there are ample opportunities for private investors to participate in transport infrastructure in ASEAN, institutional challenges are holding back investments in this space.

As UNESCAP's Dong-Woo put it, developing these projects "isn't just a matter of putting in the money". He explained it is essential to establish effective coordination and cooperation between different agencies as well as different countries.

"If you are talking about facilitating measures like border crossing, although the roads may be ready, you could still have problems in crossing the border, particularly if it involves many different agencies and stakeholders," he pointed out, adding that: "Coordination is so difficult mainly because there are so many agencies involved."

FUNDING

Nevertheless, funding has gradually been forthcoming from investors and donors. For instance, the China-ASEAN Investment Cooperation Fund (CAF), which was initiated by the Chinese government in 2009 and is focused on infrastructure, energy and resources, has invested in transport in the region.

In 2011, it completed an equity investment in Laemchabang Port, Thailand's largest deep water port, located close to the country's main industrial region. A year earlier, it invested in Negros Navigation's buyout of Aboitiz Transport System, the largest domestic shipping and logistics company in the Philippines. That investment is expected to enhance the movement of cargo and passengers in the country.

According to Kamran Khan, Program Director, Global Infrastructure Finance, the World Bank, having economies in the region at different levels of development can be seen as an advantage in terms of infrastructure funding. Khan argued that when countries are at different levels of development, there is room for more advanced countries to invest within the region and "as the region's growth increases, the investing country can drive returns from its investments".

ASEAN is keen to involve the private sector and is looking at public-private-partnerships (PPPs) to fund transport infrastructure. In fact, the catchword at the ASEAN Connectivity Symposium was "properly prepared projects", and it was very clear that ASEAN member states recognised they have not yet been able to put in place the ideal environment for the successful implementation of PPPs.

Dong-Woo, from UNESCAP said: "A public-private partnership is a partnership," adding that its key element is risk sharing. Considering that investment in infrastructure has a long gestation period, the private sector needs to be provided with incentives and the right environment to invest PPPs.

"One of the ways to make projects attractive is by providing some viability gap funding, which is very popular in India," he suggested.

In his view, the logic is simple. Governments are responsible for the provision of transport infrastructure and services and are supposed to invest in these services anyway, without expecting too much in the form of returns. The problem is that for governments to provide all this infrastructure requires a lot of money, which most cannot spare anymore.

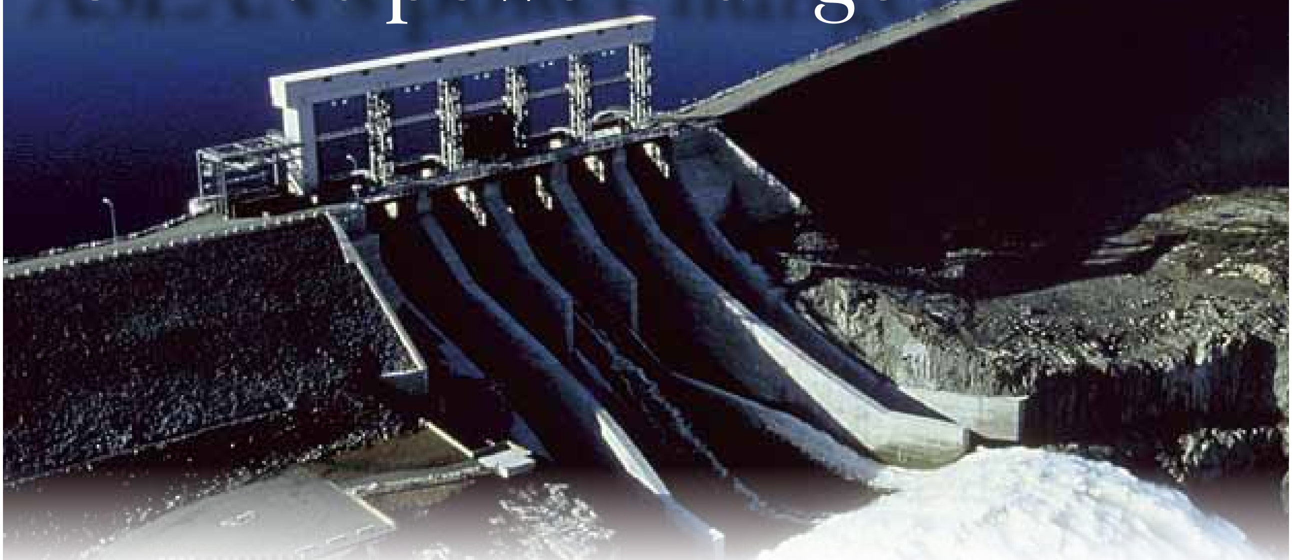
This creates a situation where, on the one hand, you have a moneyed private sector that is to invest that money because it is concerned about profitability.

"Therefore, if governments are able to provide funding to narrow the gap between private sector expectations and actual profit, then the private sector may become more interested in PPPs in the transport sector," he said.

The earlier this happens, the better. ■

ENERGY

ASEAN's power hunger



Between 2007 and 2030, ASEAN primary energy demand is expected to increase by 76%. Despite significant natural resources, the region will need considerable private sector participation if it is to realise its generation potential

Over the last 15 years, the ASEAN region has seen its nominal gross domestic product (GDP) in purchasing power parity terms multiply 2.4 times, from $1.36 trillion in 1996 to $3.31 trillion in 2011, according to data from the Economist Intelligence Unit.

This remarkable economic growth has come hand-in-hand with a steady rise in energy consumption - an increase which is expected to continue. The International Energy Agency (IEA) expects ASEAN's primary energy demand to increase 76 percent from 2007 to 2030, which translates into an annual 2.5 percent increase in energy demand.

On the flipside, as recently as 2008, 28 percent of the people living in the ASEAN region did not have access to electricity, according to the Asian Development Bank (ADB).

ASEAN is mindful of the numbers pertaining to both the current energy shortfall and the future expected demand as it works towards the implementation of the ASEAN Economic Community (AEC) and the successful implementation of the Master Plan on ASEAN Connectivity (MPAC).

Speaking at the ASEAN Connectivity Symposium in Phnom Penh, Cambodia, Syaiful Bakhri Ibrahim, Secretary in Charge of the Heads of ASEAN Power Utilities/ Authorities (HAPUA) explained that the ASEAN region as a whole has abundant energy resources in the areas of hydropower, oil, natural gas and coal.

According to Ibrahim, this provides vast opportunities for the collective exploitation of these energy resources in an attempt to reduce dependency on fuel imported from other regions.

Of the 15 prioritised connectivity projects in the MPAC, two projects, namely the Peninsula Malaysia–Sumatra (Melaka-Pekan Baru) Interconnection, a power exchange project, and the West Kalimantan-Sarawak Interconnection, a power purchase project – are related to power interconnection. Both are part of the ASEAN Power Grid, a flagship initiative launched by ASEAN Leaders in 1997, which aims to help the region meet growing demand for electricity.

The first project involves the development of a 600-megawatt high-voltage direct current interconnection link between Peninsular Malaysia and Sumatra, in Indonesia.

Once built, it should allow each country to share its peaking capacity and spinning reserve with the other, due to the one-hour time difference between the two countries and the difference in peak hours. The two countries also have distinct load curve patterns – Malaysia has a day peak, while Indonesia has a night peak

For this project, ASEAN will tap the ASEAN Infrastructure Fund (AIF) and the ADB as possible sources of capital.

