



50TH ANNIVERSARY CONFERENCE FROM BIRTH TO BOOM: ASIAN MARITIME MEGASTRUCTURES

It was not accidental that Hong Kong was chosen as the site for the final event in the year-long celebration of the 50th anniversary of the International Association of Dredging Companies. For many people in the dredging industry Hong Kong is considered the birthplace of the so-called “Mega-projects”.

It is the place where the roots of the modern dredging and maritime construction industry are to be found, where in the mid-1990s the largest and newest vessels assembled from all over the world to build the new airport Chek Lap Kok, to expand the container terminals at Hong Kong’s Port, to win land for Hong Kong Disneyland and to extend the Central district of downtown Kowloon (Figure 1). These projects mark a turning point that led to the enormous land reclamations in the Middle

East and Singapore and recently delivered port in Brazil. They led to the mega-dredgers that have rebuilt the Panama and Suez canals. Developments that could hardly have been imagined previously.

“From Birth to Boom: Asian Maritime Megastructures,” held at the Island Shangri-La Hotel, Hong Kong on October 23, 2015 commemorated these developments – not by looking back, but rather by looking forward.

CONFERENCE FOR THINKERS

The conference was kicked off by a welcome word from the president of the IADC, Peter

de Ridder, who himself had been on hand at the “birth” of the era of megaprojects. He then passed the baton on to the moderator, Julius Sen, Associate Director and Programme Advisor of LSE Enterprise and a member of the International Trade Policy Unit of the Department of International Relations at the London School of Economics. Sen’s professional focus is on the current global financial and economic crises and their impacts, trade and energy debates including climate changes, and trade policies in developing countries. A perfect mix of subjects to introduce the speakers and challenge the audience (Figure 2).

First off the mark was Robert D. Kaplan, keynote speaker, and author of fifteen books on foreign affairs – such as *Monsoon and*

Above: Hong Kong’s airport has not stopped growing since its opening in 1998.



Figure 1. Hong Kong during the burst of activities: The Central District business area extended the waterfront area; new container terminals were essential to the growth of Hong Kong as a major port city; and Chek Lap Kok , Hong Kong’s airport being built.



Figure 2. The speakers: from left to right, Robert Kaplan (keynoter), Kevin Poole, Elvis Au Wai Kwong, Tyrell Duncan and Peter Scott Caldwell; the Moderator, Julius Sen and IADC President Peter de Ridder.

Balkan Ghosts. He is a senior fellow at the Center for New American Security, contributing editor at *The Atlantic* magazine and has been named by *Foreign Policy* magazine as one of the world's "Top 100 Global Thinkers".

"90 PERCENT OF WORLD TRADE IS DONE BY SEA"

Tracing the world's maritime past, from Vasco da Gama to the Dutch and later British voyages and empires in the Far East, which then gave way to the dominance of the United States at present, Kaplan's emphasised that today's geopolitical configurations are changing. His aim is to explore "the Maritime Future of Geopolitics".

His first observation was that we are prisoners of Mercator and of the Cold War. This proved to be a unique explanation of the past and a stepping stone to the future. Gerardus Mercator, who lived in the 16th century, was a Belgian cartographer, philosopher and mathematician. His world maps shaped how we view the world – primarily from our own perspective depending on where we happen to live. The end of World War II and the start of the Cold War accentuated the Atlantic-Pacific view of the world. Then the collapse of the Berlin Wall ignited a new geopolitical reality.

According to Kaplan this event gave rise to "a fluid, organic geographic continuum of economics and culture". And it is the maritime presence that links it all.

Showing a different map than most in the audience are used to seeing, he views the

21st century through an unusual lens: the center of the globe is now the Indian Ocean (Figure 3). To zero in on the map of the Indian Ocean presents the observer with the whole world and requires understanding of some new realities: the emergence of the indigenous states. The American age is fading and is yielding power to China and India, whose burgeoning populations are leading to the global search for energy and spheres of influence.

Maritime access to ports and pipelines stretching across countries and seas are primary. Despite the occasional headlines about piracy, the vast oceans are peaceful and areas of conflict are limited. Transportation of goods by sea is far greater than any other means: "90 percent of world trade is done by sea" according to Kaplan. With energy demands in both China and India on the rise, the push across the ocean and continents will result in demands for more maritime access and connections – imagine building a canal across the Kra Isthmus in southern Thailand, or land bridges that use rail and roads to take cargo from the Bay of Bengal side of the Malay Peninsula to the South China Sea or widening the Straits of Malacca. A great deal of food for thought for those in the maritime industries.

THE THIRD RUNWAY AT HONG KONG INTERNATIONAL AIRPORT

The future also holds some very concrete developments that are already underway as Acting Executive Director, Third Runway Airport Authority Hong Kong, Kevin Poole, and his counterpart at the Environmental Protection Department, Hong Kong SAR

Government, Elvis Au Wai Kwong, were happy to explain.

Since its opening in 1998 Hong Kong International Airport (HKIA) has fulfilled all its expectations and more. In 2014 the airport served more than 63 million passengers and handled almost 4.5 million tonnes of cargo. Looking forward, to continue to compete on a world stage means continuing to expand the airport.

The third runway is the single largest development planned for the airport since its opening and the scale of the works is quite similar to the original airport project. As Poole recalled, the removal of mud and its disposal plus the transportation of mountains of sand brought in from borrow areas required the deployment of half the world's trailing suction hopper dredgers to Hong Kong.

