

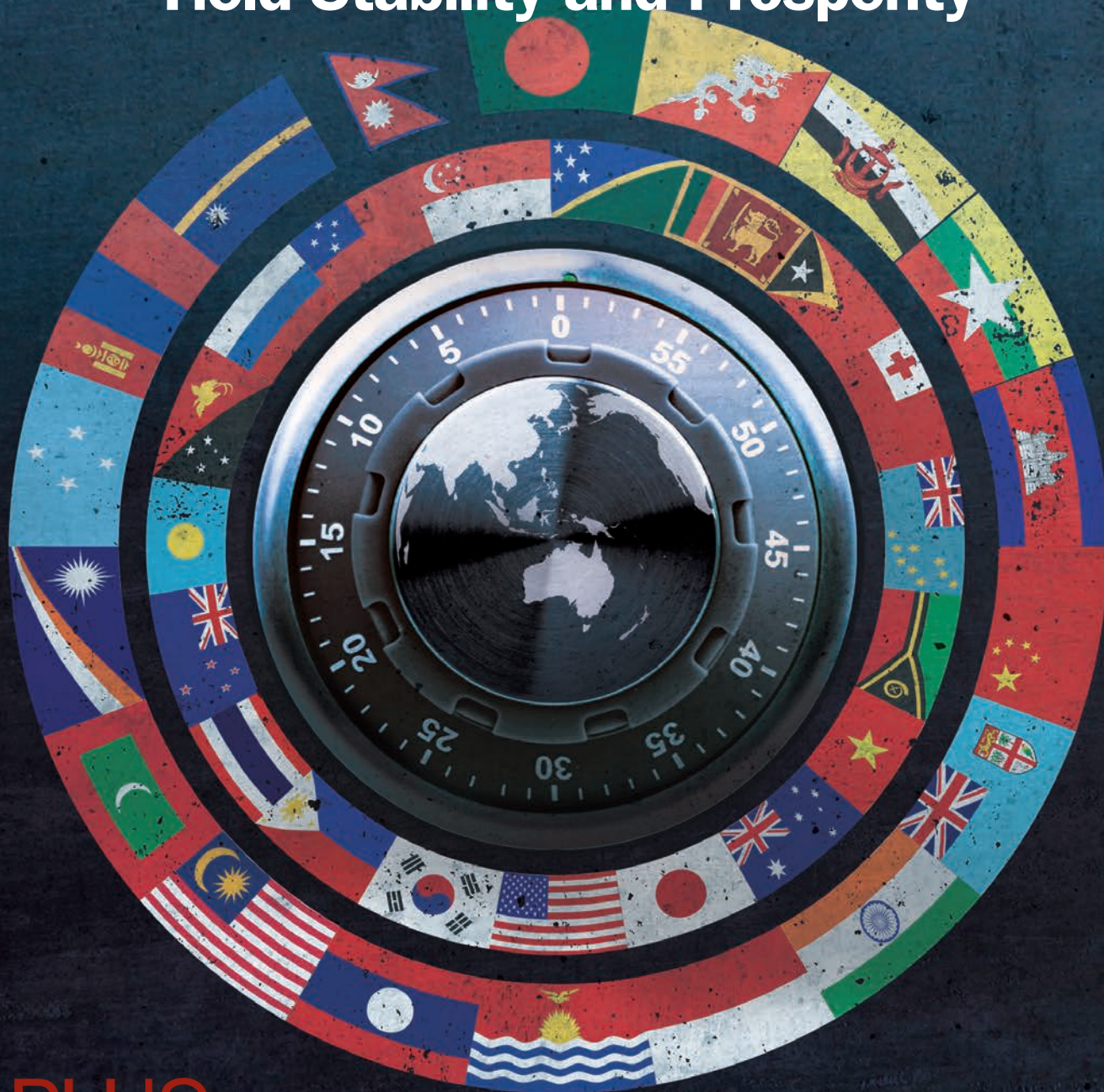
ASIA PACIFIC DEFENSE

VOLUME 40, ISSUE 2, 2015

FORUM

SAFE INVESTMENTS

Yield Stability and Prosperity



PLUS Spawning Anti-Terrorism Success in the Philippines

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ABOUT THE COVER:

This artistic rendering reveals the importance of allies and partner nations investing in peace to safeguard the region's future security and prosperity.

FORUM Illustration



U.S. PACIFIC COMMAND

Dear Readers,

Welcome to the latest edition of *Asia Pacific Defense FORUM*, which focuses on security dividends. The Indo Asia Pacific's successes in balancing relationships among nations, fostering partnerships among militaries, promoting moral leadership, and working for responsible management of territorial disputes and resources, among other security goals, have begun to yield

enduring stability and prosperity across much of the region. This issue examines the returns on investing in peace over many decades and looks ahead at the remaining challenges to regional and global security.

The revival of land connectivity across Asia stands out as an intriguing dividend of sustained security. China, for example, is developing roads, railways and energy pipelines to boost links with its neighbors. Such endeavors contribute to policies to revitalize the so-called Southwestern Silk Road connecting China's Yunnan province with Northeastern India via Bangladesh and Burma. Indian leaders, however, have their own ambitions for improving the economics and infrastructure of Northeastern India. Achieving regional security will be essential for such prospects to succeed.

Meanwhile, maintaining freedom of movement in the Pacific and the region's other waterways remains paramount for payoffs of peace. In this issue, *FORUM* examines security challenges presented by the maritime corridors of the Indian Ocean, through which much of the world's oil trade passes. Across the depths of the Earth's third-largest ocean, geostrategic rivalries, economic aspirations, resource competition, environmental management, development challenges and demographic shifts collide to reveal potential payoffs and risks.

This edition also examines the benefits of multilateral cooperation for ensuring security in the realm of health. Recent outbreaks, such as the rampant spread in 2013 of a strain of avian influenza known as H7N9, remind us that militaries can play an instrumental role in supporting a system to rapidly identify new infectious diseases and stop their spread before they menace the population.

In *FORUM*, we aim to address issues that concern and interest our readers. I hope this issue sparks dialogue among security and military leaders and professionals about the short-term and long-term benefits to citizens of all countries of maintaining peace and regional security in the Indo Asia Pacific.

All the best,

SAMUEL J. LOCKLEAR, III
Admiral, USN
Commander, U.S. Pacific Command

APD FORUM

Security Dividends

Volume 40, Issue 2, 2015

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TOM ABKE and **JIRI KOMINEK** write about the revival of the Southern Silk Road for this issue of *FORUM*. Abke is a freelance researcher and writer based in Bangalore, India. He has contributed to articles and research reports on topics ranging from mining to forced migration. Born and raised in Barbados, Abke has lived and worked in Algeria, Mali, Tunisia and Libya. Kominek is an independent journalist based in the Czech Republic. He covers economic, defense and security matters in Central and Eastern Europe, Russia and the Commonwealth of Independent States, and Asia for a number of publications, including IHS Jane's, *Business New Europe*, The Jamestown Foundation and *CNBC European Business*. **Featured on Page 10**



AFP/GETTY IMAGES

DATO' SRI MOHD NAJIB BIN TUN ABDUL RAZAK became Malaysia's sixth prime minister in April 2009, after serving as deputy prime minister for five years. He delivered the keynote address, excerpted for this issue, at the 20th International Conference on the Future of Asia on May 22, 2014, in Tokyo, Japan. He is also president of the United Malays National Organization.

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ARIN ZURAG

COL. GONCHIGDORJ NYAMDORJ is editor-in-chief of the Mongolian Armed Forces newspaper, *Soyombo*. He is a graduate of the Minsk Military Institute in Belarus, the Ulaanbaatar Management Academy in Mongolia and the Canadian Forces Language School in Base Borden, Canada. Col. Nyamdorj has published articles in the Russian Defense Ministry newspaper *Red Star*, the Canadian Armed Forces weekly publication *Maple Leaf*

and the Hawaiian daily newspaper *Honolulu Star Bulletin*. He wrote the 2011 book *Operation Iraqi Freedom: Back to Baghdad* about the Mongolian armed forces' role in Iraq. **Featured on Page 48**



MARLON MAGTIRA

MAJ. JO-AR ACOSTA HERRERA is the commandant of the Armed Forces of the Philippines Civil-Military Operations School. He engages with organizations across Asia, Europe and the United States to address terrorism involving youth. He advises government agencies and nongovernmental organizations on strategic communication programs and collaborates on capstone programs focusing on transnational crimes. Herrera

speaks about leadership and conflict management to diverse audiences in places ranging from Manila and Kuala Lumpur to Washington, D.C. He holds a bachelor's degree in management from the Philippine Military Academy and a master's degree in social developmental studies from the University of the Philippines.

Featured on Page 51



SINGAPORE MINISTRY OF SOCIAL AND FAMILY DEVELOPMENT

CHAN CHUN SING is Singapore's minister for social and family development, second minister for defense and a member of Parliament for Tanjong Pagar Group Representation Constituency. He served for 24 years in the Singapore Armed Forces (SAF), including appointments as chief of Army, chief of staff of joint staff and chief infantry officer and Army attache to Jakarta. Under his command, the SAF contributed to the multinational stabilization and reconstruction efforts in Afghanistan. **Featured on Page 56**

Join the Discussion

We want to hear from YOU!

Asia Pacific Defense FORUM caters to military and security personnel in the Asia-Pacific region. A product of U.S. Pacific Command, the quarterly magazine provides high-quality, in-depth content on topics that impact security efforts across the region — from counterterrorism to international cooperation and natural disasters.

FORUM provokes thoughtful discussions and encourages a healthy exchange of ideas. Submit articles, pictures, topics for discussion or other comments to us ONLINE or at:

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INDIA

THE ASSOCIATED PRESS

MARS MISSION

OPENS NATION TO SPACE BUSINESS

India celebrated launching a spacecraft into orbit around Mars in September 2014, hoping the rare feat shows the world that the nation is open for business in space exploration and inspires a new generation of homegrown scientists to help drive growth.

India joined an elite club when it successfully guided its Mars Orbiter Mission, affectionately called MOM, into orbit around the red planet. Only the U.S., former Soviet Union and European Space Agency have also accomplished the feat.

In scenes broadcast live on TV, scientists at the Indian Space and Research Organization's command center in Bangalore erupted into cheers as the orbiter's engines completed 24 minutes of burn time to maneuver the spacecraft into place. MOM traveled 666 million kilometers in more than 300 days after breaking from Earth's gravitational pull.

Boosting its space business has always been a key selling point of India's program. More than half of the world's missions to Mars so far have failed. In proving it can pull off a complex space mission, India becomes one of the world's few reliable ferryman to the stars. The capability can attract investors, commercial launch orders and customers to hire Indian rockets and satellites for scientific research. The Associated Press

INDO ASIA PACIFIC

Hundreds Held in Counterfeit Sting

Authorities arrested or placed under investigation more than 660 people in a major police operation across 10 Asian countries that targeted criminal networks trading fake and potentially dangerous products, Interpol announced in September 2014.

Security forces and border agencies in countries ranging from Cambodia and China to India and the Philippines had seized counterfeit goods worth nearly U.S. \$50 million, including alcohol, cigarettes, cosmetics, clothing and electrical goods, the international police organization said.

In one case, police dismantled an organized criminal group that operated a factory producing fake cosmetics and packaging. The phony cosmetics contained high levels of mercury, which is toxic to humans, Interpol said about the operation conducted in May 2014.



This is not the first major transnational operation of its kind. In February 2014, Europol — the European Union's law enforcement agency — announced that an operation targeting counterfeit schemes in 33 countries in Europe, North and South America, Africa and Asia had netted more than a 1,000 tons of fake food and drink.

Agence France-Presse



EEL PROTECTION

Japan agreed in September 2014 to cut purchases of eel fry from neighboring East Asian countries by 20 percent in an effort to protect the endangered species.

The agriculture ministry said the agreement with China, South Korea and Taiwan calls for reducing eel hauls by 20 percent for one year, beginning in November 2014. The countries also agreed to take other measures to save the species and limit eel catches, including setting up an organization to coordinate management of the industry.

The Japanese eel is a popular summertime

delicacy, served roasted with a sweet and savory sauce over rice. Conservationists put it on an international “red list” earlier in 2014, indicating the eel faces a high risk of extinction due to overfishing.

Efforts to farm eels have made slow progress due to their complicated migratory patterns. Unlike salmon, which migrate inland to spawn but spend their lives at sea, eels are spawned in remote areas of the ocean and then migrate inland, only returning to the sea to reproduce. Japanese eel farmers buy most of the elvers they raise from the three other countries involved in the talks. The Associated Press



INDONESIA

LAWMAKERS AGREE *to tap* VOLCANO POWER

The Indonesian parliament passed a long-awaited law in August 2014 to bolster the geothermal energy industry and tap the power of the vast archipelago's scores of volcanoes.

Made up of more than 17,500 islands stretching from the Indian to the Pacific oceans, Indonesia is home to 130 volcanoes and is estimated to hold about 40 percent of the world's geothermal potential.

However, it produces only a tiny fraction of its energy by converting underground heat into electricity. Although Indonesia is the world's third largest producer, behind the United States and the neighboring Philippines, the

growth of its industry has been stalled because red tape and legal uncertainty have obstructed much-needed investment.

The government hopes the law will speed up the development of the sector. Most important, the law stipulates that exploration for geothermal energy and development of plants is no longer considered mining.

Indonesia is estimated to have more than 28,000 megawatts of geothermal potential but is currently producing just over 1,300 megawatts a year of its electricity from the clean source. Most of its electricity comes from coal and oil.

Agence France-Presse

SINGAPORE

High value bank note OUT OF PRODUCTION

Singapore's central bank stopped issuing \$10,000 bank notes (U.S. \$8,000) in July 2014 to deter money laundering. Critics complained the note was the bill of choice for bribe-payers in neighboring Indonesia.

Notes currently in circulation will remain legal tender, but stocks are expected to decline over time as worn notes are returned and not replaced, a monetary authority spokeswoman said.

"If the notes remained on the market, let's say for five or 10 years after their production stopped, Indonesia would still be vulnerable to money-laundering and graft," said Agus Santoso, the deputy chairman of the Financial Transaction Reports and Analysis Centre in Jakarta, according to a July 2014 report in the *Jakarta Post* newspaper. In Indonesia, the \$10,000 note is the "bill of choice for bribe-payers or graft suspects because they can exchange a large amount of rupiah for just a few banknotes," he added.

The bill was one of the world's most valuable banknotes in circulation, along with the 1,000 Swiss franc note (U.S. \$1,120), Singapore's \$1,000 note and the 500 euro note (U.S. \$680), according to the Standard Catalogue of World Paper Money. The highest banknote for U.S. currency is \$100, and China makes do with the 100 renminbi note (U.S. \$16).

Singapore, a global financial center and major player in the wealth management industry, has rejected accusations that it is a haven for money laundering and foreign tax cheats. The government has also said it is scrutinizing new forms of illicit financing such as the trade of precious stones and metals.

Agence France-Presse



China urges neighbors to increase fight

AGAINST EXTREMISM

REUTERS

Chinese President Xi Jinping recommends that China, Russia and Central Asian nations jointly target religion-involved extremism and Internet terrorism. REUTERS

China's President Xi Jinping urged Central Asian states to intensify the fight against religious extremism and cyber terrorism, state media said, as Beijing reaches for help across its borders in addressing security concerns in its restive Xinjiang region.

Beijing says separatist groups in the far western region of Xinjiang, home to the Muslim Uighur minority, are seeking to form their own state called East Turkestan and have links with militants in Central Asia as well as Pakistan.

The government says such separatists are influenced by militant groups' training videos and audio from beyond its borders, though experts dispute their influence and reach.

Nations in the region "should make concerted efforts to crack down on the 'three evil forces' of terrorism, extremism and separatism," the state-run Xinhua news agency said in September 2014, citing Xi's speech in Tajikistan to the heads of state of other Shanghai Cooperation Organization (SCO) members.

"Currently, [we] should focus on combating religion-

involved extremism and Internet terrorism," Xi said, adding that the group's regional anti-terrorism structure should enhance efforts to combat drug trafficking.

China, Russia and four Central Asian nations — Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan — formed the SCO in 2001 as a regional security bloc to fight threats posed by radical Islamists and drug traffickers operating from neighboring Afghanistan.

Many experts and rights groups say economic marginalization of Uighurs is one of the main causes of ethnic violence that has killed hundreds of people across China since 2013.

Experts argue that benefits of development in Xinjiang, resource-rich and strategically located on the borders of ex-Soviet Central Asia, largely have gone to majority Han Chinese, stoking resentment among Uighurs.

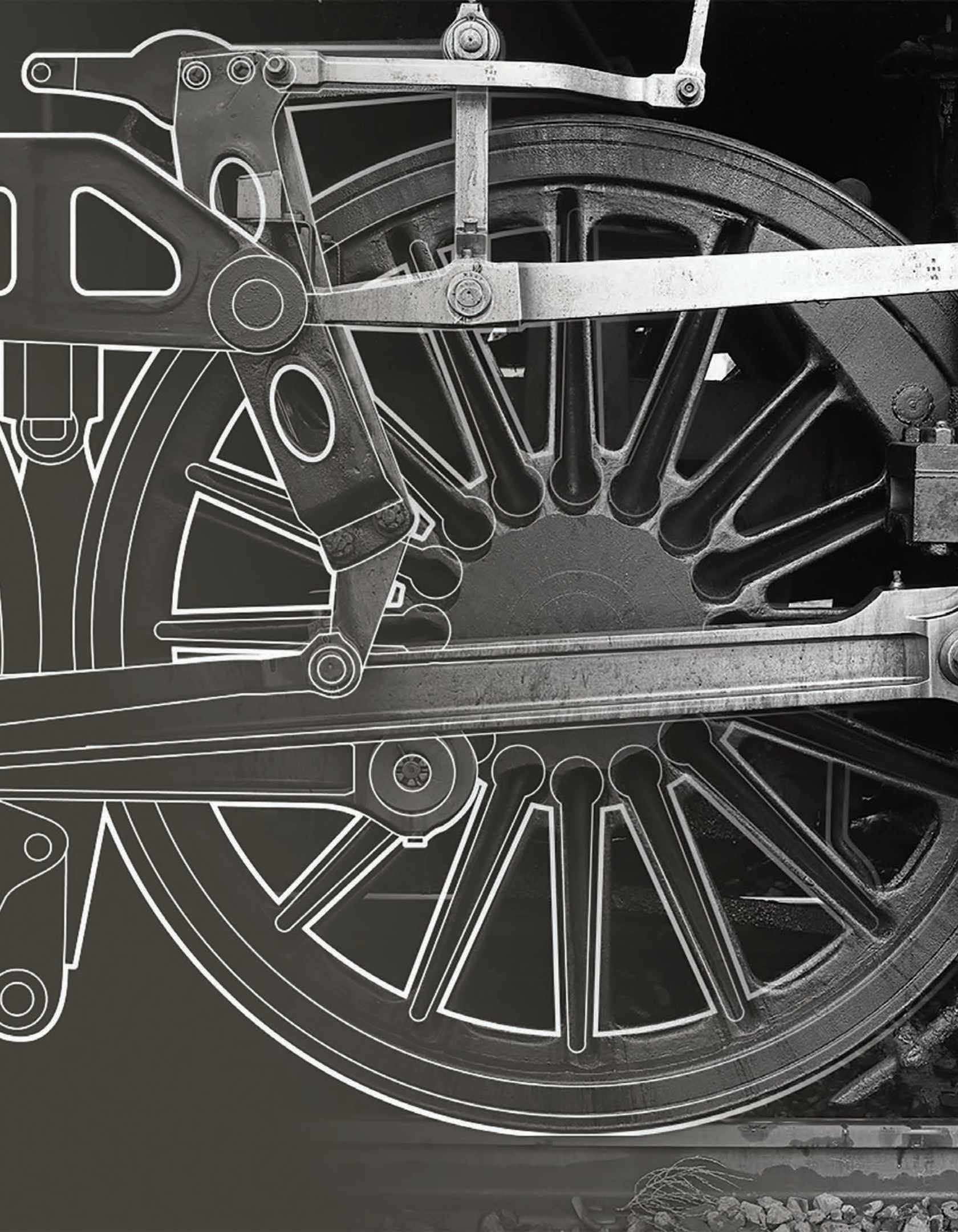
China's leaders have vowed to strike hard at religious militants and separatist groups.