The West Kalimantan-Sarawak Interconnection project will consist of 120 kilometres of high-voltage lines. The lines will connect the Bengkayang Substation, in West Kalimantan, to the Mambong Substation, in Sarawak. Once again, the AIF and the ADB are being looked to as sources of funding.

In addition to the power grid initiative, ASEAN has also established the Trans-ASEAN Gas Pipeline (TAGP), which aims to develop a regional gas grid by 2020 by connecting the existing and planned gas pipelines of member states so gas can be transported across borders. By 2013, it is expected that a total of 3,020 kilometres of pipelines will be in place following the completion of the M9 pipeline linking Myanmar and Thailand.

CHALLENGES

However, as with other extensive connectivity exercises there are several challenges to overcome.

Tran Dong Phuong, Head of the Infrastructure Division at the ASEAN Secretariat, talked about some of the hurdles the region will have to overcome before it has a unified power grid:

"Work is being done on a bilateral basis between neighboring countries. Piece by piece we will get there, but [the outcome] doesn't yet form a regional grid. At the moment, each country has its own system of regulation. They are similar, but still different. For example, each interconnection has different arrangements on tariffs, how much [power] to share. There isn't a whole template for the entire region."

Often, national priorities take precedence. In a summer 2012 interview with the Jakarta Post, Evita Herawati Legowo, Indonesia's Energy and Mineral Resources Ministry's oil and gas director general, said:

"We will prioritise Indonesia's integrated gas pipeline first before the ASEAN project," referring to the 682-kilometre Trans-Java pipeline, which is estimated to cost $1.12 billion and to begin operations by 2014.

Different energy priorities and availability of natural resources pose another threat to policy coordination.

For instance, Indonesia is the world's second largest net exporter of coal, accounting for 26 percent of global coal exports, according to the International Energy Agency. Indonesia, currently the country with the largest number of people with no access to power in the region, has plans to build more coal-fired thermal plants over the next 10 years. In this context, it is likely to retain more of a focus on generating coal-powered energy.

The obvious challenge for ASEAN is to ensure these differences do not overshadow its common energy projects.

PRIVATE SECTOR

Another piece of the puzzle is to make sure these energy projects, especially those promoted by the newer ASEAN members, have a chance of getting funded.

Laos, for example, has significant hydropower potential. In an attempt to harness it, the country now allows 100 percent foreign direct investment in the hydropower sector, Chaleune Warinthrasak, Laos' Vice Minister of Information, Culture and Tourism, explained.

Sun Chanthol, Senior Minister and Vice Chairman of Council for the Development of Cambodia, and Chair of the ASEAN Socio-Cultural Community Council pointed out that Cambodia also allows the private sector to invest in hydropower plants as well as in coal-fired thermal.

According to Chanthol, Cambodia has more than 1,000 megawatts worth of hydropower projects being built right now and has plans to develop an additional 500 megawatts. The Minister expects 1,000 megawatts to come online over the next two years and another 4,000-to-5,000 megawatts to become available four-to-five years down the line.

Additionally, Cambodia is also developing a 1,800-megawatt coal-fired power plant in Koh Kong that will connect to Thailand to sell excess capacity as part of the ASEAN connectivity on energy.

LN Sadani, managing director and chief investment officer within the Nomura Group with a focus on infrastructure investments in emerging Asian markets, argues that conventional and renewable power are among the most interesting infrastructure sectors for private investors, in addition to transport.

"Their underlying drivers [for these sectors] are the fast growing economies, where there is a need to improve logistics and meet energy needs," he explained. However, despite private sector interest, Sadani points out that the current regulatory frameworks are still weak, with the exception of Singapore.

"Consequently, the best projects are those that have limited govenrment involvement – renewable energy, water/waste management, telecommunications and small ports are the low-hanging furits," he says.

ASEAN governments must improve public-private partnership (PPP) frameworks, legislation and governance, Sadani said. Countries should only "take on as much as they can chew," Sadani added, highlighting that it is best to ensure completion of a few specific projects than to have overambitious targets which will not be met.

Governments may also need to provide financial support – in the form of credit guarantees, for example – to attract the private sector, the Nomura executive argued. And finally, they must sharpen their focus and do a better job of marketing their efforts. Sadani pointed to the Philippines as a good example of the latter, explaining that it now has a dedicated ministry for infrastructure development.

Eleazar Ricote, a director at the PPP Center in the Philippines, agrees, explaining that ASEAN has big plans for PPPs, but needs to be more specific in order to attract private investors. In his view, the main problem is that ASEAN member states do not have a common understanding of what a PPP is. While the Philippines, Indonesia and Malaysia have more or less defined legal frameworks in this area, countries such as Viet Nam have not been as successful in defining PPPs.

Ricote also believes governments should be more flexible. "The challenge is to be less prescriptive and to allow for private sector creativity," he says. "Just spell out the output required and then let the private sector do its job." ■

FEATURE

THE FINANCING CHALLENGE

Building a toolbox

With $60bn of infrastructure a year to finance, ASEAN will have to venture outside the government/multilateral duopoly that has traditionally served as a source of financing

Let's not beat around the bush: ASEAN's annual infrastructure financing needs are massive and have little hope of being financed by governments and multilaterals alone.

In a 2009 Asian Development Bank (ADB) study, Biswa Nath Bhattacharyay estimated that ASEAN countries would need to spend close to $600 billion to plug their infrastructure needs between 2006 and 2015. That translates to an average of roughly $60 billion a year.

The majority of the $600 billion, or about 66 percent, is needed to finance new investments with the remaining 34 percent required for maintenance. But as Bhattacharyay points out, "these estimates must only be regarded as a reference point rather than a substitute for detailed, bottom-up country- and sector-specific estimates which take into account actual conditions in each country".

Put differently: real ASEAN infrastructure requirements during that nine-year time period might actually be greater than that already gargantuan $600 billion figure. Crucially, that figure is "roughly five times the actual amount invested by the private sector [in ASEAN] during 1990-2006," Battacharyay points out in his study.

In all fairness, ASEAN is well aware that it needs to look beyond traditional funding instruments if it hopes to mitigate its infrastructure deficit. Lim Chze Cheen, Head of ASEAN Connectivity Division, ASEAN Secretariat, points out that "to date only about 20 percent of infrastructure investment in the region comes from the private sector".

For that to change, "we have to implement the right rules, use public-private partnerships and resort to tools like viability gap funding. Some countries will perhaps have to take a larger part of the risk for some projects, whereas in other cases the private sector will be comfortable with taking a bigger share of the risk. The most important thing is to put in a place a good framework for the private sector," he adds.

ISLAMIC FINANCE

Fortunately, there are a growing number of alternatives that ASEAN can tap into to complement the dominant government/multilateral funding duopoly. One of the most promising is the estimated $1 trillion Islamic finance market.

In a September 2012 report, ratings agency Standard & Poor's (S&P) was bullish on the growing use of Islamic finance to fund infrastructure across Asia and the so-called Gulf Cooperation Council (GCC) countries, which includes Bahrain, Kuwait, Oman, Saudi Arabia and the United Arab Emirates.

"Total sukuk issued out of Asia reached $57.9 billion in July 2012, compared with $64.9 billion for all of last year," S&P analyst Allan Redimerio pointed out, adding: "Malaysia is now the world leader in sukuk issuance. Political will, recognition of beneficial ownership, tax incentives, and a rising investor base have all supported the country's continued growth trajectory."

Sukuks are bond-like Islamic financial certificates that have the peculiarity of having to link the returns and cash flows of the financing to the assets purchased, since debt trading is forbidden under Sharia law.