The challenges this time around however are different. One is the presence of contaminated mud which cannot be removed and will demand extensive ground improvements. The other is that the sand must come from elsewhere, outside of Hong Kong's own waters.

These statements were confirmed by Elvis Au. "There have been significant changes in the environmental approach since the airport in the 1990s," he told the audience. Many parks have been built and the protection of the Chinese white dolphin is a symbol of this environmental consciousness. The environmental impact assessments are sharper, confined marine disposal of contaminated mud is a necessity and increased public



Figure 3. The Kaplan map showing the Indian Ocean has the center of the world. If “geography matters” and the American-European century is dwindling what consequences will this have?

participation is the new reality. “Enhancements such as marine parks, sustainable development and a clear biodiversity strategy are priorities”.

While optimistic and excited by this new expansion, Poole is also realistic: “Securing the sand source is going to be a huge challenge”. And as Elvis Au indicated, “environmental restraints have a price tag”. They demand working more slowly, but this is “money well spent – an investment in the future and in the long run a better choice”.

RULES, REGULATIONS AND BASIC LAW IN HONG KONG

Clearly some things in Hong Kong have changed. But not everything according to Peter Scott Caldwell, Director of Caldwell Limited and a civil engineer. As a Chartered Arbitrator, a Fellow of the Institution of Civil Engineers and of the Hong Kong Institute of Engineers, he is an expert on construction management, contractual claims and dispute resolution. He currently acts as a Dispute

Resolution Advisor on major construction projects in Hong Kong and in other countries in Asia. A singularly difficult occupation as many contractors involved in megaprojects can attest to.

Having worked in Hong Kong before and after the change of sovereignty in 1997, Caldwell has experienced infrastructure projects under both regimes. He pointed out that at the change of sovereignty, China agreed to the so-called Basic Law that would be in effect for 50 years till 2047. Of course, almost two decades have since passed, but according to Caldwell, the Hong Kong legal system remains virtually intact and has not changed since the era of mega infrastructure construction in the 1990s.

Hong Kong Basic Law is founded on the rule of law and the independence of the judiciary. Under the principle of ‘one country, two systems’, Hong Kong’s legal framework continues to follow English common law, supplemented by local legislation. Such

subjects as minimum wage and environmental restrictions, competition laws and the security of payment legislation have been adapted, but these are not major issues.

In general Caldwell’s conclusion is that Hong Kong is “not an unnecessarily difficult place to do business”. That definitely signals that the time is coming to get ready for tenders for the third runway.

FINANCING LARGE INFRASTRUCTURE PROJECTS

Speaking of tenders: Tyrrell Duncan, Technical Advisor for Transport at the Asian Development Bank brought a breath of financial encouragement into the room. Duncan leads the bank’s work on transport which accounts for about a third of ADB lending. He is chair of the multilateral development banks’ Working Group on Sustainable Transport overseeing implementation of their \$175 billion commitment to sustainable transport. And he is acutely aware that “Asia’s needs are enormous”.

The Asian Development Bank (ADB) is owned by 67 nations and is headquartered in Manila, the Philippines. It is primarily devoted to sovereign lending, that is to countries, with some very specific private (non-sovereign) loans. Since its founding in 1966, ADB has targeted its investments in Asia and the Pacific, in partnership with our developing member countries and other stakeholders, in an effort to alleviate poverty.

Mentioning a few projects such as the Jamuna Bridge project in Bangladesh in 1998 and Colombo Port Expansion in Sri Lanka in 2013, he honed in on the importance of these maritime infrastructure projects to raising economic growth. And economic growth leads to social progress. The scale of financial needs, he estimates, will be US\$ 6 billion per annum for projects involving climate change such as coastal protection until 2020.

Under the present ADB strategy, the bank's focus will be aimed at five core operations: infrastructure, environment, regional cooperation and integration (RCI), finance sector development, and education. But he

also indicated that there is "a shortage of bankable projects". Considering the drivers that shape the Asian markets as Duncan defined them – "trade, urban development, energy, coastal defence and tourism" – the maritime sector is certain to recognise the need for their expertise.

TWO-WAY COMMUNICATION

The beauty of this conference was not only the high level of speakers. It was the high level of the attendees. Some 130 top-level executives and sponsors including ABB, ABN-AMRO Bank, Ben Line Agencies, CGNMB LLP, DAMEN, Royal IHC, ING Commercial Banking, Offshore Independents B.V. and Royal HaskoningDHV were present. That resulted in an atmosphere during the conference – and the pre-meeting networking event – that was electric (Figure 4).

As the conference resumed after lunch, a panel comprised of the speakers and Mr. De Ridder, moderated by Julius Sen, took the podium. The ensuing question-and-answer session was sharp. The audience seized the opportunity to probe more deeply into the

proposals for the construction of the third runway at Hong Kong airport, as well as investment information on financing infrastructure for developing nations through the ADB and the global need and search for energy, which continue to shape the policies of China and the Russian Far East. Kaplan was not pessimistic about China's future government. He suggested that China's economic decisions will be made in the future by political types and the Chinese leaders are very aware and sensitive to public opinion.

In summation, Sen observed that there are "tectonic shifts in geopolitical relations" going on and how the United States and China react to these remains to be seen. Still, while geopolitically the world may sometimes seem unstable, Kaplan emphasised the era of claustrophobic land wars is gone.

"Technology has made the world smaller... the increasing number of ports has created an interconnected world..." Looking at these developments one can only say "This is a great age in history to be a civil engineer".



Figure 4. The high-level speakers plus an executive audience equaled an atmosphere of creativity.