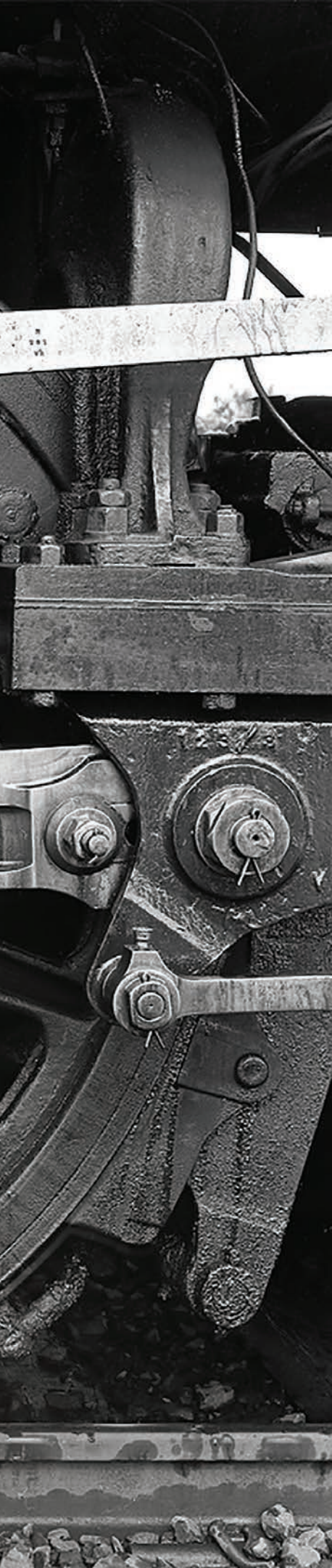
In September 2014, a Chinese court sentenced three

people to death and one to life in prison for an attack at a Yunnan province train station in March 2014 that killed 31 people and injured 141.



Paramilitary policemen patrol a street in China's Shenzhen, Guangdong province, in May 2014. China announced a yearlong operation to increase anti-terrorism efforts. REUTERS





FORUM ILLUSTRATION

REVIVING THE SOUTHERN SILK ROAD

**A NEW PUSH FOR LAND
CONNECTIVITY SHIFTS
FOCUS FROM MARITIME
ASIA TO BOOST TRADE AND
SECURITY IN THE REGION**

TOM ABKE AND JIRI KOMINEK

China and India have recently adopted new policies to bolster political, economic and security cooperation with their Southeast Asian neighbors along an overland corridor whose roots date back to the ancient Southern Silk Road.

The Silk Road spanned a web of historic trade routes that linked present day China with Europe, North Africa and the Mediterranean through Central Asia. For centuries, trade caravans crisscrossed the Central Asian deserts and mountain passes carrying valuable goods back and forth across the Eurasian landmass.

The importance of the Silk Road reached its peak during the height of the Mongolian Empire in the 14th century when Marco Polo traveled to China. As the Mongolian Empire declined, so did the Silk Road. The fate of the overland trading road appeared sealed forever with the dawning of the Industrial Revolution and the invention of the steam ship that made maritime trade between Europe and Asia along the so-called Southern Ocean Corridor quick and affordable.

CHINA GOING WEST

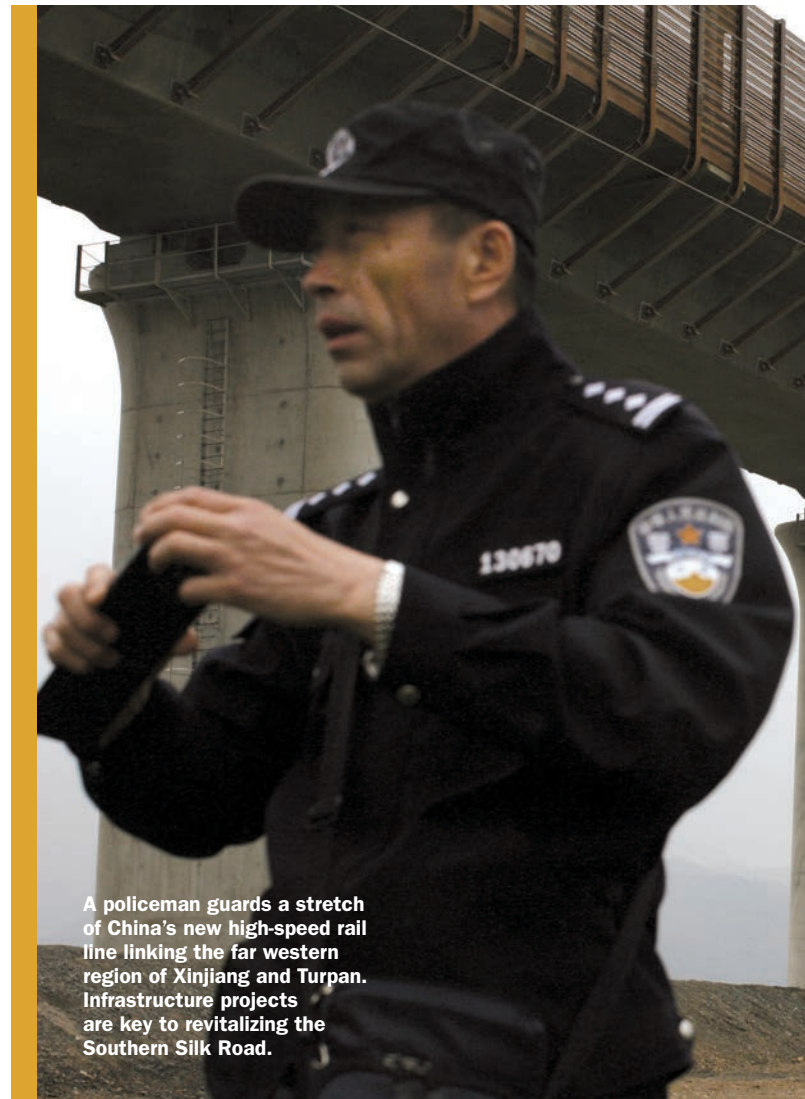
China has been developing rapidly since 1979, when the nation adopted economic reforms primarily focusing on the eastern coastal regions of the country. The government established special economic zones in four coastal cities and attracted unprecedented foreign direct investment through liberal incentives.

By 2000, however, the central government in Beijing realized that although China was the fastest growing economy in the world, a massive gulf separated the coastal cities of the east and the inner western part of the country in terms of development. At this juncture, Chinese authorities adopted their “Go West” policy aimed at developing infrastructure such as roads, railway corridors, oil and gas pipelines, power generation and telecommunications systems as well as attracting more foreign direct investment into the region.

China has followed up its “Go West” policy recently with a series of new Silk Road policies aimed at strengthening overland connectivity with its neighbors in the region through the construction of roads, railways, pipelines and other infrastructure.

A key aspect of this latest set of policies focuses on reviving the Southwestern Silk Road connecting China’s Yunnan province with Northeastern India via Bangladesh and Burma.

“China, given its economic strength, will clearly play a leadership role in developing the revived Southwestern Silk Road in cooperation with its neighbors in South and Southeast Asia,” said Dr. Wai-Mun Chia, assistant professor at the Division of Economics at Nanyang Technological University (NTU) in Singapore.



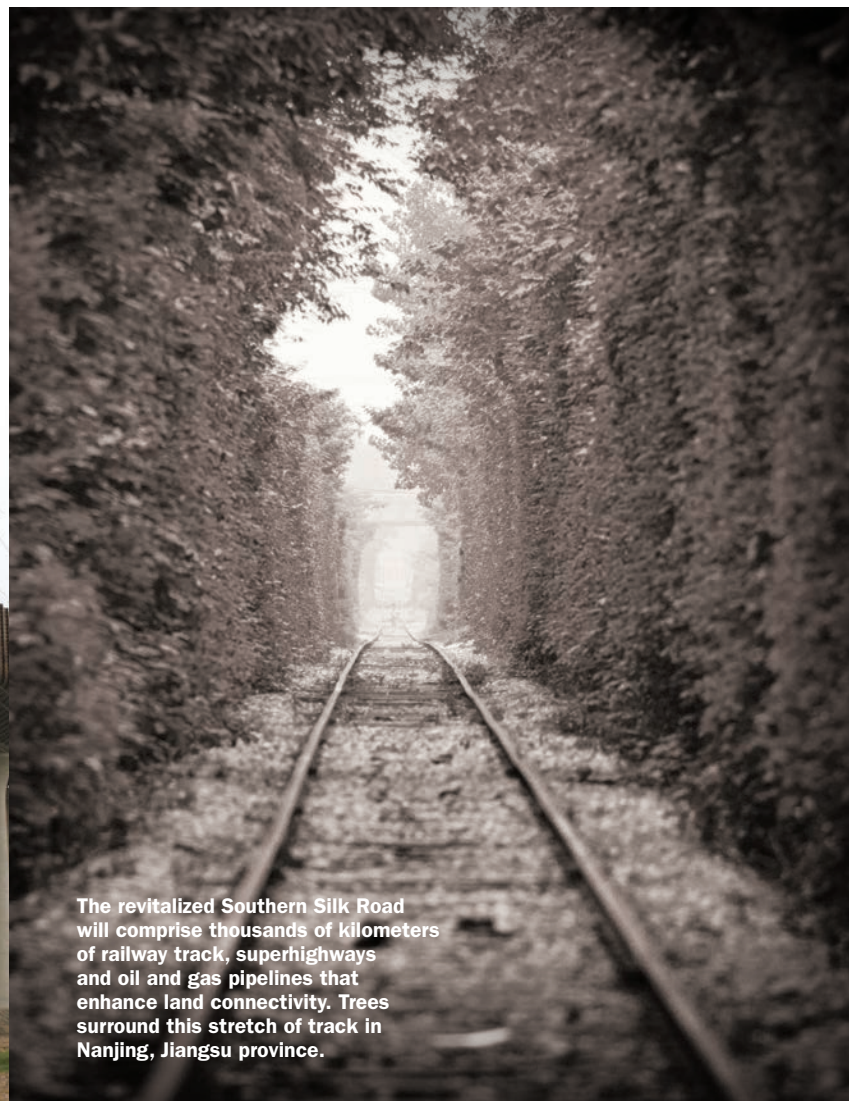
A policeman guards a stretch of China's new high-speed rail line linking the far western region of Xinjiang and Turpan. Infrastructure projects are key to revitalizing the Southern Silk Road.

REUTERS

There are several reasons for China’s decision to bolster land connectivity with its neighbors. Apart from wanting to develop its inner western provinces, China is also seeking to develop overland routes to transport oil and other resources that today must travel by ship from the Persian Gulf and Africa. China is concerned that an overreliance on such shipping lanes could potentially leave its economy and national security hostages to fortune.

Furthermore, Beijing aims to assert its influence in Asia through the Shanghai Cooperation Organization (SCO) and seeks to build more constructive political, economic and security ties with its neighbors throughout the Eurasian landmass. SCO brings together China, Russia and four former Soviet republics in Central Asia as well as five observer nations including Afghanistan, India, Iran, Mongolia and Pakistan.

“China is becoming more of a continental power in Asia and land connectivity is becoming its central focus, so what we are beginning to see is a one belt-one road policy,” said Dr. Pradumna B. Rana, associate



The revitalized Southern Silk Road will comprise thousands of kilometers of railway track, superhighways and oil and gas pipelines that enhance land connectivity. Trees surround this stretch of track in Nanjing, Jiangsu province.

REUTERS

professor at the S. Rajaratnam School of International Studies at NTU. In other words, China is developing a network of overland corridors to help achieve regional economic connectivity.

Rana says these are long-term goals that will be realized through joint investment programs with some of China's neighbors such as India. China has established the Asia Infrastructure Investment Bank focusing on the construction of roads and railways linking Yunnan province with Burma and Bangladesh. Rana noted that China and India are raising U.S. \$100 million to assist in improving infrastructure in South and Southeast Asia.

"This is not something that will happen overnight. This is a long-term process that will require cooperation from many countries, regional and international organizations. At this moment, only 5 percent of the total number of goods are being moved overland, while the remainder continues to be transported by sea," said Rana.

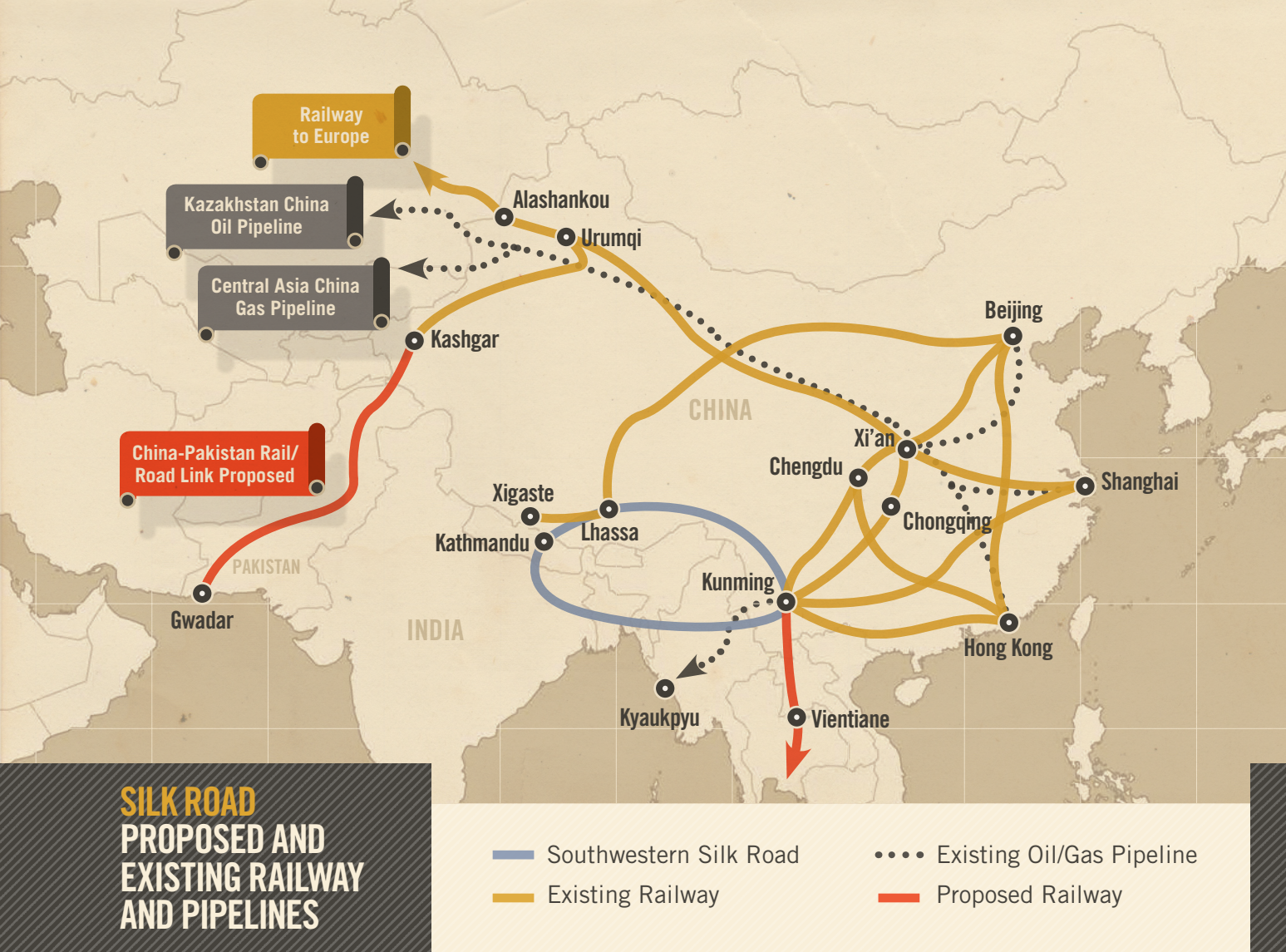
Another source of financing to promote infrastructure development could be the Manila-based

BIMSTEC BY THE NUMBERS

Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation

- Connects 1.3 billion people
- Combined GDP U.S. \$750 billion
- Inaugural meeting June 6, 1997
- Member countries: 7
 - » Bangladesh 1997
 - » Bhutan 2003
 - » Burma 1997
 - » India 1997
 - » Nepal 2003
 - » Sri Lanka 1997
 - » Thailand 1997

SOURCE: www.bimstec.org



FORUM ILLUSTRATION

Asia Development Bank (ADB), which already enjoys close ties with, and finances major projects throughout, the Association of Southeast Asian Nations (ASEAN) region.

The ADB has been a development partner with the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) since 2005, and has completed a BIMSTEC transport infrastructure and logistics study. One project under consideration for financing is the construction of a highway from the Vietnamese port city of Haiphong to Northeastern India.