Besides growing in volume, the sukuk market is also crossing borders and globalising, providing and increasingly standardised liquidity pool that will allow companies across ASEAN to tap into the sort of long-term funds that are adequate to infrastructure financing, S&P highlights.

THE BOND PRIZE

The high rate of savings across ASEAN turns local bond markets into a mouth-watering prospect for infrastructure financing. According to the Master Plan on ASEAN connectivity, savings rates in the ASEAN region stand at between 30 percent and 35 percent of GDP.

In his 2009 study, the ADB's Bhattacharyay pointed out the so-called ASEAN-5 countries alone – a group which includes which includes the Philippines, Indonesia, Malaysia, Thailand and Singapore – has savings in the region of $457 billion.

But as tempting as the prospect of a well-integrated, pan-ASEAN capital market may be, there are several obstacles standing in the way of channelling these regional savings into infrastructure financing.

Chief among them, as the MPAC points out, is the development of "market-based tools like credit ratings to help investors assess the level of risk associated with a given fixed income investment".

Steps in this direction are already being taken, with the MPAC highlighting the creation of a new credit ratings scale known as the ASEAN regional ratings scale, introduced to assign credit ratings on issuers located in southeast Asia.

But while it's crucial to have as many tools as possible in your toolbox, as the below case study demonstrates, the real key is securing the political backing to use them. ■

CASE STUDY

Walk like the Philippines

With a robust PPP pipeline, strong political backing, and innovative vehicles like a $625m infrastructure fund, the Philippines is showing how best to attract the private sector's interest

It's no secret that most of ASEAN's infrastructure has been funded by a combination of government and multilateral financing. The private sector, outside of a few notable successes, has so far played a relatively minor role in financing member states' infrastructure needs.

On the flipside, it's also true that practically every single one of ASEAN's 10 countries has been successful in attracting private sector financing, be it through independent power projects (IPPs), transport and renewable concessions or public-private partnerships (PPPs).

What most countries have lacked is a cohesive approach, backed by strong political support that places private sector infrastructure financing at the core of governments' strategy. The type of strong pipeline and commitment to the PPP framework that has been the hallmark of thriving programmes like the UK's Private Finance Initiative has so far been absent from the region.

The Philippines, however, is challenging the status quo.

COVERING ALL THE BASES

One of the most important building blocks of any nascent PPP programme is political commitment, but fortunately, the Philippines has it in spades.

Ever since coming to power in 2010, President Benigno S. Aquino III has been unwavering in his commitment to PPPs as a path to develop the country's infrastructure and boost its economy. As the President exhorted in a speech in March 2011: "Let us build, build, and build."

Accompanying Aquino's rousing words were a series of comprehensive actions. They included amending the country's build-operate-transfer (BOT) law to provide clearer guidelines on the processing of projects and better governance and accountability measures; and passing a law to help settle disputes that may arise over the lifetime of PPP contracts.

Acknowledging that one of the major difficulties plaguing PPP projects in emerging economies is the availability of early stage equity, the Aquino administration created the Project Development and Monitoring Facility (PDMF), a revolving fund that provides financing for pre-feasibility studies, feasibility studies and other early-stage activities essential in making PPP projects as bankable as possible.

The PDMF was set up in early 2011 with contributions from the Asian Development Bank (ADB) and the Filipino, Australian and Canadian governments. In the first half of 2012, this early-stage equity facility was topped up with an additional $20.5 million from the Australian and Filipino governments as well as the ADB.

But the PDMF is not the only Filipino initiative on the equity front.

During the summer of 2012, the Philippine's first-ever private equity fund for infrastructure reached a final close on $625 million. The vehicle – managed by Macquarie Infrastructure and Real Assets – was backed by leading Filipino pension fund the Government Service Insurance System, alongside other cornerstone investors including the ADB and the Netherland's largest pension provider, APG.

The fund will target brownfield and greenfield investments assets across transport, power, renewable energy, water, telecommunications and social infrastructure. On the debt side, there is now talk of the government issuing infrastructure bonds to help fund PPPs.

PIPELINE, PIPELINE, PIPELINE

The other key factor for any successful PPP programme is a sizeable and visible pipeline of projects –and again that's something the Aquino administration has put in place.

Data from the Philippines PPP Centre shows a PPP pipeline of projects spanning the water, health, renewables, roads, light rail, airport and other social infrastructure sectors worth upwards of PHP202 billion (€3.8 billion; $4.9 billion).

Importantly, the country is beginning to establish a PPP track record, with a toll road and schools project having already been successfully awarded. The reward for all of these measures has come in the form of healthy investor interest, including foreign firms.

Thirty-three companies bought pre-qualification documents for Manila's PHP60 billion Light Rail Transit Line 1 project, with four consortia submitting pre-qualifications documents to bid for the deal. The second phase of the NAIA Expressway toll road saw 20 firms buy pre-qualification documents for the project, with four consortia pre-qualified for the deal.

The lesson from the Philippines' efforts is clear: create the right environment and inspire the right amount of trust, and investors will follow, even if you are just taking your first steps in the PPP market. ■

INTERVIEW

'Diversity is good'

Kamran Khan, Program Director, World Bank - Singapore Urban Hub, argues having countries at different stages of development is positive

How is the World Bank assisting with the financing of ASEAN infrastructure?

KK: Infrastructure is a very big part of what the World Bank does and a significant part of our lending goes into infrastructure worldwide. Similarly, in East Asia we are very big on infrastructure. We think it is a big driver for growth in this region, as it is in other regions, so our lending portfolio to ASEAN is very much in line with those priorities.

What is the importance of connectivity in the ASEAN context?

KK: Infrastructure connectivity is a critical driver for regional growth. This can be seen in two important ways. One is physical connectivity. But there are a lot of connectivity-related issues that are not about infrastructure. Rather, they are about how the region comes together around infrastructure.

For example, a risk management structure that covers the whole region and is consolidated – that's connectivity. A bank that is able to lend money to a project in country X and is faced with very similar rules in country Y – that's connectivity, because it reduces transaction costs and makes it easier for a bank to appraise a project.

In my mind, that connectivity is far more powerful than just a project that cuts across two countries.

What needs to be done to get more private investment into ASEAN?

KK: I don't know if there's a yardstick you could apply to all of these countries in terms of infrastructure spending.

What is the right public-private mix? If you're a small economy, it might be difficult for you to attract private capital. On the other hand, if you're a large country, but your budget is not enough to fulfil your needs and the situation is messy, the private sector might not want to come in anyway.

I don't want to imply small countries have an inherent disadvantage, because Singapore for example is doing very well.

It's just not all about size and public expenditure: it's a combination of things that have to be put in place and results tied to outcomes.

ASEAN member states have different levels of development. How does this affect infrastructure development in the region?

KK: I have somewhat of a contrarian view on this. Having diversity – you can look at it either as a disadvantage or an advantage. Think about it: if all countries are equal, then you are always competing at the same level the whole time.

But when you have countries at different levels, then there is room to invest across the entire region and as the region's growth increases, you can get higher returns from your investments.

So I'm not entirely sure diversity is always a negative thing.

Are certain sectors within ASEAN easier for private sector participation?

KK: Without question. Sectors that touch the public directly are much more complicated for the private sector to participate in. So water, for example, is hard for the private sector. However, telecommunications have been very easy for the private sector to get involved with.

Having said that, investment is very situation-specific: what is needed above all is action. For countries to engage with the private sector, learn from the experience and maintain a feedback loop with the private sector and citizens.