Other regional organizations such as ASEAN and member states of BIMSTEC are also expected to play a greater role because increased land connectivity will directly improve the economic well-being of their members, including Bangladesh and Burma.

"As the countries in the region become more integrated, there will be a greater need to lower trading costs, as well as the costs of transportation and logistics, etc." said Rana.

BIMSTEC and ASEAN members need to further cooperate to reduce tariffs in order to boost multilateral trade in the region.

INDIA LOOKING EAST

While China started "going west" in 2000, India launched its "Look East" policy in 1991 to cultivate extensive economic and strategic relations with its neighbors in Southeast Asia, and thereby boost its standing as a regional power and offer a counterweight to growing Chinese influence in the region.

"There are three primary reasons why India is keen to participate in reviving the so-called Southwestern Silk Road: one, to offset Chinese penetration in the region; two, to bolster trade; three, to mitigate the risk of further rebellions in Northeastern India," said David Steinberg, distinguished professor emeritus of Asian Studies, School of Foreign Service at Georgetown University in Washington, D.C.

Improving economic development, including infrastructure in Northeastern India, is a top security concern for successive Indian governments, according to Steinberg. The region, connected to the main part of India via the narrow Siliguri Corridor known as the "chicken's neck," remains economically underdeveloped and isolated by mountains and dense bush.

“AS THE COUNTRIES IN THE REGION BECOME MORE INTEGRATED, THERE WILL BE A GREATER NEED TO LOWER TRADING COSTS, AS WELL AS THE COSTS OF TRANSPORTATION AND LOGISTICS, ETC.”

- Dr. Pradumna B. Rana



1
AFP/GETTY IMAGES



2
REUTERS

1. Researchers document Buddhist frescoes on the walls of the Mogao caves in Gansu province, China, a crossroads on the Silk Road. The U.N. World Heritage Committee added the Silk Road network to its list in June 2014. Twenty-two of the 33 heritage points along the road are in China.

2. More than 100 performers in ancient Chinese costumes embarked with 136 camels and eight horse-drawn carriages on the Silk Road Cultural Journey in Jingyang, Shaanxi province, in September 2014. Organized by the Shaanxi government and a local tea company to revitalize trade along the web of routes, the journey is expected to finish in Kazakhstan more than 15,000 kilometers and a year later.

The Indian government realizes the key to security in this part of the country lies in its further economic development. One way to achieve this is to construct roads and railways that allow for the movement of goods to the region via Bangladesh and Burma, which would also provide access to ports being developed in those countries.

“Nagaland is a burning issue with respect to security and stability in Northeastern India, as there is a Naga minority living in Burma as well, so there is a potential concern over Naga irredentism in the region if it is neglected,” said Steinberg.

The Indian government has established a Burma study center in the Northeastern Indian state of Manipur to focus on, among other issues, the situation concerning the Naga minority.

Another security concern facing India and China within the region of the proposed Southwestern Silk Road is an unresolved border issue in the Andhra Pradesh, a territory in Northeastern India controlled by Delhi but claimed by China since the 1962 Sino-Indian War.

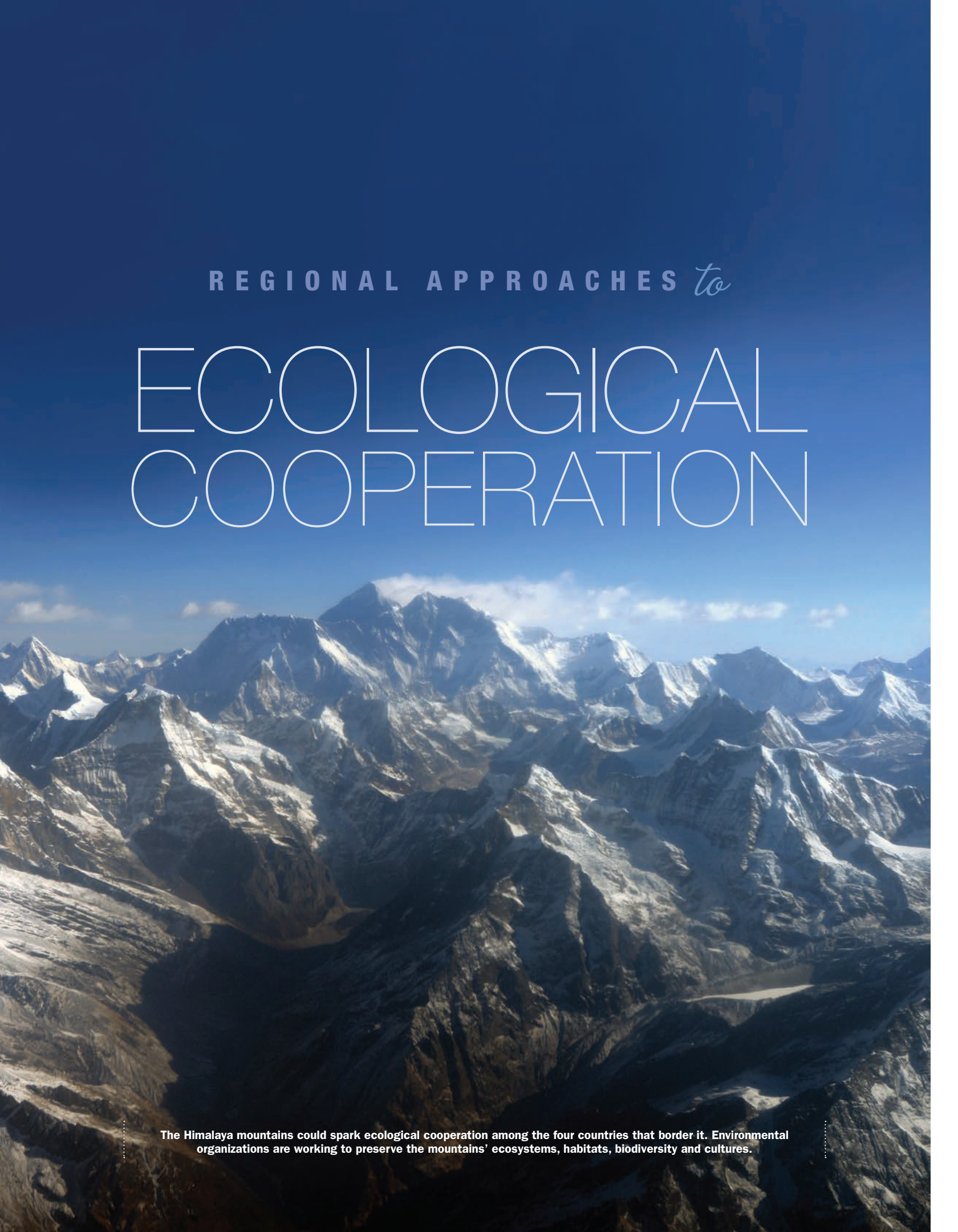
“If the renewed Southwestern Silk Road is to succeed, ASEAN should play a critical role as it will need to lower tariffs for goods entering its member states by 2015,” said Steinberg.

Other issues that will need to be addressed by the players in the region include political instability in Bangladesh stemming largely from unchecked corruption and the risk of future ethnic unrest in neighboring Burma, security experts say.

Both China and India have chosen to overlook issues as well as accusations of human rights abuses in Burma. However, they will need to pressure the local governments to address such issues if the overland Southwestern Silk Road is to be successful, experts contend.

China is investing money into modernizing ports in Bangladesh and Burma and seeks to transport oil and natural gas via pipelines through the latter. Such a venture would carry excessively high costs should Burma erupt into internal political chaos as a result of the ongoing ethnic unrest, analysts say. “What we are dealing with here in this region is a complex set of interactions that must be kept in mind and addressed,” said Steinberg.

India already does about 45 percent of its foreign trade with Southeast Asia. While successful, India continues to lag behind China in the volume of trade and economic ties with countries in the region, something that should inspire Delhi to seek additional avenues of cooperation with its neighbors. □

An aerial photograph of the Himalayas, showing a vast range of snow-capped mountain peaks and deep, rugged valleys. The sky is a clear, deep blue. The text is overlaid on the upper half of the image.

REGIONAL APPROACHES *to*

ECOLOGICAL COOPERATION

The Himalaya mountains could spark ecological cooperation among the four countries that border it. Environmental organizations are working to preserve the mountains' ecosystems, habitats, biodiversity and cultures.

NATURAL BOUNDARIES SUCH AS RIVERS AND MOUNTAINS FOSTER COLLABORATIVE EFFORTS THAT ENHANCE THE REGION'S STABILITY

FORUM STAFF
PHOTOS BY AFP/GETTY IMAGES

The Mekong River begins as an icy stream 5,200 meters above sea level in the rocky wilderness of the Tibetan Plateau, flowing 4,900 kilometers south through portions of six countries before emptying into the South China Sea. Managing the environment in the surrounding regions represents a major challenge in the Indo Asia Pacific.

More than 320 million people draw their sustenance and livelihoods from the 2.6-million-square-kilometer expanse that is increasingly threatened by development and planned construction of dams for hydroelectric power. The Mekong River Commission (MRC) manages resources for the region, which sustains 1,100 species of fish — placing it in contention for the world's largest inland fishery — as well as thousands of species of plants and animals.

The Mekong is an example of how the Indo Asia Pacific's diverse environments, from snow-capped mountain peaks to sweltering river deltas, have spawned networks for regional ecological cooperation mainly out of necessity. As competition for resources intensifies as populations grow and climate change occurs, strengthening these networks will be vital for nations, governments, militaries and citizens.

By 2050, the Indo Asia Pacific's population will exceed 2.2 billion, according to the United Nations Environment Programme (UNEP). The region is also home to about 40 percent of the developing world's poor — those who rely almost exclusively on natural resources for their livelihoods.

"The impacts of climate change pose a threat to human security, which makes our people, especially the poor, vulnerable," Anura Jayatilake, director

general of the South Asia Co-operative Environment Programme (SACEP) said in a June 2014 UNEP news release. "Increasing temperature, extreme weather events and rising sea levels call for an urgent response in mainstreaming the environment into our developmental plans and processes."

"Adequately valuing and investing in the natural capital on which many of the poor rely is vital for inclusive growth," Kaveh Zahedi, UNEP's regional director for Asia, said in the June 2014 news release.

A BINDING MECHANISM

Ecological cooperation also has the potential to build trust to resolve territorial conflicts and to enhance regional security, experts say.

"Environmental cooperation is low politics, often getting trumped by the high politics of war and peace. But it can diminish threats and grow trust among militaries and governments," Saleem H. Ali, a politics and international studies professor at the University of Queensland in Australia, told *FORUM*.



Workers load cement bags at a small village port on the Mekong River in Thailand. The 4,900-kilometer river flows south through portions of six countries before emptying into the South China Sea.

Environmental factors play a critical role as a “binding mechanism” to shift “conflict to cooperation,” as governments realize that protecting shared ecosystems could foster stability across borders, Ali wrote in his January 2013 study, “Ecological Cooperation in South Asia: The Way Forward.” Natural borders such as rivers and mountains, which separate cultures and countries, also set the stage for cooperation, because populations on either side of a geopolitical divide share the resources of those ecosystems.

Multilateral agreements for sustainable ecosystems and shared resources “should be instrumentally used for peace-building, and is an underutilized diplomatic tool that has much potential for achieving broader security objectives in the region,” Ali said in his report, published by the New America Foundation in Washington, D.C.

“*Environmental cooperation*
CAN LEAD TO ENGAGEMENT IN OTHER AREAS,
INCREASING SECURITY AND STABILITY.”

— SALEEM H. ALI

Governments increasingly acknowledge the benefits of ecological cooperation across the Indo Asia Pacific, and organizations have been established to implement initiatives and conduct studies to advise policymakers. Moreover, intergovernmental organizations have been collaborating for decades on the conservation of natural resources that cross natural and national boundaries.

MEKONG COOPERATION

Given the Mekong region’s sheer size, the four countries that border the River — Cambodia, Laos, Thailand and Vietnam — founded the MRC in 1995 to develop strategies for sustainable resource management in the subregion, including agriculture, irrigation, flood protection and domestic and industrial water use. The MRC promotes dialogue among Greater Mekong region nations and, with assistance from the Asian Development Bank, has implemented

or completed infrastructure projects, such as improving inland waterways and boosting cross-border trade, worth U.S. \$11 billion.

“With a vision to bring about an economically prosperous, socially just and environmentally sound Mekong River Basin, we have placed regional cooperation and basin-wide planning at the heart of our operation,” the MRC says on its website.

The MRC also assesses the impact of one of the subregion’s major resource challenges: the development of hydroelectric power. Eleven mainstream dams are planned or operating on the Mekong River. At a seminar in Vietnam in September 2014, MRC members evaluated the subregion’s newest project, the proposed Don Sahong hydropower plant and dam in Laos. Le Duc Trung, director general for the MRC Joint Committee in Vietnam, said the seminar aimed to study the dam’s impact on fisheries, water, sediment and quality of life, the online newspaper VietNamNet reported.

Some experts contend the 260-megawatt Don Sahong will decrease the productivity of fisheries and disrupt fish migrations when it begins operations in 2018. The government of Laos continues to move forward with the project, but the controversy prompted officials to submit

the dam proposal to the MRC, which will conduct and share studies on the Don Sahong’s environmental impact, VietNamNet reported.

The MRC’s efforts show how ecological cooperation has become increasingly important in the Indo Asia Pacific in recent years and how nations can work together to solve political conflicts over natural resources.

MECHANISMS FOR COOPERATION

Thousands of kilometers west of the headwaters of the Mekong River rests the source of another grand system. Once a flashpoint of conflict, the Indus River Basin now exemplifies a success story of environmental cooperation, though its management remains a continuing challenge. Here, in a section of the Tibetan Plateau bordered by Afghanistan, China, India and Pakistan, snow and glacier meltwater combine to power a river system that flows 3,180 kilometers south before draining into the Arabian Sea.



A boy keeps live chickens in a bag while crossing the Mekong River by ferry south of Phnom Penh, Cambodia. More than 320 million people live in the Greater Mekong subregion and depend on the river for their livelihoods.



A fisherman casts his net in the Mekong River in Cambodia. The river is the world's largest inland fishery, with more than 1,100 species.

Ecological cooperation in the river basin started, ironically, when the British Indian Empire dissolved in 1947, leading to the partitioning of India and Pakistan and a split over the management of the Indus' resources. India "controlled much of the Indus' headwaters and much of the existing water infrastructure necessary for irrigation, while Pakistan's predominantly agrarian economy depended on its waters," according to an August 2014 report, "The Rise of Hydro-Diplomacy: Strengthening Foreign Policy for Transboundary Waters," by Adelphi Research, a German-based environmental consulting group.

Difficult negotiations followed over the governance of the Indus waters, but in 1960 India and Pakistan ratified the Indus Waters Treaty, which is still in effect today. The bilateral Permanent Indus Commission implements the treaty and mediates disputes. The treaty survived three wars between India and Pakistan, and the commission "fulfilled its requirement to meet every year, even during periods when diplomatic

relations between the two states had been broken off," according to the Adelphi report. "This history of cooperation certainly constitutes a remarkable success story, even if the two countries continue to disagree over the development of water infrastructure."

Other mechanisms for cooperation exist in the absence of treaties or bilateral and multilateral agreements. These usually take the form of intergovernmental organizations. SACEP, founded in 1982, promotes financing and implementation of environmental projects, such as air pollution monitoring, and promoting regional cooperation to curb illegal wildlife trade.

The South Asian Association for Regional Cooperation (SAARC), founded in 1985, champions environmental education. Since 1997, the organization has established a forestry center in Bhutan, a disaster management center in India, a meteorological research center in Bangladesh and a coastal management center in Maldives, according to a June 2014 SACEP report, "Post



2015 South Asia Development Agenda.” SAARC also founded the South Asian University in New Delhi, where students from its member countries — Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka — can earn master’s degrees in computer science and development economics.

SAARC has faced criticism that it reacts slowly in turning proposed environmental initiatives into action, but the organization’s potential to foster regional cooperation cannot be discounted, the University of Queensland’s Ali said in his report. “Despite its poor performance historically, SAARC has regional legitimacy and a professional base that should be cultivated and empowered to implement environmental diplomacy and regional peace-building,” he said. “Despite the growth of [other] regional organizations, the potential for SAARC to play a role in multilateral ecological cooperation remains strongest.”

SCALING MOUNTAINS

The Himalayas require regional environmental cooperation because the world’s tallest mountain range, bordered by Bhutan, India, Pakistan and Nepal, contains glaciers that are headwaters for major rivers and the main source of water for those nations, Ali told *FORUM*.

“Generally, there’s a physical demarcation of borders with natural features such as mountains and rivers,” he said. “Most political discourse focuses on the divide. It can be a place where stakeholders can cooperate because they share that feature. There are ample reasons why governments and militaries should think of mountains in that regard: climate change, the source of water, shrinking glaciers.”

An ecological disaster in the Himalayas, such as the potential for climate change to impact glaciers, would pose a serious security challenge to the nations that depend on the mountain ranges’ resources, Ali added. Melting glaciers could cause increased flooding in agricultural areas downstream.

Himalayan cooperation has focused on the management of water and other resources, and monitoring the potential impact of changing weather patterns. “Environmental factors have led erstwhile adversaries across the cultural and political divide to consider ways of cooperating around mountain systems. This is due to the

seminal role mountains play in providing resources for human survival,” Ali wrote in his report.

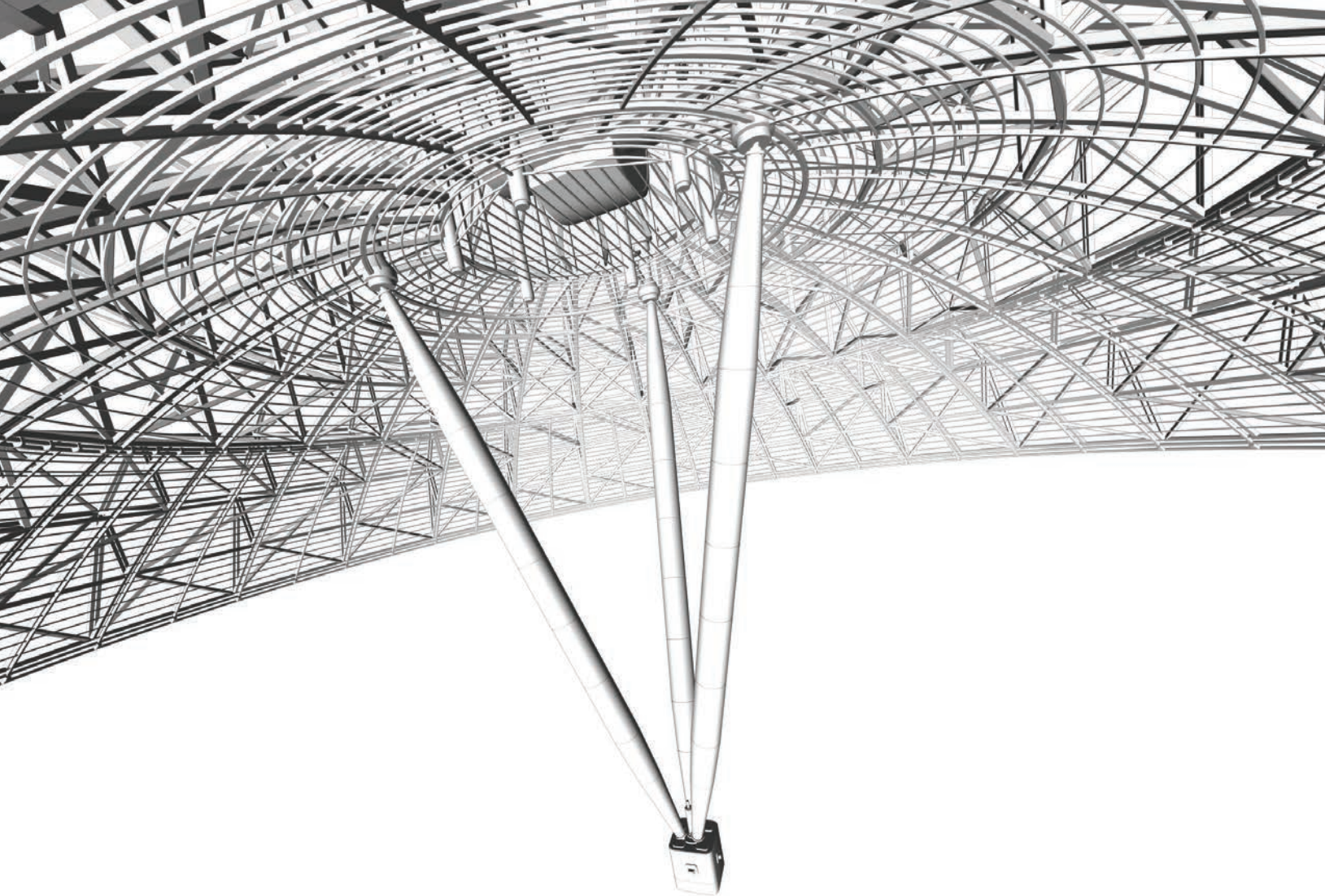
Two intergovernmental organizations promote regional environmental cooperation in the Himalayas: the Kailash Sacred Landscape Conservation Initiative (KSLCI) and the International Centre for Integrated Mountain Development (ICIMOD), both based in Nepal. KSLCI, a collaborative program among China, India and Nepal, focuses on long-term conservation of habitats and biodiversity and promotes sustainable development.

ICIMOD aims to sustain the mountains’ ecosystem and improve the living standards of the people in the Hindu Kush Himalaya region. ICIMOD also launched initiatives to improve transboundary cooperation and trade among China, Pakistan and Afghanistan. The organization conducted a study that showed regional cooperation around food supply chains and trade involving forest resources along the Nepal-India border could positively impact the subregion. ICIMOD’s study estimated that regulating conservation efforts and trade would generate about U.S. \$125 million for the local economy. “Conservation and trade thus need to be planned regionally to prevent animosity and conflict,” Ali said in his report.

WORKING TOGETHER

Climate change has prompted the U.N. to call for global collaboration in preserving ecosystems and managing natural resources. A landmark climate summit hosted by the U.N. in September 2014 generated momentum for “real action in Asia and the Pacific,” Shamshad Akhtar, an undersecretary-general of the U.N., said in an editorial for the news website *The Indian Republic*. “Moving the climate frontier from negotiations and commitment to real action is not only urgent but also opens a new window of sustainable development opportunity for all in Asia and the Pacific.”

True regional ecological cooperation across the entire Indo Asia Pacific has not yet occurred, but Ali said the examples in the Mekong region and Himalayas are encouraging signs. “Environmental cooperation can lead to engagement in other areas, increasing security and stability,” he said. “It’s an incremental process, but we will see it happen in due time.” □



MOBILE SECURITY

MILITARIES ANALYZE PROS AND CONS OF IMPLEMENTING A
BRING-YOUR-OWN-DEVICE POLICY AND MONITOR THE EVOLUTION
OF SECURITY FEATURES AS THE TREND GROWS



FORUM ILLUSTRATION



FORUM STAFF
PHOTOS BY AFP/GETTY IMAGES

Action films have a way of making Soldiers look digitally up to date and unstoppable. Men in uniform dart from mission to mission, outsmarting bad guys at every turn with help from the latest — and often futuristic — high-tech gadgets. Due to the rapid evolution of technology, cumbersome military procurement processes, and competing budgetary requirements, commanders are usually unable to issue their personnel the latest technological devices on the market.

When it comes to a Soldier's personal life, however, the images on the big screen may not seem too far-fetched.

Cellphones have long since replaced laptops. Smartwatches are replacing cellphones as the new “it” thing in the tech world. Military personnel use such gadgets at home, and younger recruits — who have grown up in a world where these luxuries always existed — seek jobs expecting their employer to not only know the latest technology tools but to deliver them.

A growing trend known as “bring your own device” (also called “bring your own technology”) could provide government organizations with a way to meet the demand for updated technology, such as smartphones and tablets, without the hardware costs.

“If an organization does not develop a bring-your-own-device policy, but instead insists on the status quo of the traditional model, there are risks that staff will become frustrated, potential working hours will be lost and productivity will suffer,” said Rick Ness, chief technology officer for Thomas Reuters, who was quoted in an Australia Defence Force report titled “Using Mobile Platforms for Sensitive Government Business.”

The biggest question when evaluating if a bring-your-own-device (BYOD) policy fits an organization remains whether the right types of security features exist to protect sensitive information. A litany of variables means the answer can appear as complex as the choice of smartphones in today's market.

Businesses that have implemented BYOD policies continue refining guidelines as employees expose security gaps. The larger the organization, the higher the chance for a security breach. Because militaries can't afford such risks, many have opted to continue studying the trend and looking for software to ensure information passed through personal devices ends up in the hands of its intended user.

From left: A pilot onboard a Vietnamese Air Force Russian-made AN-27 aircraft uses a tablet during a search over Vietnam's southern sea for the missing Malaysia Airlines Flight 370 in March 2014.

Former Indian Chief of Army Gen. V.K. Singh checks his mobile phone prior to attending a news conference at the college of Electronics and Mechanical Engineering in Hyderabad in 2012.

An Indonesian police commando takes pictures with his cellphone as he attends a security roll call at the police headquarters in Jakarta.

AUSTRALIA TAKES THE LEAP

Eager to test how a BYOD policy works within a military setting, the Australia Defence Force (ADF) has done what it calls “really small-scale pilots.”

“We know we can do certain things, meet some of our security requirements for some of the devices, but in no way does it need to be large-scale just yet,” Peter Lawrence, chief information officer for the ADF, told the International Data Group News Service in February 2013. He said the ADF had to be sure information transmitted on the devices couldn’t be intercepted.

The ADF analyzes pros and cons of a BYOD policy and gives security recommendations in its “Using Mobile Platforms for Sensitive Government Business” report, released in January 2013. The unclassified report discusses general security issues, vulnerabilities and threats as well as data transmission confidentiality and integrity. It includes recommendations such as prohibiting privately owned devices from accessing government information above an unclassified level; requiring any mobile device used for accessing information above classified be purchased and owned by the commonwealth; and requiring BYOD participants to select a smartphone from a preapproved list of devices and operating systems that have been vetted by security experts.

“The security requirements of government differ to those of private industry since governments have a greater responsibility to protect the confidentiality of sensitive data in their care; in some situations, lives may even be at stake,” the report said. “For this reason, governments typically need stricter policies than private industry for controlling the use of mobile devices that handle sensitive data.”

BYOD TREND HERE TO STAY?


Close to 60 percent of Asia-Pacific organizations surveyed by the International Data Corporation (IDC) reported having some kind of mobility policy that caters to the practice of BYOD, the group reported in June 2014.

“With the user experience of mobile devices improving, end users can start to perform more complex tasks on those devices. In addition, the price of devices has also dropped to a level where increased proliferation becomes possible,” Ian Song, IDC’s Asia Pacific research manager, told New Delhi Television in June 2014.

IDC estimated nearly 155 million consumer smartphones had some use in a BYOD program across the Asia-Pacific region by the end of 2014, an increase over the previous year by 40 percent.

Whether the trend becomes a movement or fades before full implementation in government circles, security experts continue to recommend a cautious approach. Militaries already on pace to create a BYOD policy have been careful to scrutinize every step.

“How often has BYOD been successful in commercial industry? Not as often as people think. So we are looking at what it would mean to do BYOD, and we’re going to do a controlled pilot for that,” Terry Halvorsen, acting chief information officer for the U.S. Department of Defense, told C4ISR & Networks, a website that monitors defense intelligence and technology, in September 2014. “It’s not a technical issue; it’s more about the tactics and procedures that allow us to [monitor] while protecting individual rights. And it gets hard. Government data that could be lost or mismanaged ... that is the more complicated part of the process than the technical piece.”



An Army Soldier in Bangkok, Thailand, uses a tablet computer to capture the scene of a deadly explosion in February 2014.

'KILL SWITCH' PROTECTS SMARTPHONE DATA

THE ASSOCIATED PRESS

New crime data show Apple's addition of a "kill switch" to its iPhones in September 2013 has sharply reduced robberies and thefts, U.S. authorities said in June 2014.

The report by state attorneys general, prosecutors, police and other officials from a year-old initiative called "Secure Our Smartphones" said Google and Microsoft will incorporate a kill switch into the next version of their operating systems on smartphones. The three systems — Android, iOS, and Windows Phone — are used in 97 percent of smartphones in the U.S.

New York Attorney General Eric Schneiderman, part of the initiative, said the data show crimes, meanwhile, surged against people carrying phones without kill switches.

"The statistics released ... illustrate the stunning effectiveness of kill switches, and the commitments of Google and Microsoft are giant steps toward consumer safety," he said. The report noted an estimate by *Consumer Reports* magazine that 3.1 million mobile devices were stolen in the United States in 2013, double a year earlier.

Google spokesman Christopher Katsaros said the next version of Android will include "a factory reset protection solution to help deter smartphone theft." The company plans to release more details shortly, he said.

Microsoft plans to offer "theft-deterrent features" as an update for all phones running Windows Phone 8.0 and newer, subject to mobile operator and phone manufacturer approvals by July 2015, Vice President Fred Humphries posted online. It will update the "Find My Phone" feature, making it capable of remotely erasing personal data, rendering phones inoperable by unauthorized users except to call 911 and prevent reactivation without the authorized user's permission. It will allow reactivating phones recovered by authorized users and restore erased data stored in the cloud, he wrote.

The iPhone switch is an opt-in feature, requiring users to enable it by touching a series of buttons: settings, iCloud, Find My iPhone. It allows the user to locate the phone on a map and remotely lock or erase it. The initiative, with 29 U.S. state attorneys general, dozens of prosecutors, police and other officials as members, advocates kill switches as standard features where users would have to opt out.

In August 2014, California became the first state enacting a law requiring all smartphones sold there come pre-equipped with anti-theft software as a default setting.

"Our efforts will effectively wipe out the incentive to steal smartphones and curb this crime of convenience," California state Sen. Mark Leno said.

The chief information officer for the U.S. Department of Defense outlined its commercial mobile-device implementation plan in a February 2013 memorandum, which details a three-phase approach for enhancing security features and capabilities for mobile devices that began in April 2013 and had no specified end date.

TIPS FOR A SECURE CONNECTION

"Security challenges have definitely grown in scale and scope with the variety of devices like iPads, smartphones and laptops that people want to use to connect to their network," Jeffrey Stark, a cyber security expert, told the website AccountingWEB in August 2013.

Stark warns that hackers have little trouble accessing smartphones through low-security applications such as social media and email, applications that typically automatically store a user's password and personal information for ease of use.

Once through the initial security barrier, experienced hackers can phish for sensitive work information and extract it.

Stark shared these tips with AccountingWEB to enhance users' security measures for a BYOD program.

- Develop a comprehensive network security policy by assessing risks and identifying weaknesses. The first step in developing a comprehensive network security policy is making sure employees understand what data the organization has, what data it owns, what can be shared and what cannot.

- "Make sure they know what data is highly confidential. If you call data confidential, but you did not tell anybody that it is confidential, it is not really confidential," Stark told AccountingWEB. "User education is important. Monitoring of a company use policy or an access rights policy for effectiveness is important to do on a periodic basis, and then remind the employees of that policy or policies on a periodic basis."

- Establish criteria to distinguish authorized users and their level of access based on ranking and classification.

- Use key data protection tools such as firewalls, encryption software, content filters, virus protection and passwords to mitigate risks.

- Monitor and maintain physical risk assessment of the network under security procedures.

By many accounts, the BYOD and military world have no choice but to learn how to coexist, because the evolution of technology demands it. In fact, half of all companies worldwide will embrace some form of a BYOD program by 2017, according to Gartner, an information technology research company.

The increase in BYOD programs may translate to an increase in happier workers who stay with the organization longer and produce more, given the ability to connect to work networks safely away from the office.

"The basics of being more productive involve being able to work smarter, faster and being able to adapt to changes," the Australia-based *Human Capital* magazine said in a September 2014 article on BYOD. "A key to ensure that this happens is to provide employees with the ability to work anytime, anywhere, from any device." □



NATURE'S WARNING SYSTEM

Pacific island nation villagers use traditional knowledge and technology to forecast natural disasters

FORUM STAFF

One day before a magnitude-7.3 earthquake hit Haicheng in China's Liaoning province in 1975, city officials ordered a massive evacuation based on reports of odd animal behavior — hibernating snakes had abandoned their winter hideouts months before normal. Historians credit the decision to evacuate on the basis of that warning with saving thousands of lives.

While documenting the breeding habits of toads in Italy in 2009, researchers noticed their subjects had disappeared, choosing higher ground over their typical shallow lakebed. Within days, an earthquake hit the area.

Officials at the Smithsonian National Zoological Park in Washington, D.C., observed atypical animal behaviors moments before a quake hit there in August 2010. Nocturnal snakes left their hiding places, apes headed for treetops and flamingos clustered together.

LiveScience.com detailed each of these bizarre incidents in an October 2013 article written after oarfish washed ashore in California. The Japanese refer to the deep-sea-dwelling oarfish as a “messenger from the sea god’s palace” and believe its sighting forewarns of an impending natural disaster.

Debate rages as to whether apparent correlations between animal behavior and natural disasters provide statistically significant predictive tools. For developing countries, and particularly remote Pacific island nations, preserving the practice of recognizing these out-of-the-ordinary animal behaviors — and sometimes those of plants or celestial changes — could provide another layer of warning to move to higher ground or take other precautions to survive a disaster and limit its destruction, historical records reveal.





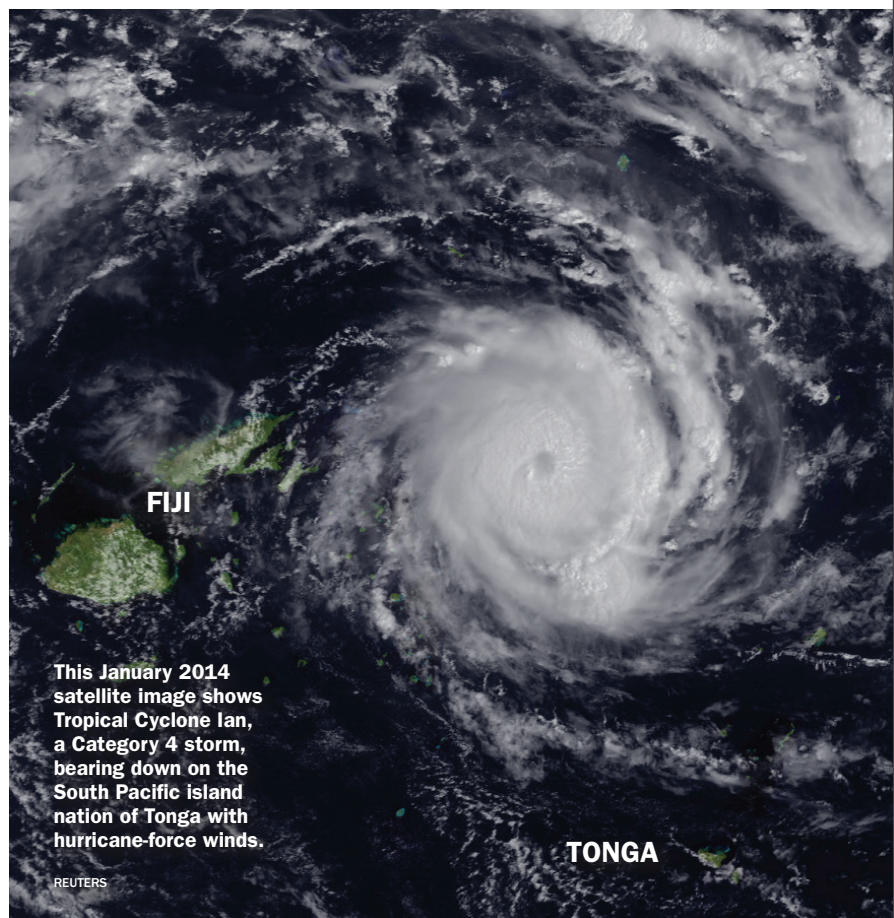
Floodwaters inundate the tourist town of Nadi on the island of Viti Levu in April 2012 as Fiji braced for gale-force winds that were expected to intensify into a tropical cyclone.

AFP/GETTY IMAGES



Fishermen work in the shallow waters near Nuku'alofa, Tonga.

THE ASSOCIATED PRESS



This January 2014 satellite image shows Tropical Cyclone Ian, a Category 4 storm, bearing down on the South Pacific island nation of Tonga with hurricane-force winds.

REUTERS

Australian researcher Ingrid Johnston interviewed villagers in Fiji and Tonga about traditional knowledge for predicting cyclones. They reported more than 15 signs by animals, plants and the sea that indicate bad weather on the horizon. What follows represents a sampling of their accounts.