Countries have to go and get their hands dirty and then figure out what makes sense to them. ■

INTERVIEW

'ASEAN's mini development bank'

Bambang P. Brojonegoro, Head of Fiscal Policy Office at Indonesia's Ministry of Finance and co-chair of the ASEAN Infrastructure Fund (AIF) talks about the fund's origins and its goals

How long did it take to set-up the AIF?

BB: I believe the idea to establish the AIF was first mooted during the 10th ASEAN Finance Ministers' Meeting in Cambodia in 2006.

So when I joined the Indonesia Finance Ministry in 2011, everybody agreed that this fund would have to be set-up. More importantly, the Asian Development Bank (ADB) really got behind the idea and put its weight behind the AIF.

In addition to the ADB, the other major initiators of the fund are Malaysia and Indonesia. These two members contributed the largest amounts for the AIF.

The ASEAN Finance Ministers then signed the Shareholders' Agreement relating to the establishment of AIF in the fall of 2011, during the IMF/World Bank meeting in Washington D.C

Why did Malaysia and Indonesia decide to take a lead role in the AIF?

BB: From the Indonesian point of view, we understood when we started having relatively high growth of 5 percent plus that we were still below our potential. We knew we could grow by 7 percent, or even more. The problem is our infrastructure bottleneck.

We spent around seven years just recovering from the 1997 Asian financial crisis. During that time, we didn't have the resources to invest in infrastructure. However, we now know that to maintain a sustainable growth of above 6 percent, we need infrastructure development.

And in the context of developing our infrastructure ASEAN is important. If you look at the geography of ASEAN, aside from the Philippines, Indonesia is somewhat isolated – we are made up of islands; we are not really connected to the mainland of south-east Asia.

In order for us to have connectivity we need to develop ASEAN infrastructure. The AIF is a perfect extension of that.

One of the AIF's unique features is its ability to issue debt. What was the rationale behind that?

BB: Firstly, this is a fund dedicated to infrastructure and infrastructure requires long-term financing.

If you look at development banks like the World Bank, you can see that one of their main priorities is to help countries develop their infrastructure. But although we have several multilateral banks, they cannot concentrate only on infrastructure – they have to help develop agriculture, health, education, etc...

At the same time, though, we need more and more money for infrastructure. That's where the AIF comes in.

Once the fund can raise its own bonds, it will be able to provide money for infrastructure at close to commercial rates while allowing everybody to access this type of infrastructure financing. It will be much easier to go to the AIF than going to commercial banks or other financial institutions.

Will the AIF be able to provide equity and/or early-stage equity?

BB: Yes, but only later. For the first years, the partnership with the ADB will be very important and even though the AIF is currently based in Labuan, Malaysia, many of its operations are conducted out of Manila [where the ADB is headquartered].

Once the fund can raise its own funding from third-parties, things will be different. For example now, the AIF can only fund projects the ADB has invested in. Later, when the AIF is more established, it will be able to finance public-private partnerships, for example.

In terms of pipeline, do you have sector-specific targets?

BB: Regarding sectors, and since AIF works on a co-lending partnership, it will target those projects the ADB is lending to.

The pipeline of projects the AIF will focus on is not limited to ASEAN Connectivity projects, but we are giving priority to national projects which are in line with the concept of ASEAN Connectivity.

Do you believe the AIF will make it easier to attract private sector financing?

BB: In the future, we expect other members and even other financial institutions to join the AIF. It'll work as a sort of mini development bank at ASEAN level, but open to any contribution. With multilaterals, the members are usually countries. But with a fund structure, you can be more flexible and have institutions participate. ■

FEATURE

ICT

Overcoming the digital divide

Increased ICT interconnectivity is crucial to ASEAN's integration. The region has made rapid strides in the area of service penetration and the focus is now on bridging the digital divide

Rapid economic growth across ASEAN coupled with an increase in disposable income has turned the region into one of the fastest growing ICT markets in the world.

In terms of mobile penetration, for example, five member states – namely Singapore, Viet Nam, Malaysia, Brunei and Thailand – breached the 100 percent coverage mark in 2011. Others, such as Indonesia and the Philippines, are on the cusp of hitting that milestone as well, data from the ASEAN Secretariat shows.

According to the ASEAN ICT Masterplan for 2015 (AIM2015), the ICT sector today employs more than 11.7 million people and amounts to more than $32 billion, or over 3 percent, of ASEAN's combined gross domestic product (GDP). These numbers are expected to grow significantly by 2015.

The Southeast Asia Department of the Asian Development Bank (ADB) talked about the impact of ICT, highlighting its role as a basic tool that supports all other sectors. For example, ICT helps facilitate trade movements and investments through e-communication, database support and other technological innovation. It also helps expand markets through quick and interactive information and marketing campaigns, among others.

"ICT is therefore a crucial backbone of the connectivity agenda of ASEAN to facilitate the process of its integration," the ADB said. But while the ICT industry is well established in certain countries and has even flourished for a few years now, there are others in which it is still at a nascent stage.

This is particularly true in the area of broadband penetration, ASEAN's main focus in this sector. Of the 15 prioritised projects contained in the Master Plan on ASEAN Connectivity (MPAC), two pertain to the ICT sector. The cornerstone project concerns the development of an ASEAN Broadband Corridor and the second is the establishment of ICT skill standards.

The ASEAN Broadband Corridor is one of the key initiatives under the AIM2015 strategic thrust for infrastructure development. It aims to develop and implement appropriate strategies to promote greater broadband penetration, affordability and universal access in order to enhance economic growth in the region.

ASEAN recognises ICT infrastructure as fundamental to supporting trade, commerce and investments "through its ability to facilitate information exchange, to connect people, to support delivery of services and to reduce the cost of business and trade-related transactions".

PATCHY BROADBAND ACCESS

Still, one of the greatest challenges the region is facing is that broadband penetration levels vary greatly across countries at this point. According to the World Bank, penetration rates fluctuate significantly between less developed economies such as Myanmar (0.03

percent), Laos (0.19 percent) and Cambodia (0.25 percent) and other member states such as Malaysia (7.32 percent) and Singapore (24.77 percent).

Governments in the region have been trying to ensure that unserved and underserved areas and communities have access to ICT services, sometimes at great expense. The challenge for countries is to provide broadband and other ICT services to these communities at affordable prices to boost penetration levels.

But the debate is still open on whether it is ASEAN's responsibility to have a more hands-on approach towards the building of the necessary infrastructure or whether that should be entirely left to the member states to execute. Currently, this responsibility is undertaken by member states themselves.

Indonesia, for instance, has set up an ICT fund to accelerate the development of broadband infrastructure as part of its efforts to help connect ASEAN. The regulation for it has already been signed, said Lukita Dinarsyah, Indonesia's Vice Minister of National Development Planning and the National Coordinator for the implementation of the MPAC, speaking at the ASEAN Connectivity Symposium in Phnom Penh, Cambodia.

In Cambodia, the private sector is currently involved in installing fibre optic lines across the country. Sun Chanthol, Senior Minister and Vice Chairman of Council for the Development of Cambodia, and Chair of the ASEAN Socio-Cultural Community Council explained this should be viewed as a first step.

Cambodia is increasingly using more technology such as video conferencing among government ministries and for meetings between the cabinet and provincial capitals. "We cannot use it if we don't have a good infrastructure backbone, so that is why we have allowed the private sector to invest in the laying of overground and underground fibre optic lines in Cambodia," he said.

The China-ASEAN Investment Cooperation Fund (CAF), a private equity fund focused on infrastructure, energy and natural resources in ASEAN and China, has invested in Cambodia through a 2011 investment in International Telecommunications Holdings, the sole shareholder of the Cambodia Fibre Optic Communication network.

Speaking at the ASEAN Connectivity Symposium, Li Yao, President of CAF, said the fund is looking at the Indochina region for further investments in the ICT sector. He said governments in the region do not have to worry too much about private investment in sectors such as ICT because most of these projects can be commercial in nature, as opposed to, say, investing in a rail project, where "something really innovative in terms of returns and deal structure" is needed for the private sector to invest.

This is definitely a good sign for ASEAN, particularly as it is keen to develop PPP initiatives for the ICT industry. While the region has successfully managed to implement projects in the areas of transport and energy, progress in the ICT sector has been slow, perhaps by design, given that transport and energy have a greater immediate impact on economic growth at an earlier stage.

JAPANESE HELP

Kimihiro Ishikane, Ambassador Extraordinary and Plenipotentiary, Mission of Japan to ASEAN, talked about Japan's involvement in assisting ASEAN to meet its ICT connectivity goals.

Japan is involved with the ASEAN Smart Network, which aims to join people and goods using high-speed multipurpose ICT infrastructure, to introduce Japan's problem-solving ICT application models and to contribute to various ASEAN plans related to connectivity. This includes disaster response, sensor networks and eGovernance initiatives.

According to the Ambassador, Japan is now trying to come up with ideas for concrete projects to be implemented with regard to the Smart Network. However, this first requires an identification of problems in respective countries, since the ICT environments differ greatly from one member state to another.

"We need to identify the problems and then maybe focus on some kind of capacity building in those countries where the ICT environment is a little bit delayed. Then comes some kind of integration of ICT environments across the region," he said. In parallel with these feasibility studies, Japan is trying to pick up some concrete projects to move ahead with ICT enhancement.

One such project on which work has begun is related to disaster management. Japan is cooperating closely with the ASEAN Humanitarian Assistance (AHA) Centre, which is based in Jakarta, to build an ICT network among ASEAN countries. The project is now in its second phase, which will connect all disaster management centres in the 10 ASEAN member states with the AHA Centre.

At the moment, it is clear the focus has to be on ICT infrastructure within states first, followed by ICT connectivity across ASEAN.

Herein lays ASEAN's biggest challenge, though. Many of the lesser developed ASEAN countries currently have greater and more immediate infrastructure requirements such as roads and ports, which has meant that ICT infrastructure development has not received the same level of attention.

But there is now recognition of the benefits of greater ICT connectivity and member states acknowledge that the only way to circumvent the budget shortfalls is to invite greater private sector participation. That is a big step forward. ■

TOURISM

Testing the bounds of sovereignty

Tourism is one of the key components of many ASEAN economies. Greater regional connectivity will provide the sector with a big boost, which in turn will catalyse job creation and economic growth

Tourism in the ASEAN region has been transformed over the last decade or so, owing largely to a significant rise in disposable income and also due to the proliferation of a number of low cost carriers (LCCs) and a large number of new flight routes in the region, making travel easier and more affordable.

Gross domestic product (GDP) per capita in ASEAN in purchasing power parity terms has increased to an estimated \$5,780 per annum in 2012 from just \$2,550 in 1995, according to the Economist Intelligence Unit. As a result, people in ASEAN are traveling more, both for work and leisure.

Between 2000 and 2011, tourist arrivals into ASEAN countries more than doubled from 39.14 million to 81.23 million people. During the same time period, growth in the number of intra-ASEAN tourists was even more rapid, with an increase from 15.92 million in 2000 to 37.81 million people 11 years later.

In 2001, intra-ASEAN tourism comprised 46.5 percent of all tourists visiting ASEAN countries. It is a figure ASEAN wants to increase. There are several projects relating both directly to tourism and many others affecting the sector indirectly, for example through the impact of developments in the transport sector.

Of the 15 prioritised projects outlined in the Master PΔlan on ASEAN Connectivity (MPAC), one is focused on boosting tourism in the region. It deals with easing visa requirements for ASEAN nationals in order to facilitate mobility of people and tourists and possibly involve visa exemptions for intra-ASEAN travel by ASEAN nationals in all member states.

Suvarnabhumi Airport, also known as Bangkok International Airport

Plans to implement progressive visa relaxation for foreign tourists visiting ASEAN by 2015 are also being explored. Lukita Dinarsyah Tuwo, Vice Minister of National Development Planning and National Coordinator for the Implementation of the MPAC, speaking at the ASEAN Connectivity Symposium in Phnom Penh, Cambodia, argued that a relaxation of visa requirements is important to promote people mobility in ASEAN countries.

According to ASEAN, member states "strongly supported" the initiative to also develop an ASEAN common visa for nationals of non-ASEAN countries. Senior officials in the ASEAN states have been tasked with conducting a study on the feasibility of such an initiative.

'BITS AND PIECES'

Raman Narayanan, Regional Head for ASEAN Affairs, Air Asia, the region's largest airline, commented that governments are in an odd situation. By nature, they are national and no government is willing to give up on sovereignty. He says governments have done it in bits and pieces, but the real test will come in 2015, when the open skies agreement is to be implemented.

ASEAN governments have committed to implement the ASEAN open skies policy by 2015 as part of the ASEAN Single Aviation Market (ASAM). Through the implementation of ASAM, air travel between member countries is expected to be fully liberalised, thus boosting tourism.

"Open skies policy is crucial to making the ASEAN Economic Community work," Narayanan says. "We live in a region of 600 million people living in countries that are separated by large bodies of water. The best means to get around is by air. If we can provide cheap air travel, the possibilities are immense," he adds.

In a bid to boost tourism in the region, ASEAN will be developing tourism products, the work plan for which was endorsed by ASEAN Tourism Ministers in January 2012. The grouping has designated tourism products in four categories, namely nature-based tourism, cultural and heritage, community-based and cruise and river-based tourism.

There are 31 nature-based tourism products for which the lead country is Malaysia; 32 culture and heritage-based products, with Indonesia taking the lead role; 27 community-based tourism products, which are being spearheaded by Cambodia; and a total of 40 cruise- and river-based tourism products with a focus on new itinerary development, which are being led by Singapore and Viet Nam respectively.

Another initiative in the works is the development of ASEAN tour packages involving at least two member states and at least one of the designated ASEAN tourism products from those listed above.

The idea is to create holistic packages so that the ASEAN region can be viewed as one tourist destination, with seamless connectivity and minimum bureaucracy when crossing national borders within the region. At a physical level, some of the big challenges involve providing easier access to tourism areas and better and more extensive tourism infrastructure.

TOURISM: A BIG SOURCE OF REVENUE

Laos is one country that is heavily dependent on tourism as a source of foreign exchange and economic growth. Chaleune Warinthrasak, Vice Minister of Information, Culture and Tourism for Laos, said:

"In Laos, the government is concerned about tourism development as it is one of the main sources of revenue and contributes about 7 percent to 8 percent of GDP." It is also the country's second-biggest foreign exchange earner after the mining sector and is the fastest growing industry in the country.

According to Warinthrasak, the objective is to make Laos a tourist destination, and not just a "transit destination". He says there is a lack of funds, which are being sought from multilaterals and other donor countries. The government, for its part, has been promoting foreign direct investment (FDI) in the tourism industry in areas such as entertainment, hospitality and recreation, while hard infrastructure is still largely being provided by government.