FRUIT GROWTH: Breadfruit that grows in bunches indicates a cyclone will hit land the following year. New growth on banana plants also changes. Months before a hurricane or cyclone, the young banana leaves point down instead of up.



BIRDS: Larger birds begin flying closer to the ground before a cyclone. Villagers also reported seeing an increased number of birds flying out of the clouds and closer to land before bad weather.



COCONUT LEAVES: In Fiji, a villager reported that elders could tell a cyclone was coming by the way sunlight reflected on coconut leaves.



CORAL REEFS: Villagers in Fiji say they hear the coral reefs “roaring” and “crying” before bad weather hits. In Tonga, the reef turns white when a storm approaches.



WIND: The direction of the wind can provide long- and short-term warnings in Tonga. Wind blowing from the northwest is a sign of a cyclone; wind blowing from the north indicates higher waves as well. In Fiji, the mere increase of wind indicates a storm.



CHICKENS: In Tonga, villagers watch the sleep habits of chickens to know whether a hurricane forecast to hit will affect their island. If a chicken sleeps down and not in the tree, expect a hurricane.



OCEAN CURRENTS AND TIDES: Tides rise and waves grow bigger, moving closer to homes before a cyclone.



SPIDERS: In Tonga, elders say spiders make more webs before a cyclone.

Fiji and Tonga: a case study

Researchers have looked at the integration of traditional and Western scientific knowledge for early warning systems, but few studies exist that concentrate on the actual documentation of traditional knowledge for forecasting cyclones, according to Ingrid Johnston, a researcher studying at the University of Tasmania in Australia. Between 2012 and 2014, Johnston visited Fiji and Tonga several times to investigate how locals use early warning signs to predict cyclones and later shared portions of her findings with *FORUM*.

“The South Pacific is one of the most vulnerable regions in the world due to a range of factors, including the geographical location and socio-economic factors resulting in a high likelihood of extreme events becoming disasters,” including poverty, high dependence on agriculture and traditional subsistence farming, developing nations, population increase and migration within countries to urban areas, and places with a high risk for extreme weather, Johnston said. In fact, the World Bank lists three South Pacific countries among the world’s top 12 in terms of vulnerability to storms: Samoa at No. 8, Tonga at No. 9 and Fiji at No. 12, according to 2009 data.

The U.N. International Strategy for Disaster Reduction lists four key elements of a “people-centered” early warning system: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received.

Johnston uncovered more than 15 traditional warning signs used in Fiji and Tonga, with locals saying they look first to the traditional signs to know whether to prepare for a cyclone.

Honey bees, for example, give a nod to a coming cyclone by how they build their nests. If bees and hornets build nests closer to the ground, locals believe that indicates a cyclone. “And if they are hiding up the tree, there will be no cyclone,” an unnamed villager in Tonga told Johnston. “They are telling it by how they live.”

The heavens have a way of warning villagers, too. In Tonga, for example, an incomplete rainbow means prepare for bad weather. Traditional knowledge like this rests mainly with elders of the communities studied, while the younger generations rely mostly on technological warnings through radio, television or SMS alerts on cell phones.

“However, with mobile phone reception on these islands being dependent upon standing under the right tree or on this particular rock, the importance of traditional knowledge is likely to remain for some time to come,” Johnston said.

Johnston doesn’t suggest people choose one forecasting tool over the other. On the contrary, combining their use could help reduce vulnerability, she said.

While Western scientific warnings are able to provide information about the likely severity of an approaching cyclone, long-range predictions remain a challenge. “Traditional knowledge can warn of a cyclone or storm on your particular island but not tell you anything about the severity of it,” Johnston said.



People take shelter in an evacuation center in Fiji in December 2012 as Tropical Cyclone Evan headed their way.

REUTERS

People she spoke with in Fiji and Tonga already practiced integrating the two systems “by using one as a validation of the other,” Johnston said. People also trust both, she said. The radio tells villages to prepare for a cyclone in the area. Natural signs tell villages to prepare for a cyclone to hit their island.

“Properly acknowledged, preserved and formalized, traditional knowledge has the potential to combine with technological warnings and overcome some of the impediments to warnings being recognized, taken seriously and acted upon,” Johnston said. “Locals understand the natural signs, and the understanding may be passed on to those younger people who currently do not have the same knowledge.”

The possibility remains that these “natural” weather indicators are more folklore than actual traditional knowledge, Johnston said. “Certainly, there have been controversies in the past regarding the interpretation of Pacific island culture from anthropological studies.” Still, Johnston asserts the reliability of the traditional warning signs for cyclones based on the consistency in descriptions from Fiji and Tonga.

Evolving technology aids in risk reduction

One of the oldest recorded instances of so-called animal warnings happened in the ancient Greek city of Helike. “All the mice and martens and snakes and centipedes and beetles and every other creature of that kind left the city,” Roman author Aelianus wrote about the 373 B.C. event, according to the LiveScience.com report. “After these creatures had departed, an earthquake occurred in the night; the city subsided; an immense wave flooded and Helike disappeared.”

Today’s technological advances help ensure modern societies don’t face the same fate. Providing accurate warnings — before a disaster — recently became more localized.

As of October 2014, the Hawaii-based Pacific Tsunami Warning Center (PTWC) shifted authority to each country’s national tsunami warning center. “The change is intended to improve the response capability of a country and its sensitivity to local conditions, for example improving response times and reducing the numbers of areas warned unnecessarily,” according to the U.N. Educational, Scientific and Cultural Organization (UNESCO).

The PTWC now plans to provide textual, graphic and statistical information to the national tsunami warning centers to make informed decisions based on enhanced information. “Transition to the new products will place countries in a better position to assess national threats and decide on the best course of action for the protection of lives and infrastructure,” according to UNESCO.

The U.N. said continued improvements to early warning systems and transitioning alert authority to a national level will better inform and protect vulnerable Pacific countries. “The best chance a person has of being safe during a disaster is to know that it is coming,” Johnston said. “Well-positioned and managed evacuation facilities will be empty if no one has time to reach them. The importance of early warning systems is clear. How to translate that need into efficient and effective systems is not always so clear.” However, natural warning systems coupled with evolving technology will likely be reflected in the answer. □

S T A B I L I T Y

in the

Indian Ocean

*Cooperation is vital for strengthening security and
unlocking the region's economic potential*

FORUM STAFF



An Australian Sailor searches for debris of the downed Malaysia Airlines Flight 370 in the Southern Indian Ocean in April 2014. AFP/GETTY IMAGES





A crowd in Chennai, India, performs rituals and offers milk on Marina Beach to commemorate the 2004 earthquake and tsunami that killed 230,000 people in 12 Indian Ocean nations. Humanitarian aid and disaster relief missions are examples of how littoral states work together to tackle regional threats. THE ASSOCIATED PRESS

M

ost of the world's oil trade passes through the Indian Ocean. Before ships can sail the open sea, they must navigate through narrow channels, or choke points,

such as the Suez Canal between Egypt and Saudi Arabia, the Strait of Hormuz that divides the Persian Gulf from the Arabian Sea and the Malacca Strait that connects the Andaman Sea with the South China Sea in the Pacific. These maritime corridors present security challenges ranging from piracy to boundary disputes for the Indian Ocean Region (IOR), which with its combined gross national product of U.S. \$6.5 trillion and 2.6 billion population is a key player in the global economy. The world's third largest ocean spans the borders of resource-rich nations in Africa and the Middle East, key shipping routes surrounding Singapore and Indonesia, and the western shores of Australia.

Securing the IOR and ensuring the stability of its shipping lanes and littoral states are key for the future of the region. "The security outlook for the Indian Ocean region is increasingly important for global stability and prosperity because it encompasses a vital and expanding intersection of geostrategic rivalries, economic ambitions, resource competition, environmental management, development challenges and demographic change," Michael L'Estrange, professor at the Australian National University's National Security College, said at the Indian Ocean Naval Symposium in March 2014. Trade, competition for natural resources such as oil and gas, and naval activity will continue to increase, he said, and littoral states must work

together to ensure stability in the region. "New dimensions of security dialogue and cooperation on Indian Ocean issues are clearly necessary," L'Estrange said.

Security Challenges

The Indian Ocean Rim Association (IORA), an organization of 20 member states that seeks to bolster regional cooperation, identified maritime security, territorial disputes, natural disasters and growing competition between India and China as the region's major security challenges. Maritime safety remains the biggest challenge, IORA contends, because the Indian Ocean plays a vital role bridging the East and



Indian officers hoist the Navy flag during the induction ceremony of the INS Kolkata, one of India's newest warships. India seeks to be the net security provider in the Indian Ocean region. THE ASSOCIATED PRESS

West, and its shipping lanes — which now heavily extend into the Pacific Ocean — help power global trade and the world's economy.

"The IOR is at the center of geostrategic and economic seismic shifts currently underway in the world," Mohan Malik, a professor at the Asia-Pacific Center for Security Studies in Hawaii told *FORUM*. "It is now inextricably linked to the Western Pacific via deep linkages



A marine police officer guards a boat at Malaysia's Klang port. Indian Ocean countries are working together to curb piracy, protect merchant vessels and safeguard shipping lanes.

THE ASSOCIATED PRESS

and interdependencies, whether in energy security, nuclear proliferation, trade and markets, or through economic growth and maritime security.”

Eighty percent of the world's oil exports pass through the IOR's choke points. About 17 million barrels of crude oil per day go through the Strait of Hormuz, and 15.2 million barrels per day pass through the Malacca Strait, according to the U.S. Energy Information Administration. Pirates targeting these vessels remain the most immediate threat for freedom of movement on the ocean, according to IORA. Pirate attacks in three of the IOR's major choke points increased in 2014.

Between January and November 2014, pirates hijacked two vessels sailing in the Malacca Strait and boarded another 11

cargo ships or tankers anchored at port and stole cargo, according to the International Maritime Bureau (IMB). In the Singapore Strait, which lies southeast of the Malacca Strait, pirates boarded 25 vessels and stole cargo. In the Strait of Hormuz, pirates attempted an attack on one vessel and fired upon another. Pirates attacked 129 vessels in the Indo-Asia-Pacific region between January and September 2014, and most incidents involved the petty theft of cargo, according to the Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP).

In 2013, pirates attacked only one vessel in the Malacca Strait, nine in the Singapore Strait and none in the Strait of Hormuz. Southeast Asia had 128 piracy incidents

in 2013, the most in the world, with 106 attacks or theft of cargo reported in Indonesia, nine in Malaysia and three in the Philippines, in addition to the attacks in the Malacca and Singapore straits, the IMB said. Africa had 79 reported attacks, with seven in the Indian Ocean off the coast of Somalia, and India and Bangladesh authorities reported 26 piracy incidents to the IMB.

The number of pirate attacks in the Indian Ocean off the coasts of India and Bangladesh has fluctuated since 2009 when 30 incidents occurred, dipped to a five-year low with 16 in 2011 and rose to 26 in 2013, the IMB said. Overall, 264 pirate attacks in international waters occurred in 2013, the lowest recorded since 2009, when 410 incidents occurred.

Some Indo-Asia-Pacific nations have responded to piracy threats by joining ReCAAP, a multilateral organization established in 2006 that focuses on maritime security and promotes and enhances cooperation against piracy. Australia, China, India, Japan, the Philippines and Singapore are among its 20 member nations. The U.S. joined ReCAAP in September 2014 and supports multilateral efforts in patrolling vital sea lanes, The Diplomat online magazine reported in October 2014.

ReCAAP serves as a platform to exchange information among its members to improve



Indian Prime Minister Narendra Modi, left, chats with Japanese Prime Minister Shinzo Abe in Tokyo in September 2014. The prime ministers held formal talks to enhance security and cooperation between the two nations. AFP/GETTY IMAGES

response to piracy threats, the organization said on its website. ReCAAP also promotes capacity-building efforts that enhance members' capabilities in combating piracy and cooperates with governments and militaries on joint exercises.

For example, ReCAAP officials visited Vietnam in September 2014 to improve information sharing between the organization and the Vietnam Coast Guard and focus on the challenges of securing the country's ports and anchorages, ReCAAP noted

BAY of BENGAL

Dispute Resolved

REUTERS

A United Nations court awarded Bangladesh nearly four-fifths of an area sprawling over 25,000 square kilometers in the Bay of Bengal, ending a dispute over a sea border with India that has ruffled ties between the neighbors for more than three decades.

The verdict in July 2014, binding on both countries, opens the way for Bangladesh to explore for oil and gas in the Bay of Bengal, the site of important energy reserves.

"It is the victory of friendship and a win-win situation for the peoples of Bangladesh and India," Bangladeshi Foreign Minister Abul Hassan Mahmood Ali said at a news conference announcing the ruling. The dispute had hampered the economic development of both countries for more than 30 years, he added.

India also welcomed the judgment, reflecting new Prime Minister Narendra Modi's focus on building closer regional ties.

"The settlement of the maritime boundary will further enhance mutual understanding and goodwill between India and Bangladesh by bringing to closure a long-pending issue," India's Ministry of External Affairs said in a statement. "This paves the way for the economic development of this part of the Bay of Bengal, which will be beneficial to both countries."

Bangladesh, with a population of 160 million and strong economic growth, has battled supply shortages to keep its gas-fired power plants and industries running.

The award brings to an end an arbitration process Bangladesh started in 2009 under the U.N. Convention on the Law of the Sea over disputes with Burma and India. The Burma dispute was settled in 2012 after arbitration at the International Tribunal on the Law of the Sea in Germany. In that dispute, Bangladesh won more than 118,813 square kilometers of waters comprising territorial seas and an exclusive economic zone extending out 200 nautical miles.



PIRACY in the Indian Ocean Region

(Actual and attempted attacks)

	2014	2013
Bangladesh	21	12
India	13	14
Indonesia	100	106
Malacca Strait	1	1
Singapore Strait	8	9
Somalia	3	7
Tanzania	1	1

FORUM ILLUSTRATION

Source: International Maritime Bureau

in its third quarter report published in October 2014. ReCAAP members also participated in a meeting of the Asian Shipowners' Forum in September 2014 to share information on how to report piracy incidents and introduce the ReCAAP Focal Points smartphone app, a free download that allows users to make timely reports to the organization.

Territorial disputes also present another challenge. For example, India and Sri Lanka have an ongoing dispute over fishing grounds in the Palk Strait that lie between the two nations. India and Bangladesh once fought over a 23,000-square-kilometer area in the Bay of Bengal, but the dispute has since been settled (see sidebar on page 35). The emerging competition between China and India, however, is now seen as a tangible challenge to stability in the IOR, experts say.

"Because both the Middle East and Africa are richly endowed with natural resources from hydrocarbons to mineral and metals, China and India are competing for influence with IOR littoral states," said Malik, editor of the book *Maritime Security in the Indo-Pacific: Perspectives from China, India and the United States*. "China is giving liberal economic aid to Indian Ocean nations,

signing friendship pacts and security assistance agreements, and building ports, signal intelligence facilities and special naval-access arrangements along the strategic sea lanes."

Meanwhile, India has sought alliances outside the IOR, deepening its ties with Japan, which has its own rivalries and disputes with China. Indian Prime Minister Narendra Modi met with Japanese Prime Minister Shinzo Abe in September 2014, and both pledged to enhance security and economic cooperation between the two nations, *The Wall Street Journal* newspaper reported. "This region is fast becoming a chessboard of strategic rivalries and maneuverings of great powers," Malik said.

The Need for Cooperation

Old rivalries, territorial disputes and littoral states operating in "pursuit of their own national objectives" present barriers to effective regional cooperation, IORA noted in its March 2014 workshop report on stability in the IOR. Regional cooperation is needed to secure shipping lanes and allow littoral states to reap potential economic benefits, IORA reported.

"The first barrier is the lack of coherence in regional cooperation," IORA said in its workshop report. "Discussions initiated by various regional and sub-regional groupings on security cooperation in the Indian Ocean revolve mainly around capacity building, but these groupings do not necessarily coordinate or cooperate with one another."

Indian Ocean interests are diverse and fractured, Malik said. For example, the Gulf Cooperation Council of Arab states "is barely effective in an unstable region" surrounding the Persian Gulf, while the South Asian Association for Regional Cooperation promotes cooperation only among South Asian nations. Littoral states' competing interests limit IORA's effectiveness, Malik said. "Despite its crucial role in providing maritime connectivity with other oceans and continents, the Indo Pacific is yet to evolve into a vibrant regional community. No multilateral forum aimed at promoting region-wide maritime cooperation has emerged."

Although IORA has limited resources, in terms of budget and staff, it hopes to strengthen its influence by creating working groups to come up with recommendations that promote cooperation, the workshop report said. The initiatives include identifying areas suitable for sparking regional cooperation, such as counterterrorism, and creating a mechanism for humanitarian assistance and disaster relief (HADR), such as a regional early warning systems for typhoons and tsunamis.

IORA can achieve its goal as a facilitator of regional cooperation if it focuses on benchmarks and timelines, said Australian National University professor L'Estrange. "For

“While we are a diverse group, we have much in common, including a shared commitment to the peaceful, sustainable use of the Indian Ocean.”

Graeme Wilson, *former Australian high commissioner to South Africa*



Caps of naval officers from different countries adorn a table during the opening of the Indian Ocean Naval Symposium in Cape Town, South Africa, in April 2012. The symposium gathers 30 countries to discuss navy-to-navy cooperation and maritime security. AFP/GETTY IMAGES

example, a working group of the rim association could be focused exclusively on maritime energy security, with the goal of developing practical steps to achieve a cooperative maritime security regime in relation to Indian Ocean energy flows and ocean management,” he said.

Several examples of cooperation have already occurred, however, and provide hope for the future. HADR is a common objective that Indian Ocean states handle particularly well. The Indian Navy took the lead in humanitarian efforts after the 2004 earthquake and tsunami devastated the region, and most island states, which lack capacity in HADR, rely on countries such as India, Australia, Singapore and Japan for assistance, Malik said. IOR navies cooperated again in early 2014 during search and rescue operations for Malaysia Airlines Flight 370, which likely crashed in the Indian Ocean.

China, India and Japan also work together to curb piracy. In January 2012, the three navies shared information on their patrol movements and escort schedules to cooperatively

protect merchant vessels in the Indian Ocean, according to a May 2014 East Asia Forum report, “Indian Ocean Could Get Choppy Without Regional Security Cooperation.” China and Japan contend that “the main task of their anti-piracy efforts is to look after their own merchant vessels,” the report said. “The Indian Navy asserts that it aims to provide assurances to both Indian and foreign merchant vessels alike. Yet all three navies have greatly contributed not only to the protection of their own merchant fleet but also to securing the global common that is the Indian Ocean.”