In what is a unique policy, Laos has agreements with its neighboring countries that allow people living in certain border districts on either side of the border to cross over into the other country with just a form and a photograph, without the need for any visas or even passports. This is an attempt to promote greater people mobility in the border areas, according to the Vice Minister of Information.

Growth in tourism is vital for CLMV countries (Cambodia, Laos, Myanmar and Viet Nam). As such, a boost in tourism through an easing of procedures and an enhancement of connectivity options through swifter and a greater number of links will help boost the economies of these countries.

The CLMV countries have seen rapid growth in their tourism industry. Between 2004 and 2010, the annual growth rate for the tourism industry in the CLMV countries was 12.33 percent, almost twice the rate of growth seen in the ASEAN-6 (6.38 percent).

This clearly shows that there is great potential for catch-up through growth in the tourism industry, for a boost in tourism will have spillover effects on the economy at large. The creation of jobs and increased local incomes will lead to an increased demand for a variety of goods, benefiting local industry in the process.

Getting to these countries is also not such a big challenge anymore. Thanks to the growth of low cost carriers such as Air Asia, Tiger Airways, Garuda and Jet Star, to name a few, air travel has been "democratised", Narayanan says. He adds that there is ample room for further growth in the number of air travelers in the region, but governments need to be more proactive.

According to him, the focus in ASEAN should be on smaller airports to promote passenger travel. For too long, airport charges for airlines and airport taxes for passengers have been too high. Narayanan argues these should be lowered and more money ought to be made from concessions.

"In essence, an airport is not just a place for you to take a flight from. It should become more like a supermarket. That is a more effective way to make money," he says, emphasising the need to keep costs low for travelers.

NEW RULES NEEDED

ASEAN is seeing more intra-regional travel largely as a result of cheap fares and an increased number of links between cities and towns that were hitherto unconnected. However, a lot of this has happened due to private players, who have been campaigning for a change in mindset and regulations.

Narayanan explains that rules and regulations in the aviation industry were drawn in the age of single carriers where governments were protecting the interests of their national carriers. "With the coming of budget airlines, the game has changed, but the regulations have not changed," he says. He is optimistic about the governments' commitment to the ASEAN Economic Community, but states that a mindset shift is required.

ASEAN member states have traditionally been very conservative about sovereignty. It is an approach that has worked for the last four decades, but it will be put to the test in the quest for greater interconnectivity through initiatives such as the open skies policy, a common visa for the whole of ASEAN, and more seamless travel across the region for ASEAN nationals.

Member states have agreed to make these compromises and have committed to a united goal and that is a big step towards the creation of one community. Speaking at the ASEAN Connectivity Symposium in September, Sun Chanthol, Senior Minister and Vice Chairman of Council for the Development of Cambodia and Chair of the ASEAN Socio-Cultural Community Council, said that ASEAN members have signed various protocols, but the ratification and implementation of all these protocols has not been realised.

"We need to accelerate institutional and people-to-people connectivity in order to maximise the effects of physical connectivity," he said. "Tourism is hence critical, for it is both a result of greater connectivity, and a means to greater connectivity." ■

REGULATIONS

Harmonising regulations

ASEAN member countries have done a good job developing the physical infrastructure they need. Now countries need to put in place the kind of regulation that will allow that infrastructure to be used seamlessly across borders

Home to 600 million people and with a gross domestic product (GDP), in Purchasing Power Parity (PPP) terms, of circa $3.31 trillion in 2011, ASEAN is an economic powerhouse that continues to see higher annual economic growth than most parts of the world.

The region has seen its GDP in PPP terms more than double over the last 15 years and it is said that this growth could have been even more impressive if ASEAN had better cross-border infrastructure connectivity.

The most important requirement to facilitate the provision of cross-border infrastructure is harmonisation of standards. Harmonisation is a big challenge, particularly given the number of different entities involved and of the challenge of synchronising various parameters across these different institutions.

According to the Asian Development Bank (ADB) – in a working paper named *Key Issues of Cross-Border Infrastructure Projects, Policies and Measures to Mitigate Potential Environmental Impacts of Cross Border Infrastructure Projects in Asia* – the main obstacles to the development of cross-border infrastructure projects are of a technical, regulatory, institutional, and legal nature.

From a technical perspective, standards, guidelines and procedures need to be standardised. On the regulatory side, pricing, tariffs, rates, user fees, regulation of transmission and security of supply need to find common ground. At the institutional level, the establishment of a common legal framework, accompanied by joint coordination between the relevant country agencies, ensuring the accountability of all entities involved, is imperative.

SECURING CONFIDENCE

The importance of establishing strong legal frameworks should not be underestimated: cross-border infrastructure investments are very capital intensive and have long life-cycles. As such, investors need a stable legal framework to gain the confidence to invest in this type of projects.

"The key issue is that all regulatory and legal frameworks differ in several critical respects across ASEAN countries," argues Johan Bastin, chief executive of CapAsia, a private equity firm investing in infrastructure across southeast and central Asia.

Bastin adds that for viable cross-border infrastructure investment to take place, concession contracts, for example, need to be implemented in a way that ensures compatibility on both side sides of the border. He points to the toll road sector to highlight what needs to be done:

"The ownership of these [toll road] concessions normally ends at the border and then there is another half of it that belongs to some other party in a different country, involving distinct national procuring authorities," says Bastin, adding that harmonisation of key terms between these types of cross-border concessions is extremely important.

Kimihiro Ishikane, Ambassador Extraordinary and Plenipotentiary, Mission of Japan to ASEAN, agrees that getting the physical assets to line up to one another is, in many ways, the easier part of the puzzle:

"Although the roads and bridges are there, in order for transportation of goods and service to be smooth and transaction costs to be reduced, institutional connectivity – especially trans-border arrangements – need to be carried out," he said.

This, however, is easier said than done.

"If we try to reduce the transaction costs for countries A, B and C, we need to ask all the relevant stakeholders: that means talking not just to one ministry – like transport – but likely also to the finance ministry, the police and so forth. We need to get all these parties to sit down together and talk about how we can move forward to streamline institutional connectivity."

This is a considerable challenge, Ishikane argued, because it requires coordinating different agencies and ministries not just across a single country, but in several countries throughout the region.

Fortunately, ASEAN is not without help in meeting these goals, with multilateral organisations and agencies like the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) lending a hand.

Ha Dong-Woo, director of the transport division at UNESCAP, explained that the organisation is able to help, especially with getting people together. "As a UN organisation, one of the biggest strengths that we have is convening power – we can bring member countries into a forum so they can discuss various issues together," Dong-Woo says.

It should be noted, however, that the sector already has a common forum – the ASEAN Air Transport Working Group (ATWG) – where member states meet twice annually to discuss closer aviation

Opening ceremony of the 21st ASEAN Summit, Phnom Penh, Cambodia

ties and better air connectivity within the region.

SECTOR VIEW

Still, it can be argued that the aviation sector would benefit from even stronger intra-regional cooperation.

Raman Narayanan, Regional Head for ASEAN Affairs, Air Asia and board member of ASEAN Tourism, says many of the region's aviation rules and regulations were drawn up in the age of single carriers, when governments were protecting the interests of national carriers. But some of these regulations have not been adequately modified to bring about a level playing field in the current age of multiple and low-cost air carriers.

On a positive note, change is clearly on the horizon with the scheduled implementation of an open skies policy by 2015, which will allow regional aviation companies to make any number of flights across ASEAN countries. This has the potential of allowing the private sector to set-up their own routes, which, in time, will generate their own demand.

But there are still certain issues in the sector ripe for change. For instance, Narayanan questions why ASEAN companies cannot set up domestic airlines in other ASEAN countries.

"Treat ASEAN companies as domestic, national companies. If we are talking about one region, then treat companies across the region as domestic companies," he argues. "Let's just have one single authority with standard rules."

Energy is another key infrastructure sector in need of ironing out transnational differences across regulatory, legal and pricing frameworks.

"With market structure, energy prices and demand varying in each market, what you need is a framework that allows you to sell power from one country to another – such as Malaysia to Singapore, or Laos to Thailand – without regulatory, trade or tax barriers," CapAsia's Bastin explains.

Moreover, there is also a requirement for transmission lines that have adequate capacity and technical characteristics that physically allow for such sales as well as a functioning auction system involving national grid operators on different sides of borders.

Bastin says an investor needs to assume that he can sell to another market at a price that covers his cost and gives him an adequate return on capital. That is, an investor will not commit to an export-focused power generation project in one country unless he knows there is a stable cross-border market and he understands how the price mechanism is determined.

"In ASEAN, the different markets have different dynamics. You could argue that Thailand and Malaysia are similar in terms of how their markets works, but things are different in Viet Nam. You also have to bear in mind that these markets are still dominated by relatively long-dated power purchase agreements," says Bastin.

Regardless, Bastin argues that a true cross-border ASEAN energy market has to be able to answer several questions in order to attract investors' money.

"What you need is some harmonisation of the market structure so you know whether you can sell [power] to large consumers directly, or whether you have to sell to a local grid operator; whether you can sell power at spot prices or whether you have to sell it through an auction mechanism without a reserve price. You need to know if you have the ability to offer a mix of products, for example, such as earmarked bundles of long and short-term capacity in each direction."

A similar theme applies to the transportation sector, where again the challenge is less about funding and more about how to unblock the institutional bottlenecks that will allow the actual physical infrastructure to be put to good use.

"If you are talking about facilitation measures for crossing borders, although the roads may be ready, you can still have problems in crossing the border because this involves many different agencies and stakeholders," UNESCAP's Dong-Woo says. Without proper coordination between the relevant stakeholders and agencies across countries, cross-border flows cannot be facilitated, he added.

Stakeholders in ASEAN talk about

the importance of implementing a single window clearance scheme. The need for this becomes even more pertinent when talking about cross-border infrastructure projects. Countries such as the Philippines and Indonesia have taken steps in this direction, but many other ASEAN member states still lag behind.

For a region that is seeking private investment – and often foreign private investment – for its infrastructure, it is important that governments streamline such procedures. Considering that some member states don't even have national single window clearances, a regional-level single window clearance system seems unlikely in the near future.

According to Bastin, ASEAN needs to promote a clear policy to allow for the development of cross-border transport corridors. He argues that if there is confidence in the market that governments have a clear plan and will move to implement that plan, then there is an adequate basis for the private sector to get involved in the financing of cross-border infrastructure.

Bastin points to Europe as an example. In Europe, even before the Central European countries became European Union members, there was a master plan for major intra-European transportation corridors developed by the European Commission and adopted by national governments that connected Central and Eastern Europe with Western Europe and that had a tremendous impact on economic activity in the region, he says.

"Treat ASEAN companies as national companies. If we are talking about one region, then treat companies across the region as domestic companies"

"I think transportation has been a very important driver of increasing trade between countries that were previously isolated physically. It has accelerated economic growth and bought prosperity to what used to be poor or slow-growing regions."

ELIMINATING BOTTLENECKS

Looking solely at hard infrastructure, most people would agree that ASEAN has been extremely successful in delivering what it has agreed to build. But connecting these country-wide infrastructure networks is the next – and most challenging – step.

ASEAN has 10 member states; several multilateral organisations are involved in the region; a number of regional sub-groupings co-exist; and ASEAN counts multiple private stakeholders at a regional level. Add to this a plethora of ministries and other institutions operating at the national level, and the scale of the challenge of harmonising rules and regulations becomes clear.

Encouragingly, most of the sources that participated in this report believe that there is no real shortage of capital to finance development of ASEAN's multiple infrastructure sectors. But equally, there is a sense that there are several issues to be addressed before that capital flows freely.

In particular, there is a strong belief that if governments in the region succeed in implementing strong legal and regulatory frameworks that are in harmony across member states; if governments succeed in making these cross-border projects attractive to the private sector; then ASEAN will experience an influx of private capital

Of course, the presence of different political systems and economies at starkly different levels of economic development poses a significant – but not insurmountable – challenge to harmonising the necessary frameworks that will be conducive to the development of supranational infrastructure.

Sovereignty is strongly cherished in the region, and any policies that are seen to impinge upon it are not viewed favourably. As such, measures that will streamline border crossings – or for that matter, things like the pricing of energy – are, in the near future, likely to remain the prerogative of individual governments.

Harmonisation in these and other areas perceived as sensitive is going to be a tough task. But harmonisation should not be confused with equalisation. While coordinating the policies and regulatory frameworks of member states is a crucial theme, this should not be equated with defending the implementation of one set of rules for 10 different countries.

As private investors like CapAsia's Bastion point out above, what markets are looking for are frameworks that are similar and complementary enough for private investors to feel comfortable investing in cross-border infrastructure. That will be enough.

With connectivity – at all levels – a central pillar of the Master Plan for ASEAN Connectivity, regulatory harmonisation should be near the very top of ASEAN policy makers' agendas. ■

ASEAN: facts and figures

On the following pages are some of the key economic and infrastructure-related numbers

SELECTED BASIC ASEAN INDICATORS

Indicators	Unit	2010	2011	Remarks
Total land area	km2	**4,435,670**	***4,435,674***	
Total population	thousand	***597,176***	***604,803***	
Gross domestic product at current prices	US$ million	**1,882,700**	***2,178,148***	
GDP growth	percent	**7.8**	***4.7***	ASEAN figure is estimated using country growth rates and country share of world GDP valuated in PPP$ from the IMF WEO Database April 2012.
Gross domestic product per capita at current prices	US$	***3,153***	***3,601***	
International merchandise trade	US$ million	***2,045,731***	***2,388,592***	
Export	US$ million	***1,070,941***	***1,242,286***	
Import	US$ million	***974,790***	***1,146,306***	
Foreign direct investments infow	US$ million	***92,279***	***114,111***	
Visitor arrivals	thousand	***73,752.6***	***81,229.0***	

Sources ASEANstats, ASEAN Secretariat

Symbols used
- \- not available as of publication time
- n.a. not applicable/not available/not compiled
- Data in *italics* are the latest updated/revised figures from previous posting.