A Stable Future

The IOR’s size and diversity presents the biggest hurdle for true regional cooperation, experts say. “The geographical scale of the IOR and the diversity of its littoral states do not make it amenable to strategic control by any single government,” L’Estrange said. “The region is simply too vast, too diverse in its economic needs and priorities and too disparate in its strategic outlooks to accommodate a one-size-fits-all approach to security architecture.”

IORA, however, realizes that continuing dialogue among its member states could spark initiatives that lay the groundwork for cooperation in the future. IORA hosted a seminar on enhancing maritime security cooperation in Durban, South Africa, in July 2014. Representatives from its member states stressed the importance of the Indian Ocean as a global commons that could unite rather than divide.

“We share with all Indian Ocean littoral states, and key extra-regional countries, an interest in addressing the ongoing challenges that face the region,” Graeme Wilson, the former Australian high commissioner to South Africa, said in a keynote address. “The stability and prosperity of the Indian Ocean is increasingly important globally. While we are a diverse group, we have much in common, including a shared commitment to the peaceful, sustainable use of the Indian Ocean.” □



PREVENTING PANDEMICS



IMPROVED
PROTOCOLS,
UPDATED
PREPAREDNESS
PLANS AND
COOPERATION
HELP CONTAIN
DEADLY
OUTBREAKS IN
THE INDO ASIA
PACIFIC

Infectious particles of the H7N9 bird flu virus emerge from a cell. The virus, first identified in China, infected 450 people and killed 165 from February 2013 to June 2014. THE ASSOCIATED PRESS | Inset: A quarantined medical worker in Beijing, China, wears a face mask to protect against SARS. The 2003 SARS outbreak infected more than 8,000 people and killed 775. AFP/GETTY IMAGES

An elderly farmer checked into a Shanghai hospital in February 2013, wracked with coughing and wheezing fits. He soon contracted a fever that inflamed his brain, and he died a week later of what appeared to be a severe form of pneumonia, according to the World Health Organization (WHO). Doctors treated two more people with similar symptoms at the same hospital that month, and both died just as quickly. Health officials discovered the patients succumbed to a strain of avian influenza known as H7N9. It had jumped, for the first time, from fowl to humans, according to WHO officials.

The Chinese government, which struggled to contain an outbreak of severe acute respiratory syndrome (SARS) 10 years earlier that spread to more than 35 countries, responded quickly to keep H7N9 casualties low. Chinese scientists expediently posted H7N9's genetic sequence and published a detailed study in the *New England Journal of Medicine* in 2013. By quickly reporting the findings, the Chinese raised awareness of the new bird flu strain and alerted other nations to the virus' symptoms. The Chinese government's rapid response to H7N9 helped keep the mortality rate to 165 of 450 confirmed cases reported through June 2014, WHO reported. The 2003 SARS outbreak afflicted 8,273 people and killed 775, by WHO's count. National and local Chinese health departments continue to monitor suspected cases of H7N9 and other strains of avian flu and issue public advisories through health department websites or state-run news outlets.

"We will remain vigilant and maintain liaison with [WHO] and relevant health authorities," a spokesman for the Hong Kong Department of Health said in a September 2014 advisory. "Local surveillance activities are ongoing according to the WHO's recommendations. Suspected cases will be immediately referred to public hospitals for follow-up investigation."

Lessons learned confronting sporadic outbreaks over the past several decades have enabled governments and militaries in the Indo-Asia-Pacific region to act quickly and use improved protocols to identify, track and contain new deadly viruses and other pathogens as well as known ones that are resistant to drug treatments. No entity can prevent all fatalities, but officials strive to spot emerging infectious diseases and suppress their spread before they become full-blown pandemics. Multilateral cooperation remains essential to ensure security and to prevent communities from descending into chaos, especially as the potential for new pathogens to emerge continues to grow.

CAUSE AND EFFECTS

Development, deforestation and fluctuating weather patterns are increasing the risk that new pathogens can emerge in large part because they bring people and pathogenic hosts closer together. Wild animals can serve as reservoirs of diseases, which can spread to humans when they hunt bats or monkeys for food, for example. Insects such as mosquitoes can serve as disease vectors as well.

"A country that has highly diverse bird and mammal species also likely harbors a high number of vectors and reservoirs, which are essential elements for transmitting infectious diseases," Angelina Galang, director of the Environmental Institute of Miriam College in the Philippines, said in March 2014, according to the science news website SciDev.net.

At the same time, rapid population growth encroaching on once-pristine wilderness and loss of biodiversity through development and trade can contribute to the transmission of previously undiscovered infectious diseases, studies reveal. Researchers have now linked new and recurring disease outbreaks in the Indo Asia Pacific to the "rapid and extensive erosion of that diversity," according to a February 2014 study in the science journal *PLOS One*. Researchers

are still untangling the complex interactions behind the correlation. Loss of genetic diversity in an animal population could render hosts more susceptible to viruses, for example.

Moreover, growing urban populations and development also increase the risk that infections will spread more rapidly. Highly mobile populations, tourists and business travelers, for example, could contract a deadly pathogen and then return home to spread the disease in crowded cities.

One of the world's deadliest outbreaks in recent years did not occur in the Indo-Asia-Pacific region but re-emerged in West Africa. The Ebola virus, transmitted through fruit bats, infected more than 15,900 people and claimed the lives of about 5,600 between March and December 2014, according to data from the Centers for Disease Control. The cost of containing the terrifying virus — which causes vomiting, diarrhea and uncontrollable bleeding and was first recognized in 1976 in the Democratic Republic of the Congo — topped U.S. \$1 billion and showed the importance of multilateral cooperation in preventing Ebola from turning into a global pandemic. "Patients can beat this disease. And we can beat this disease. But we have to stay vigilant. We have to work together at every level," U.S. President Barack Obama said in an October 2014.

Malaysia sent 20 million latex gloves to health workers in the hardest-hit West African nations, addressing a critical need and reducing the risk of Ebola spreading among doctors and nurses, the Malaysian government announced in September 2014. "Malaysia can make a unique and vital contribution to the fight against Ebola because we are one of the biggest manufacturers of rubber gloves," a government spokesman said, according to Reuters. "We hope this contribution will prevent the spread of Ebola and save lives."

Other countries that lent humanitarian aid to Africa included

China, which sent a mobile lab and 174 medics; Japan, which offered a stockpile of an experimental drug that could treat victims; and the United States, which deployed 3,000 troops in September 2014 to build treatment centers, train health care workers and establish a military command center to coordinate containment with local governments.

THE ROLE OF MILITARIES

When an outbreak occurs, militaries play a crucial role in coordinating with government agencies to maintain security and bolster logistical support for humanitarian aid.

Appropriate use of the vast resources and capabilities intrinsic to military forces is key for successful disaster response, according to the most recent pandemic response plan developed by the U.S. Pacific Command (PACOM). The plan, “Pandemic and Emerging Infectious Disease,” grouped outbreaks into the same category as natural disasters, noting that pandemics disrupt society as much as major typhoons or earthquakes.

An increasing number of militaries in the region, including both U.S. combatant commands, take a whole-of-government approach to enhance cooperation with a nation’s government agencies and military forces in times of crisis and calm. When it comes to combating pandemics for the long term, militaries have built civic partnerships to support studies of infectious diseases across the region to enhance surveillance and identification techniques and to develop vaccines and treatments to control the spread of diseases before they become threatening.

Royal Thai Army and U.S. Army researchers at the Armed Forces Research Institute of Medical Sciences (AFRIMS) in Bangkok, Thailand, have been working together to combat tropical diseases for roughly 50 years. AFRIMS has made key advancements in the study of dengue fever and development of malaria and HIV vaccines, among other achievements. The institute

recently launched a program to monitor new, emerging disease threats as a part of a Global Emerging Diseases Surveillance system.

Researchers at the Cambodian National Institutes of Public Health and U.S. Naval Medical Research Unit 2 (NAMRU2), based in Phnom Penh, study infectious diseases that impact militaries in the region, ranging from avian flu to drug-resistant varieties of malaria. Researchers from Vietnam, Laos, Singapore, Philippines and Thailand also work with NAMRU2.

Vietnam and Cambodia have worked with PACOM to train military and civilian medical personnel in the countries’ provinces. PACOM and its partners continue to develop protocols for protecting Soldiers and civilians in infected areas and train rapid response teams to investigate the first signs of a viral outbreak. Meanwhile, the U.S. Navy hospital ship *Mercy* participates in humanitarian relief missions in the Indo Asia Pacific and stands ready with its 1,200 medical personnel to render aid to partner nations. The Chinese medical ship *Peace Ark*, with its complement of 328 crew members and 100 medical personnel, also conducts humanitarian aid missions in the region.

These efforts, along with annual joint exercises, assist the region’s militaries in preparing for the potential “large-scale refugee situations, increased criminal activity, border incursions, and possibly even escalation of existing local, national, and/or regional conflicts” that disease outbreaks can spark, PACOM and AFRICOM outlined in their plan.

SOCIAL STIGMA

Before international aid arrived in Africa, the Ebola outbreak sowed

SUPPORTING CONTAINMENT

Soldiers play an integral role in maintaining security and saving lives when pandemics arise. Military forces involved in pandemic response operations:

- Assist civil authorities in enforcing quarantines
- Support hospitals and clinics with military medical assets
- Bolster local police in law enforcement operations
- Secure national entry points, such as airports and seaports
- Help civil authorities and nongovernmental organizations with refugee accountability, transportation and life support
- Provide logistics support for the procurement, storage and distribution of critical commodities
- Transport and secure relief supplies
- Maintain communication networks if civilian communications fail
- Assist local authorities in operations management such as situation monitoring and reporting
- Continue performing traditional security missions

Source: U.S. Pacific Command and U.S. Africa Command

fear, devastated communities and exposed the difficulties of containing a pandemic in nations with limited capacity and resources. Miscommunication ran rampant because the populace first believed the sick and dying suffered from a new unidentified illness. Citizens mistrusted medical workers wearing full-body hazardous materials suits, and mobs attacked the homes of some infected people in Liberia, The Associated Press reported in April 2014.

The social stigma surrounding Ebola poses obstacles and contributes to the virus’ spread, WHO officials said in an August 2014 situation assessment report. Because Ebola has been perceived to have no cure, families hid infected relatives in their homes so they could die peacefully, instead of taking them to treatment centers, WHO said. Some communities view isolation wards as incubators for the virus. People diagnosed with Ebola fear rejection. In rural villages, relatives buried bodies without notifying health officials.



Health workers in protective gear inspect a wholesale poultry market in Hong Kong in January 2014. Chinese officials responded quickly to contain the outbreak of a new bird flu strain discovered in 2013. THE ASSOCIATED PRESS

Similarly, the stigma cast by pandemics presented challenges to containing SARS in China in 2003. Chinese authorities ordered doctors to hide SARS patients from a visiting WHO team in an attempt to downplay the seriousness of the outbreak, *The Washington Post* newspaper reported in April 2003. Doctors placed about 30 patients in ambulances and drove around the city to avoid detection.

PREVENTING PANDEMICS

As the Ebola and H7N9 outbreaks showed, governments and militaries must coordinate efforts and collaborate with other nations to prevent pandemics and bolster security. The Chinese government's effective response to the new bird flu strain limited casualties, experts contend. In Africa, military forces provided additional training to medical workers and calmed civil unrest to contain Ebola. Much work remains, however, to protect populations from the persistent dangers of infectious diseases.

Margaret Chan, WHO's director-general, said China's resources stopped a widespread H7N9 pandemic, a

factor that Guinea, Sierra Leone and Liberia lacked in battling Ebola. H7N9 occurred in a country that "had capacity, which had the leadership and which have the people. But [with Ebola], these three countries we're talking about ... have very challenging conditions," Chan told *The New York Times* newspaper in September 2014.

Countries are working together and with intergovernmental agencies to bolster that capacity. Thailand partnered with WHO to establish the National Influenza Centre to track bird flu and test samples from all Indo-Asia-Pacific nations, *The Economist* magazine reported in April 2013. Shanghai monitors 15 categories of infectious disease at 5,700 sites in China, and the Mekong Basin Disease Surveillance Network encourages collaboration from countries in that subregion to track SARS, bird flu, swine flu and other diseases, the *Bangkok Post* newspaper reported in September 2014. Labs in the region, including AFRIMS, have improved technology that rapidly sequence a pathogen's DNA for quick identification, *The Economist* reported.

Twenty-seven Indo-Asia-Pacific nations currently have

preparedness plans to identify and contain bird flu strains, according to the Asia-Pacific Alliance for the Control of Influenza. Singapore honed its plan in 2014, citing new surveillance systems in laboratories, hospitals, veterinary clinics and communities that detect pathogens with "pandemic potential and to mitigate consequences when the first wave hits." The plan noted that Singapore's Homefront Crisis Management System is the lead agency in coordinating containment and quarantine procedures for the region.

FUTURE OUTBREAKS

Given the realities of globalization and world population changes, researchers expect new infectious agents deadly to humans to continue to emerge and known pathogens continue to develop resistance to drug treatments. Between 1940 and 2004, WHO, for example, identified 154 new viruses, two-thirds of which were transmitted from animals to humans.

WHO contends there is no evidence that outbreaks are getting more frequent, but countries are "better at identifying them," WHO spokesman Tarik Jasarevic told Singapore-based Channel NewsAsia in August 2014.

Governments and militaries must continue to work together to mitigate the emergence of new pathogens, increase infectious disease surveillance and disease prevention efforts and be prepared to respond when outbreaks occur, experts say.

"We've made good headway against a number of these diseases, but it's an illusion to imagine that we can live in a microbe-free world," Tony McMichael, a population health professor at Australian National University, told ABC News Online in September 2014. "Frankly, they've been around a lot, lot longer than we have, and they're very fleet-footed genetically; they adapt very quickly to changing circumstances. We are going to have to be on our mettle to keep on top of this in a world that's increasingly interconnected." □

THE EVOLUTION OF THE

ASIAN CENTURY

{ DATO[®] SRI MOHD NAJIB BIN TUN ABDUL RAZAK
MALAYSIAN PRIME MINISTER }



Under Prime Minister Shinzo Abe's leadership, the Japanese economy has burst back into life, with strong early promise. Now Japan looks set to usher in a new period of sustained growth — and set a new standard for reform.

Japan's reputation for economic leadership is well known and well deserved. In the early 1980s, under Prime Minister Mahathir bin Mohamad's leadership, Malaysia began a "Look East" policy, turning to Japan and Korea for inspiration, helping to train the next generation of Malaysian students and business leaders in the East Asian way.

Not only has the Look East policy continued under my tenure, but in line with our transformation program for Malaysia, it's moved into a second phase, focusing on high-technology and highly skilled workers — helping us move our economy up the value chain and onto high-income status.

Back in the 1980s, things were different. Asia was rising, but the truly explosive growth was still to come. The emergence of the "tiger" economies and the reforms in China showed the world that something was stirring in Asia. It was the 1980s that the phrase "Asian century" was coined. For many observers, Asia was still tomorrow's story.

Tomorrow has come. Economically and politically, Asia is now at the heart of world affairs. The most populous region on Earth is also one of the most dynamic — and increasingly, one of the more contested.

Remarkable economic development has focused global attention on Asia's prospects. When the recent financial crisis shook confidence in established markets, more companies — and countries — began to "look East."

This growing sense of economic momentum has also raised the geopolitical stakes, as emerging and established powers vie for influence in Asia.

This trend shows no sign of abating. Within 20 years, Asia is set to account for more than 40 percent of global gross domestic product (GDP), and

60 percent of the world's middle class. This phase of growth will be accompanied by growing global stature, influence — and interest. We must come to terms with life in the spotlight.

Asia's economy will remain in focus; our internal dynamics will be under the microscope. There will be no return to Asia's age of isolation. We are one of the new centers of gravity in a newly multipolar world.

For the Asians of tomorrow, what matters is how we respond to this scrutiny: whether we build strong and sustainable economies or simply inflate more bubbles; whether we show security leadership or allow internal tensions to derail the peace upon which prosperity depends.



A Malaysian Royal Army Regiment marches before the arrival of Malaysia's King Abdul Halim Mu'adzam Shah during the king's official birthday celebration in Kuala Lumpur in June 2014. AFP/GETTY IMAGES

Economic Challenges

There are a number of trends that will determine Asia's continued success. The first is economic integration: the removal of trade barriers and cooperation on monetary and fiscal policies.

According to the research firm McKinsey Global Institute, in 2012, cross-border trade accounted for a third of global GDP. By 2025, that figure could reach half. In the past 20 years, emerging economies have more than doubled their share of cross-border goods, services and finance but are still lagging far behind developed markets.

For Asian economies, integration offers significant benefits, including the ability to negotiate together. It can increase the power of middle nations and raise living standards for all. It can help developing nations climb the ladder and ensure fewer citizens are left behind, as common standards and entry requirements filter back into domestic policy.

Asian states must look to build stronger, more lasting economic connections — both within our region and with the outside world. That is why I strongly support the push to create a single market in Southeast Asia. The Association of Southeast Asian Nations [ASEAN] economic community will support jobs and growth for more than half a billion people and help ensure Southeast Asia's growth spills across into all member states.

In an interdependent global economy, the benefits of greater cooperation extend far beyond Asia's borders. Malaysia looks forward to the completion of the Trans-Pacific Partnership [TPP] on terms acceptable to us. The TPP will strengthen our ties with the wider world; as will the Regional Comprehensive Economic Partnership, which will bring three of the largest economies into the world's largest trading bloc.

For governments and businesses, trade agreements such as these often have a visible logic. We see the negotiations unfold, often over years. We see the compromises that are made and the benefits that are secured.

For ordinary people, they can be less clear-cut. The long-term benefits can be less tangible. Complexity can be mistaken for conspiracy, and the risk of public disaffection can grow. In an age of increasing integration, we must ensure we take people with us — explaining the process and describing the benefits more clearly. Education



**FOR MANY OBSERVERS,
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TOMORROW HAS COME.
ECONOMICALLY AND
POLITICALLY, ASIA IS
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WORLD AFFAIRS.**

and engagement can help address public concerns and win support for agreements that can unlock growth and create higher paying jobs.

To prevent the buildup of risk, we must also ensure that reforms to our financial and regulatory regimes keep pace with innovation in the financial sector. In the next decade, Asia's financial sector is projected to grow by 50 percent, accounting for almost a third of global banking sector assets. Yet, as the International Monetary Fund points out, Asia's financial integration is not keeping pace.

As Asian firms "build out" beyond their borders, and Asian investors seek new opportunities, they will be bound more closely into the global economy. There will be new regulatory challenges — such as the growth of shadow banking — and new problems of scale. As Asian capital stretches into other emerging markets, financial supervisors must be ready to address a much wider range of cross-border risks.

We must also focus on the reforms needed at home. As the Hong Kong Monetary Authority has pointed out, despite a considerable pool of savings, and strong inflows of capital, some Asian infrastructure projects struggle to attract investment due to political, legal and governance risks. Stronger credit, risk management and corporate governance norms can make it easier to secure foreign capital. These must be complemented by a commitment to institutional reform, to boost business and public confidence.

These reforms must be undertaken with an eye on the big picture: Asia's changing role in the world economy. For many years, emerging Asia's development model was based on a trade surplus with rich-world markets. Rebalancing is now underway, as our nations grow richer and our labor costs rise. Some Asian economies are focused on building domestic demand, laying the foundations for more independently sustainable growth.



**Left: Malaysia Prime Minister
Dato' Sri Mohd Najib bin Tun
Abdul Razak** AFP/GETTY IMAGES

**A Malaysian woman visits the
Magic of the Night carnival in
Putrajaya in June 2014. Malaysia
declared 2014 as "Visit Malaysia"
year to boost its tourism industry.**

AFP/GETTY IMAGES



A Malaysian policeman guards a security checkpoint in Lahad Datu.

AFP/GETTY IMAGES



Alongside macroprudential policies, this approach will help cushion us from the near-term problems, such as the ongoing effects of sluggish growth in established markets, the withdrawal of U.S. stimulus, while also preparing our economies for the next phase of development. They will pave the way for Asia to play a greater role in shaping the global financial architecture, for the ultimate benefit of our citizens. Such structural changes take time and commitment. They can be socially disruptive, but the reward is a stronger and more secure economic future.

Security Challenges

The second trend we must come to terms with is inequality.

Over the past few years, the growing gap between rich and poor in developed economies has become a pressing policy issue. This is not just the battle cry of the “Occupy Wall Street” protesters: Many research institutions have pointed to the corrosive effect of structural inequality.

A little inequality encourages individuals to work hard and innovate; an unequal system, however, creates hollow economies, where wealth and opportunity are kept for the few, at the expense of the many. Excessive inequality has serious — and avoidable — effects on health, education and life outcomes. When soaring GDP outstrips living standards, people feel they do not have a stake in their nation’s economic success. That in turn undermines social

progress and threatens stability.

With rapid growth at a time of globalization and technological change, emerging Asia is particularly exposed to widening inequality. Over the past two decades, eight out of 10 Asians found themselves living in areas where income inequality is rising, not falling. While inequality has narrowed in emerging regions such as Latin America, it has widened in Asia. As the Asian Development Bank has pointed out, had inequality stayed static, an extra 240 million people would have been lifted out of poverty.

Behind the headline growth figures, it is clear that Asia’s future success depends on broader and more diverse economic development. For Asia to truly prosper, we must give our citizens greater equity, as well as greater equality.

We must invest more in public goods such as education and health, increasing access to quality education and narrowing the divide between urban and rural health outcomes. It means strengthening social safety nets and deploying targeted subsidies that support the poor at the point of need. It means encouraging the private sector to do its part, with corporations providing labor with flexibility, training and support. It also means building more balanced economies, with higher quality jobs and more even growth spread across sectors.

It also requires a lasting commitment to the fight against corruption. Corruption suppresses meritocratic

opportunity, undermines social cohesion and eats away at people's confidence in the state. Tackling corruption is not the work of a year or even a decade, but it can and must be done. Government procurement should be reformed to introduce open bidding, bringing transparency to a process often blighted by graft. Strengthening independent anti-corruption institutions and increasing prosecutions for both bribe takers and bribe givers can help change attitudes, even when corruption is deeply rooted.

A Strategic Response

Responding to these two trends — integration and inequality — will be critical. The changes I have spoken about will not always be easy; they require the investment not just of resources but of political will. Difficult conversations will be had. In my country, for example, where income inequality remains a concern, we are working to find the right balance between affirmative action and individual opportunity.

With courage and foresight, however, we can deliver a stronger economic future for Asia. This future will not be assured unless we deliver the security and stability on which economic success depends.

To do so, we must manage our own rising influence while responding to more intense outside interest in Asian security matters. We must make headway on nonstate threats such as terrorism and piracy and act on the “new security” issues such as climate change. We must prepare to play a new leadership role in global security issues.

Peace Dividends

First and foremost, we must ensure that the rise in Asian military power delivers peace, not instability.

Over the past decades, Asia's strong economic growth has obscured a military buildup that is almost as strong. In 1988, Asian defense spending constituted 8 percent of global military expenditure. By 2012, that figure had risen to 20 percent. In the past 25 years, overall military expenditure has grown by 187 percent.

Countries have every right to defend themselves. Regular arms replacement programs aside, this trend indicates deeper concerns about security and conflict — concerns that could swiftly become self-fulfilling. To address this risk, we should reject the siren song of competitive armament and seek wherever possible to strengthen the multilateral and diplomatic ties that check instability.

We should also redouble our commitment to negotiation. Confronted with complex disagreements between states, Asia must place its trust in diplomatic solutions. We should heed the fundamental principles on which good diplomacy is conducted: sovereign equality, respect for territorial integrity, peaceful settlement of disputes and mutual benefit in relations.

We must affirm our commitment to rule-based solutions to competing claims. International law — and

not economic or military coercion — should guide the resolution of disputes over resources.

Asia can explore ways to make a bigger contribution to global security challenges. On nonproliferation, for example, ASEAN has adopted a comprehensive treaty, the Southeast Asian Nuclear Weapon-Free Zone. We should also make a concerted effort to implement and enforce strategic trade controls to cut the risk of dual-use goods.

Our regional agreement on piracy is cited as a strong example of regional cooperation by the International Maritime Organization, which seeks to replicate it elsewhere. The same principles — of sharing information and building capacity — could be applied to anti-terrorism initiatives, which, despite some successes, have sometimes lacked the coordination needed to be truly regional.

On peacekeeping and conflict resolution, Asian nations are already ramping up their involvement in the promotion of global peace. Malaysia, which has already played an active role resolving regional conflicts, is bidding for a non-permanent seat on the United Nation Security Council for 2015-2016. Japan has made peacebuilding one of its main diplomatic priorities. South Korea has markedly increased its peacekeeping and post-conflict work, and many ASEAN nations — such as Vietnam, which will join U.N. operations in 2015 — are looking to play a more active role.

This is driven partly by pragmatism: We have seen from the rise of nations that growth in influence and hunger for resources can bring new tensions and exacerbate old ones. It is also about acknowledging that with rising influence comes rising responsibility; that for Asia to continue to prosper in a stable global security environment, we must play our part not just in the enforcement of international norms, but in their creation, too.

Asian Shift

By laying the foundations for greater Asian engagement in the international security agenda, and preparing our economies for more integrated and sustainable growth, we are recognizing that our position in the world is changing.

As we leave behind the era of single-hyperpower dominance, as the global economy becomes more connected and as nations converge around democratic market liberalism, a broader policy approach is needed. Today, more than ever, consensus, cooperation and constructive engagement are the basis for success.

Thirty years after it was proposed, the Asian century is upon us. By reforming at home, and assuming a greater international role, we can ensure it brings stability, prosperity and growth. □

This article was excerpted from the keynote address on May 22, 2014 in Tokyo, Japan, to the 20th International Conference on the Future of Asia attended by political leaders, including many heads of governments, and top business executives from across the Indo Asia Pacific. It has been edited for clarity and style for this format.



President of Mongolia Ts. Elbegdorj thanks participants at the closing ceremony of Khaan Quest 2014.

KHAAN QUEST 2014

PEACEKEEPERS FROM 24 NATIONS TRAINED TOGETHER, FORGING STRONG FRIENDSHIPS UNDER THE MONGOLIAN BLUE SKY

COL. GONCHIGDORJ NYAMDORJ

PHOTOS BY M. MUNKHZORIG



Despite several hot and rainy days, more than 1,200 peacekeepers from 24 countries trained together and forged strong friendships during the 12-day Khaan Quest 2014 (KQ14) exercise, designed to promote regional peace and security. Participating service personnel from different countries may meet and serve together again during peacekeeping missions throughout the world.

“I am fully aware that peacekeepers have been performing their duty under unexpectedly risky conditions, including inclement weather,” Mongolian President Ts. Elbegdorj said during closing ceremonies. “Thus, this duty assignment is not easily accomplished. I take this opportunity to emphasize that I am proud of your commitment to fulfilling your duties with great dedication and a Soldier’s steely resolve.”

The Mongolian Armed Forces hosts the annual multinational exercise KQ14, which is co-sponsored by the U.S. Army Pacific. The training event, marking its 12th anniversary, ran from June 20 to July 1, 2014.

During the exercise, Soldiers and Marines learned peacekeeping operational techniques and shared experiences. In addition, military doctors from various countries ministered to civilians of the 1st Khoroo in the Songinokhairkhan district. U.S. veterinarians organized training sessions with their counterparts from the Mongolian Armed Forces and Border Troops to exchange professional know-how. International construction crews and engineers set up the water distribution system at the 4th Khoroo of Songinokhairkhan and renovated the 114th kindergarten facility in the Bayangol District. “Just as we did in Afghanistan, we are working together for humanitarian aid,” said Mongolian construction Sgt. G. Dorjpalam.

These complex humanitarian activities carried out in Ulaanbaatar are but some of the exercise’s commendable accomplishments. “One of the great things about Khaan Quest is you get to see all the militaries from around the world, not even just as much as their tactics, techniques and procedures, but as well as their basic mentality in how to operate in different situations,” said U.S. Marine 2nd Lt. Ryan T. Murray, a platoon commander with Company C, 1st Battalion, 8th Marine Regiment.

Indonesian Platoon Commander Capt. Riwan said, “My unit is located at the Peacekeeping Center, Indonesia. My personnel and I are happy to participate in the Khaan Quest 2014 exercise. This is the fourth time that Indonesian Soldiers participated in the exercise. Soon, an exercise similar to Khaan Quest will take place in our country. I hope that a Mongolian platoon will come to our country to participate.”

The Khaan Quest exercise consists of four main components, including the combined battalion level Command Post Exercise (CPX), the platoon level Field Training Exercise (FTX), the Engineering Civil Action Program (ENCAP) and the Cooperative Health Engagement (CHE) events in which everyone takes part.

The CPX supports the Mongolian Defense Renewal Policy, which prepares the battalion-size unit for operations. The FTX improves small unit capabilities and promotes cohesion and achievement of tasks. The exercise introduced multinational military personnel to different weapons systems and tactics.

Peacekeepers engaged in eight training lanes during the FTX, including a dismounted patrol, cordon and search operation, checkpoint, riot control, convoy operation, combat first aid, river patrol and a Mongolian cultural exposure. Participants completed a total of 550 training



Mongolian Armed Forces Capt. Enkhtsog trains U.S. Soldiers on the AK-47 during Khaan Quest 2014.

hours for seven different lanes with each lane requiring 80 hours of training.

The survival course was the most interesting one for Mongolian personnel. It is a skill honed through rigorous training. For a platoon of approximately 30 Mongolian Armed Forces service members, led by a training contingent of five Alaskan Army National Guardsmen and U.S. Marines, the survival training course served to create a better understanding of techniques to ensure survival in the wilderness, participants said.

The service members also practiced dismounted patrolling and how to properly control a checkpoint entry. “I think the best lane was checkpoint because we will go to South Sudan, where we will need to check people,” said Mongolian Armed Forces 1st Lt. T. Gankhuu, a platoon commander. “So it is good to practice more. And it is good to learn other ways to do it.” Some Mongolian Armed Forces service members will be able to use their Khaan Quest training when they are deployed to South Sudan for U.N. peacekeeping operations.

Countries including Belarus, China, Germany, Japan, Poland, Russia and Turkey sent military observers to Khaan Quest. Maj. Taracevch Sergei and Capt. Trubin Ivan from Belarus said, “It is for the first time that we observed a peacekeeping exercise. We obtained important peacekeeping knowledge.”

Every evening after training, participants also had a great opportunity to familiarize themselves with various cultural traditions. Personnel from the United States, Tajikistan, Indonesia and South Korea performed their traditional dances, sang their traditional songs and demonstrated martial arts. The Mongolian hosts organized a mini Naadam Festival for their colleagues from abroad featuring Mongolian wrestling, horse racing and archery; participants were invited to try out wrestling and archery. This proved an excellent opportunity to showcase Mongolian traditional heritage.

Addressing service members, Lt. Gen. Stephen Lanza, commander of the 1st U.S. Army Corps, said: “Multinational exercises such as Khaan Quest allow our nations’ militaries to broaden their knowledge and understanding of each other and build bonds stronger than those built in any other way. Over the past two weeks, Soldiers and Marines from 24 nations have had the opportunity to train together and to build everlasting bonds. In the process, they have shared their expertise on a number of missions that have ranged from peacekeeping to improving the Mongolian infrastructure, to conducting medical service missions in the community.”

Khaan Quest participants said they returned to their native lands with fond memories of their stay in Mongolia. Many expressed satisfaction that they had visited the land of renowned conqueror Chinggis Khan. □

SPAWNING *Anti-Terrorism Success*

The Armed Forces of the Philippines Civil-Military Operations School emerges as a prime mover in counterviolence and radicalization interchange



An Indonesian Soldier supported by police commandos participates in an anti-terror exercise in Medan in July 2014. The Armed Forces of the Philippines Civil-Military Operations School is helping the Philippines, Indonesia and the U.S. cooperate in the fight against terrorism.

MAJ. JO-AR ACOSTA HERRERA/PHILIPPINE ARMY

Counterterrorism efforts in the Philippines, Indonesia and the United States have strengthened as a result of a trilateral conference in Bonifacio Global City, Philippines, in February 2013.

Organized by the Armed Forces of the Philippines (AFP) Civil-Military Operations (CMO) School, the conference provided an avenue for the strategic exchange of informative dialogues, skills, expertise and best practices in the fight against terrorism. The participating nations worked together to align and integrate varying techniques in policymaking, procedures and decision-making to foster synergy and compatibility among the nations in the counterterrorism arena.

The collaborative endeavor helped improve interagency links and coordination among organizations at international, regional and local levels by synchronizing efforts to address terrorism. Moreover, the AFP CMO School is working to spread such efforts across Southeast Asia.

The AFP CMO School, part of AFP's Civil Relations Service, conceived of the conference to strengthen cooperative policymaking with some of the Philippines' allied nations. With the support of the U.S. Army Military Information Support Team (MIST), the school organized

the trilateral conference to initiate competency and capacity building of agencies involved in Information Support Operations (ISO) in the Philippines, Indonesia and the U.S.

The conference sought to integrate the different aspects and approaches of police and military ISO/Information Support Affairs (ISA) on the counterterrorism front. The approach built upon the first round-table discussion on Philippine Security Forces ISO/ISA and Counterviolence/Radicalization, which was held in January 2013.

The Law Enforcement and Security Integration Office and Philippine Center for Transnational Crime, under the auspices of the Office of the Executive Secretary, formalized the program with Indonesian authorities. The AFP CMO School, as the lead agency of the event, also coordinated with various Philippine government agencies.

The event, held in February 2013, included the AFP, Philippine National Police, Bureau of Jail Management and Penology, Philippine Anti-Organized Crime Commission, Philippine Center for Transnational Crime, Law Enforcement and Security Integration Office, and the Anti-Terrorism Council Program

Management Center. The Indonesian party included delegates from two of its vital units, the National Counterterrorism Agency (Badan Nasional Penanggulangan Terorisme) and Special Detachment 88 (Detasemen Khusus 88). The United States brought in the Joint Special Operations Task Force-Philippines, U.S. MIST and U.S. Embassy representatives for the Philippines and Indonesia.

The conference helped participants recognize mutual regional problems between Indonesia and the Philippines. The AFP CMO School is increasingly serving as a multilateral conference delegate as the coordinated effort to face these challenges expands throughout Southeast Asia. To further develop relationships among partners and enhance various approaches to countering violent extremism based on best practices and real world encounters, AFP CMO helped organize another meeting in Manado, Indonesia, in November 2013. The meeting set the stage for the creation of a multilateral countering violent extremism working group that included the participation of the newly formed Cambodian National Counter-Terrorism Committee and the Royal Thai Army. □

MAJ. GEN. BYAMBASUREN BAYARMAGNAI,

DEPUTY CHIEF OF THE GENERAL STAFF OF THE MONGOLIAN ARMED FORCES,

REVEALS KEYS TO THE SUCCESSFUL RESURGENCE OF HIS NATION'S MILITARY

FORUM STAFF

After graduating from the U.S. Army Command and General Staff College at Fort Leavenworth, Kansas, in 2001, Maj. Gen. Byambasuren Bayarmagnai served as chief of Mongolia's National Peacekeeping Training Center, where he prepared Soldiers for the United Nations peacekeeping missions and other Peace Support Operations. In July 2003, he commanded the first Mongolian contingent in Operation Iraqi Freedom in Iraq. In June 2006, he once again commanded the first Mongolian contingent in the U.N. Peacekeeping mission in Sierra Leone to provide security to the Special Court for Sierra Leone. He was chosen as the deputy chief of the general staff and promoted to brigadier general in 2009 and major general in 2011. In September 2014, he talked to *FORUM* about the evolution of today's Mongolian Armed Forces (MAF). He holds a master's degree in military science from the Defense University of Mongolia and has been awarded numerous medals for his service, including the distinguished military service medal and the U.N. medal for peace.

WHAT ARE THE MAIN GOALS OF THE MONGOLIAN ARMED FORCES?

The primary mission, like all countries, is to defend our nation and the homeland. Of course, we have a number of peacetime missions. One of the very successful peacetime missions has been our participation in the U.N. peacekeeping missions. We have also participated in other international peace support operations since 2002.

HOW ARE THE MONGOLIAN ARMED FORCES STRUCTURED?

Since 2009, we are following the NATO style of the force headquarters

structure. This makes it easier to cooperate with different nations in multinational and coalition environments. The general staff headquarters and the unit level headquarters are under the changing process. All levels of staff have been adjusting the goals and tasks that they are responsible for.

HOW DID YOU JOIN THE GLOBAL WAR ON TERRORISM?