SELECTED KEY ASEAN MACROECONOMIC INDICATORS

Country	Growth rate of gross domestic product at constant prices	Inflation rate	Exchange rate at end of period[1/]		Unemployment rate[2/]	International merchandise trade						Year-on-year change in foreign direct investments net inflow[3/]	
						Ratio of exports to GDP	Ratio of imports to GDP	Ratio of total trade to GDP	Growth of nominal value of exports	Growth of nominal value of imports	Growth of nominal value of total trade		
	percent	percent	national currency per US$	Currency	percent	percent	percent	percent	percent	percent	percent	US$ million	percent
	2011	2011	2011		2011	2011	2011	2011	2011	2011	2011	2011	2011
Brunei Darussalam	2.2	2.0	1.26	Dollar (B $)	2.6	75.6	15.0	90.6	43.5	3.2	34.8	582.9	93.2
Cambodia	6.4	5.5	4,079	Riel	0.2	52.6	48.0	100.6	20.2	25.3	22.6	109.2	14.0
Indonesia	6.5	3.8	8,775	Rupiah (Rp)	5.0	24.0	21.0	45.0	29.0	30.8	29.8	5,470.7	39.7
Lao PDR	8.0	7.6	8,011	Kip	1.3	21.4	27.1	48.5	-28.2	6.4	-12.3	(31.8)	(9.6)
Malaysia	5.1	3.2	3.06	Ringgit (RM)	3.1	79.3	65.1	144.4	14.8	13.8	14.4	2,845.0	31.1
Myanmar	10.4	5.0	766.59	Kyat	4.0	15.4	12.9	28.2	6.8	62.1	26.5	-	-
The Philippines	3.9	4.6	43.39	Peso (PhP)	6.4	21.4	28.4	49.8	-6.6	9.4	1.9	(36.0)	(2.8)
Singapore	4.9	5.2	1.26	Dollar (S $)	2.9	157.6	140.7	298.3	10.3	11.5	10.9	15,245.6	31.3
Thailand	0.1	3.8	30.49	Baht	0.7	66.2	66.5	132.7	17.2	21.3	19.2	(1,333.5)	(14.6)
Viet Nam	6.0	18.6	20,510	Dong	3.6	77.4	84.5	161.9	32.1	22.9	27.1	(570.0)	(7.1)
ASEAN	**4.7**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**57.0**	**52.6**	**109.7**	**16.0**	**17.6**	**16.8**	**21,832.0**	**23.7**

Sources ASEAN Finance and Macro-economic Surveillance Unit Database, ASEAN Merchandise Trade Statistics Database, ASEAN Foreign Direct Investment Statistics Database (compiled/computed from data submission, publications and/or websites of ASEAN Member States' national statistics offices, central banks and relevant government agencies, and from international sources)

Symbols used
- \- not available as of publication time
- n.a. not applicable/not available/not compiled
- Data in *italics* are the latest updated/revised figures from previous posting.

Notes

1/ The official foreign exchange rate in Myanmar in 2011 was Kyats 5.5/US$. The exchange rate used in ASEAN statistical databases is derived from the IMF WEO Database April 2012 which is Kyats 766.59=US$1.

2/ Lao PDR figure is for 2005

3/ Unless otherwise indicated, figures include equity, reinvested earnings and inter-company loans.

ASEAN MEMBER STATES GDP GROWTH

Country	2010	2011
Brunei Darussalam	2.6	2.2
Cambodia	6.0	6.4
Indonesia	6.3	6.5
Lao PDR	8.1	8.0
Malaysia	7.2	5.1
Myanmar	10.6	10.4
Philippines	7.6	3.9
Singapore	14.9	4.9
Thailand	7.8	0.1
Viet Nam	6.8	6.0
ASEAN	7.8	4.7

***Source**: ASEAN*

ASEAN MEMBER STATES INFLATION RATE

Country	2010	2011	2012
Brunei Darussalam	0.4	2.0	0.5
Cambodia	4.0	5.5	*4.0*
Indonesia	5.1	3.8	4.3
Lao PDR	6.0	7.6	4.3
Malaysia	1.7	3.2	1.6
Myanmar	6.2	5.0	1.5
Philippines	3.8	4.6	3.2
Singapore	2.8	5.2	4.6
Thailand	3.3	3.8	3.0
Viet Nam	9.2	18.6	9.2

***Source**: ASEAN*

NUMBER OF MID YEAR POPULATION OF ASEAN COUNTRIES 1980-2011 (MILLIONS)

Country	1980	1990	2005	2006	2007	2008	2009	2010	2011
(1)	(2)	(4)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Brunei Darussalam	196	253	370	383	390	398	406	415	423
Cambodia	6,590	8,600	13,807	14,081	14,364	13,396	14,085	14,303	14,521
Indonesia	146,777	179,248	219,852	222,747	225,642	228,523	231,370	234,181	237,671
Lao PDR	3,199	4,140	5,622	5,747	5,873	6,000	6,128	6,256	6,385
Malaysia	13,879	18,102	26,128	26,640	27,174	27,729	28,307	28,909	28,964
Myanmar	33,608	40,786	55,396	56,515	57,504	58,377	59,130	59,780	60,384
Philippines	48,098	60,703	85,261	86,973	88,575	90,457	92,227	94,013	95,834
Singapore	2,414	3,047	4,266	4,401	4,589	4,839	4,988	5,077	5,184
Thailand	46,718	55,839	65,099	65,574	66,041	66,482	66,903	67,312	67,597
Viet Nam	53,722	66,017	83,106	84,137	85,155	86,211	86,025	86,930	87,840
ASEAN	**355,202**	**436,736**	**558,907**	**567,197**	**575,305**	**582,412**	**589,567**	**597,176**	**604,803**

1) Brunei Darussalam 1980 were estimated using the rate of growth of 1990-2000;
2).Cambodia 1980-2011 figures are national projection, taken from country submission
3) Indonesia 1980-2010 figures are national projection, taken from country submission
4).Lao PDR 1980-2011 figures are national projections, taken from country submission
5) Malaysia 1980-2011 figures are national projection, taken from country submission
6) Myanmar 1980-2011 figures are national projection, taken from country submission
7) Philippines 1980-2010 figures are national projection, taken from country submission
8) Singapore 1980-2011 figures are national projection, taken from country submission;
9) Thailand 1980-2011 figures are national projection, taken from country submission
10) Viet Nam 1980-2011 figures are national projection taken from country submission
*). Viet Nam 1980: the 1979 figure was used.
Indonesia and Philippines 2011 figures were estimated based on the average rate of growth of 2009-2010

***Source**: ASEAN*

FISCAL BALANCE (GOVERNMENT SURPLUS/DEFICIT) AS PERCENT OF GROSS DOMESTIC PRODUCT

in percent

Country	2006	2007	2008	2009	2010	2011[1/]
Brunei Darussalam	22.0	15.0	24.3	3.9	8.5	28.9
Cambodia	(1.5)	0.6	0.1	3.3	3.5	3.8
Indonesia	(1.0)	(1.4)	(0.1)	(1.6)	(0.7)	(1.1)
Lao PDR	(3.9)	(2.6)	(4.1)	(2.4)	(2.1)	*(1.0)*
Malaysia	(3.3)	(3.2)	(4.8)	(7.0)	(5.4)	(4.8)
Myanmar	-	-	-	-	-	-
Philippines	(1.0)	0.2	(1.4)	(3.1)	(3.6)	(1.1)
Singapore	0.5	3.1	1.4	(1.0)	0.2	1.3
Thailand	2.3	(1.7)	(1.1)	(4.4)	(2.6)	*0.4*
Viet Nam	(1.8)	(2.2)	(2.1)	(6.4)	(3.7)	(1.9)

Source ASEAN Finance and Macro-economic Surveillance Unit Database (compiled/computed from data submission, publications and/or websites of ASEAN Member States' national statistics offices and relevant government agencies, and from the International Monetary Fund World Economic Outlook (IMF WEO) Database April 2012)

Symbols used
- \- not available as of publication time
- n.a. not applicable/not available/not compiled
- Data in *italics* are the latest updated/revised figures from previous posting.

Notes: 1/ 2011 figures for Lao PDR and Thailand are Q3 figures

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