Mongolia became the 33rd nation to support the United States and Coalition in the global war on terrorism in 2003. Of course, it was a big decision for a small nation. On the other side our two big neighbors, Russia and China, had no response to global war on terrorism at that time. Mongolia had only one choice among other requests from the United States. It was to send our troops to the coalition mission, and the Mongolian government made the decision on 10 April 2003 to send Mongolian Soldiers to Operation Iraqi Freedom. I was selected as the commanding officer for the first Mongolian contingent. I had one infantry company and construction engineer team under my command. We entered in Iraq in July 2003, and we did 10 rotations until October 2008; from the beginning till the end of the coalition mission, we participated in Operation Iraqi Freedom.

HOW DID MONGOLIA WIN OVER THE TRUST OF THE UNITED NATIONS SO QUICKLY?

Mongolia signed a memorandum of understanding with the United Nations in 1999. Mongolia first found the opportunity seven years later. The United Nations Mission in Sierra Leone (UNAMSIL) was

the first Mongolian contingent mission in U.N. environment. Of course we sent military observers to the U.N. mission beginning in 2002. Our mission in Sierra Leone was to protect the Special Court for Sierra Leone. It was challenging in the beginning of the mission after the UNAMSIL mission ended and 24,000 peacekeepers were leaving Sierra Leone. I was tasked to be a commanding officer again.

At the beginning of the UNAMSIL, no one knew the Mongolian Soldiers and what they could do, how they compared to the rest of the countries' Soldiers. Various contingents of U.N. Soldiers had disciplinary issues happen in the past. But there were no disciplinary issues with the Mongolians. ... Then after three months of deployment, they saw the Mongolians are the real Soldiers. The former Secretary-General Kofi Annan had a plan to visit six countries in West Africa, including Sierra Leone. And he asked to meet the Mongolian Soldiers because they were deployed there. He asked to see us for 30 minutes. His visit was scheduled for only two hours, so they added time. So the visit was two hours and 30 minutes. It was a remarkable day with Mr. Kofi Annan. Today, everyone knows the strengths of the Mongolian peacekeepers and who the Mongolians are. We had Soldiers in Sierra Leone from 2006 till 2010.

WHAT OTHER U.N. MISSIONS DID THE MAF PARTICIPATE IN?

After the very successful mission in Sierra Leone, Mongolia was easily selected for the U.N. mission in Chad in 2010, and then for the mission in South Sudan in 2011. Mongolia was selected in the top five out of 116



Mongolian peacekeepers patrol in an armored vehicle in Sierra Leone in 2006.

MONGOLIAN ARMED FORCES

Inset: Mongolian Armed Forces Deputy Chief of the General Staff Maj. Gen. Byambasuren Bayarmagnai MONGOLIAN ARMED FORCES

troop-contributing countries among the United Nations. Right now, we've had over 10,000 peacekeepers serve in U.N. missions and coalition missions within 10 years. Compared to our population, that is much more than any other country. We are proud of our achievement, what we have done in the past 10 years. Today, our Soldiers are serving in the United Nations mission in South Sudan and Darfur, Sudan. We also have Soldiers in Afghanistan.

WHY DO YOU THINK MULTILATERAL TRAINING IS IMPORTANT?

There are many benefits, but the most important are the skills of the Soldiers and the lessons they learn in these operations to make the Armed Forces more powerful at the Soldier level. The Soldiers get experience from the different missions. Some Soldiers have already been deployed six times for the missions abroad, so they have the

experience with many tasks, so they know all kinds of situations. There are also benefits for the country on a political, economic level and social level. But as a military commander, we see the Soldier-level benefits as the most important. We see the best trained Soldiers are the backbone of the Armed Forces.

PLEASE SHARE MORE ABOUT THE REGIONAL TRAINING CENTER THAT YOU HELPED START OUTSIDE THE CAPITAL CITY.

We are building a regional peacekeeping training center. It is about 50 kilometers outside the capital city of Ulaanbaatar. It was established in 2002 as a national peacekeeping center, and in 2013 we started expanding it to a regional facility. We are now a member of the Asia-Pacific regional peacekeeping training center association and joined the NATO network of Education and

Training centers. Any regional country can come to this training center and conduct training. There is plenty of space and training capacity. We are improving it every year. We have about 10 bilateral trainings each year and are conducting U.N. courses under the U.S. Global Peace Operations Initiative (GPOI) program. The U.N. courses are a contingent commander's course, logistics officer's course, military liaison officer's course and military observer's course. So far, we have trained 25,000 Soldiers across all these trainings and exercises.

HOW HAS MONGOLIA'S ANNUAL JOINT TRAINING EXERCISE KHAAN QUEST EVOLVED?

In 2003, we started our Khaan Quest exercise. It was the U.S. Marine Corps and our forces together — a bilateral exercise in the beginning, and then by 2006 it was expanded to multinational

peace support operations exercise by help of the GPOI program. Gradually, we've invited more countries in the Asia-Pacific region. In 2014, we had 24 nations as main participants and 1,200 Soldiers as participants of the main events, and 10 other nations observed the exercise.

WHAT OTHER EXERCISES BESIDES KHAAN QUEST?

We have a bilateral exercise with India, China, Russia, United States, Qatar, Belgium, Turkey, South Korea and Japan. Plus, we are invited to Asia-Pacific peacekeeping training events abroad.

WHY DO YOU THINK MONGOLIAN TROOPS ARE SO VERSATILE?

Because of the four seasons in Mongolia, very harsh climates: very hot summer, very cold winter. That's why Mongolians can deploy anywhere in the world. Mongolians

are more quickly adjustable than any other Soldiers in any climate situation. Also, Mongolians can build anything without any materials ready. Many Soldiers in many countries asked for engineering materials and engineer Soldiers to build the base, guard towers, checkpoints, but we did not ask. If they give us a task to do, we do it. In the Iraq situation, there were lots of exploded cars, vehicles everywhere, so we collected them and made guard towers and other needed structures. They asked us, "How did you find materials? Who gave you the materials?" The Mongolian base wasn't given any materials, but Camp Charlie was ready. In the missions in Chad and South Sudan, Mongolians built many camps by their own hands and received great appreciation from the force leadership. The commanders say, "Do this," and the Soldiers make it happen, so that is the difference. The commander knows what he is

supposed to tell, and the Soldiers know what the commander said.

WHY DO YOU THINK MONGOLIAN TROOPS ARE SO DISCIPLINED?

We like to say all disciplinary veins go through our blood, our great king's blood running through us. Chinggis Khaan's blood keeps running even today from the 13th century. Discipline must be at the highest in the lines of the Mongolian Soldier for winning the battle. Soldiers have to be disciplined, then you are easy to train because you are a Soldier — if not disciplined, then you can't be trained as a Mongolian Soldier. Discipline makes Mongolian Soldiers as one team.

DO YOU THINK MONGOLIAN SOLDIERS ARE NATURAL WARRIORS?

We have a culture of natural warriors. Physically, the Mongolian children ride the horse at 3 years.

Mongolian Soldiers stand in front of a statue of Chinggis Kahn in the State Palace of Mongolia in Ulaanbaatar. The country is in the middle of a resources boom that could help the government expand the military.

AFF/GETTY IMAGES



Mongolian peacekeepers familiarize themselves with local sites in Sierra Leone for the 2006 mission.

MONGOLIAN ARMED FORCES



Some people say Mongolians ride the horse before they start walking. Today, children over 6 years are allowed to ride horses at the national-level horse racing competition. No one taught the children how to ride and how to do the archery, so this is the blood. And then the wrestling, this is natural. Children start to do wrestling naturally; this is in the blood. Today, top Japanese sumo wrestlers are from Mongolia.

WHERE DO YOU SEE MONGOLIAN ARMED FORCES OF THE FUTURE?

After 1990, we faced a difficult time economically. Now the difficult times are over. Our country's economy is growing at a rapid rate each year. We have vast natural resources that we did not use until today. We kept our resources, and in many countries, they finished their

resources. We have plenty of space and plenty of resources. We are using some resources in the Gobi region today: coal, copper and gold, so that makes the economy grow. So, the Armed Forces, based on our economic growth, should increase our weapons and equipment systems to modern. We can use all the modern technologies throughout the Armed Forces. The only difference from the countries in NATO and developed countries is they have better weapons systems, better equipment — we need those. Then we will have strong Armed Forces.

WHAT ARE MONGOLIA'S TOP SECURITY ISSUES?

Mongolia is a peaceful country, one of the most peaceful countries in the world with two close neighbors, Russia

and China. Mongolia is developing a full range of strategic partnership with its two neighbors. From Mongolia's perspective, we don't see any close threats and security issues so far. There are no real problems inside the country. But, we have concerns in regional security issues. We have to work together to build peace and security in the region.

WHAT REGIONAL SECURITY ISSUES CONCERN YOU?

We worry about regional threats like terrorism — it's coming closer and closer. Some countries that lost their instability are developing terrorism and becoming home to the terrorists. It's hard to protect an individual country alone. We have to work together to protect and save our countries and our neighbors. □

FINDING COMMON GROUND

Bold Interaction, Open Dialogue and
Joint Military Training Are Key to Cooperation

CHAN CHUN SING



SINGAPORE MINISTRY OF SOCIAL
AND FAMILY DEVELOPMENT

We are living in interesting times. The Indo Asia Pacific has seen rapid economic development.

Economic growth has lifted millions from poverty and improved the lives of many more. The fast-changing regional demographics further add elements to the already interesting times.

With the exception of a few countries such as Japan, countries around the region can expect to see their populations grow further in the coming years. In the next two decades, China's population is expected to grow to 1.45 billion and India's to 1.53 billion. Southeast Asia's population, half of which is under the age of 30, is expected to grow by 19 percent over the next two decades. South and Southeast Asia will remain relatively youthful compared to Northeast Asia and, indeed, most developed countries.

Access to education and higher education has also increased tremendously in the region. As an indication, the adult literacy rate in the Indo-Asia-Pacific region has increased from 82 percent in 1990 to almost 96 percent today. The percentage of those with access to secondary and tertiary education is expected to grow across the board for almost all countries. This combination of a growing population — and youthful populations for South and Southeast Asia in particular — with better-educated workforces presents huge potential

for regional prosperity. However, these very same factors can also cause nations to face competing demands for resources to meet the rising aspirations of their people. These factors can also lead to other contests in the perception of might. Rapid growth can breed confidence as much as assertiveness.

Opportunities for growth will enhance shared interests and interdependence among regional states. We share interests in securing common space for trade to enable prosperity and development for all. As economies become even more interdependent as trade grows, states will also better appreciate the need to work together to reap mutual benefits.

On the other hand, as the economic stakes increase and the contest for resources intensifies, countries are also likely to be more assertive in defending their strategic interests and perceived interests. Growing nationalism in some countries has exacerbated historical animosities, which in turn increases the pressure on governments to be seen to be defending these interests and redressing real and perceived historical wrongs. At the same time, the unequal distribution of growth across the region has also placed some countries and their governments in conditions of relative inadequacy. For these countries, foreign policy can become a convenient means to shift attention away from domestic issues.



The Home Team Academy puts up a defense display during the National Day Parade at the Float at Marina Bay in August 2014 in Singapore.

GETTY IMAGES

Such behavior can precipitate state-to-state tensions and undermine regional stability.

What can we do to navigate away from strife and toward shared interests? The answer lies in one word — leadership. We need wise and strong leaders who appreciate that there is much more to gain through cooperation than conflict. We also need courageous leaders who do not succumb to domestic pressures or nationalistic pursuits against the greater good of the region, including seeking to right historical wrongs and perceived wrongs, when the conditions are still premature. Indeed, this was the wise approach taken by the late Chinese leader Deng Xiaoping, who declared that some issues are better left to future generations with greater wisdom to resolve. We need leaders who do not succumb to the notion that might is right. That the mightier one may be, the more circumspect one may be in using one's might. The mark of a powerful country is not how it is able to use its might to get its way. The mark of a truly powerful country is how it is able to

restrain itself and not have to use its might to get its way, and yet convince others to come along its side.

Military Modernization and the Strategic Environment

The potential for tensions to spiral out of control in today's strategic environment cannot be underestimated. As regional economies grow, countries have also gained the wherewithal to acquire more advanced warfighting platforms. [In 2013], for the first time, Asia spent more on defense than Europe, and this trend is projected to continue. As more advanced military platforms are introduced into the regional military landscape, the challenge will be to reduce the potential for miscalculations. For air power in particular, there will be a temptation to use it as the instrument of choice in any contest or demonstration of national will, given the reach of air power and the seeming ease of forward deployment to tackle threats and perceived threats away from population centers.



**Military professionals,
more than politicians,
have the opportunity
to grow up, train
together and bond
to build deep trusts.
These opportunities,
when used well,
provide the basis for
deep trusts and open
communications.**

**A military policeman keeps
watch during the National
Day Parade at the Float
at Marina Bay in August
2014 in Singapore.**

GETTY IMAGES

How ongoing military modernization efforts shape the regional landscape will depend on how we manage its accompanying opportunities and challenges. On the one hand, the enhanced capabilities of regional militaries present more opportunities for the militaries to work together to secure the global commons, and in so doing forge good will and trust. For example, the Republic of Singapore Air Force participates in multilateral security cooperation such as the combined maritime air patrols in the Malacca Strait, humanitarian aid and disaster relief missions such as the Typhoon Haiyan relief effort, and peace support operations in Timor-Leste and Iraq. On the other hand, the enhanced lethality of new military platforms has also placed more destructive power and responsibility in the hands of our Soldiers, Sailors and Airmen. Tactical miscalculations can rapidly spiral out of control, aggravating strategic rivalries and leading to conflict.

The Way Forward

What can we, as defense and security professionals, do to steer the region away from potential conflicts and toward cooperation in areas of common interests? I suggest we interact boldly, dialogue openly, network assiduously and train together professionally. These are the reasons why Singapore supports and hosts multilateral and bilateral forums to allow parties with different interests to come together in a neutral and nonthreatening environment to find common ground, forge consensus and generate positive ideas to build a more peaceful environment for all. Such platforms include today's Asia-Pacific Security Conference and the annual Shangri-La Dialogue.

Our efforts must extend beyond the strategic and policy levels. Markets do not just watch politicians speak; markets, more than ever, watch military moves. We must therefore back political efforts with practical military cooperation, to build trust and cultivate habits



The Singapore Army exhibits defense tactics during the National Day Parade in August 2014.

GETTY IMAGES

of working together toward common goals at the military-to-military level. Military professionals, more than politicians, have the opportunity to grow up, train together and bond to build deep trusts. These opportunities, when used well, provide the basis for deep trusts and open communications. We have seen many previous occasions when the political channels may have stopped but the military channels continue to be open, and this had provided alternative channels to calm things. On the other hand, we have also seen situations where poor military links exacerbate the political tensions, leading to unfortunate outcomes. We have also seen poor military professionalism causing unwanted incidents that then lock political masters into positions from which they cannot back down, causing already tricky situations to spiral out of control. A positive example of practical military cooperation is the

ASEAN [Association of Southeast Asian Nations] Defense Ministers' Meeting-Plus [ADMM-Plus] exercise held in June 2013 in Brunei, which brought together over 3,000 military personnel from 18 ADMM-Plus countries. Such tactical and operational engagements can help build strategic confidence and moderate tensions. The value of the exercise was not just in the exercise itself. The value of the exercise was also seen in the many sessions — planning together and working together prior to the exercise to make things happen. These are valuable opportunities for military and security professionals to grow together, to bond and to build trusts so that we develop alternative channels to calm things when things do not go well. It is through such efforts that we can engender a future of peace and prosperity founded on mutual trust, respect and shared interests. □



JORDAN

AFP/GETTY IMAGES

ARAB BANK FOUND LIABLE

FOR FUNDING TERRORISM

In a landmark decision, a U.S. jury found the Jordan-based multinational Arab Bank liable for 24 counts of supporting terrorism by transferring funds to Hamas.

The New York jurors deliberated for nearly two full days after a monthlong trial before reaching their verdict in September 2014. Authorities filed the federal lawsuit in 2004. "This is an enormous milestone," said Gary Osen, a lawyer on the team representing about 300 American relatives and the victims of 24 attacks carried out in Israel and the Palestinian territories.

For the first time, a financial institution is liable for supporting terrorism. Arab Bank, which has assets worth U.S. \$46.4 billion, said it would appeal the decision.

The defense argued there was no evidence Arab Bank executives supported terrorism and denied the allegation that the institution knowingly made payments to designated terrorists.

Plaintiffs said the bank transferred more than U.S. \$70 million to an alleged Saudi terror group that ran charities they claim were a front for Hamas and 11 globally designated terrorist clients. Agence France-Presse

Turning Blood into MONEY

To Ghana's legions of jobless young men, Eric Bimpong has a money-making proposition: Sell your blood.

Bimpong spends his days outside schools, bars and on the streets of poor neighborhoods in Accra, scouring for teenagers and 20-somethings to give blood outside the capital's largest hospital.

Commercial blood donors, as the authorities call them, fill a void in a country where blood is often in short supply, and cultural and religious beliefs keep some from donating.

When a patient needs blood and the blood banks are empty — and family and friends are unavailable or unwilling to donate — the paid donors step in for a price. The going rate per 0.57 liters of blood is between U.S. \$31 and U.S. \$37. Bimpong keeps U.S. \$6.20 for himself.

While the donations likely save lives, public health officials worry that the donors spread diseases such as HIV or hepatitis to those who receive the blood.

Bimpong shrugs off concerns about safety. Laboratories should be responsible for screening, he said. Donated blood is tested for HIV, hepatitis B and C and syphilis, and donors are asked if they've been sick with malaria.

"It's abnormal. We don't really encourage this kind of donation," said Stephen Addai, a spokesman for Ghana's National Blood Service (NBS). "Sometimes they don't even know their blood group." Keeping blood banks stocked remains a constant struggle, he added.



AFP/GETTY IMAGES

The NBS usually relies on students to donate the approximately 250 units of blood per day used in the southern third of the country, which includes the capital. The NBS has sounded the alarm about blood shortages repeatedly on radio stations and in newspapers, encouraging people to donate.

During a blood drive at a shopping mall in Accra in September 2014, the NBS hoped to get 1,500 donors; instead, the service got just five. Agence France-Presse



CRICKET TEAMS TREK TO WORLD'S HIGHEST GAME

AFP/GETTY IMAGES

Map, tent, water, food — check. All are needed to scale the snow-capped peak of Africa's highest mountain, Kilimanjaro.

Bat, ball, stumps, pads — check. Also needed when you're hoping to break the world record for the highest-elevation game of cricket ever played.

Two teams took part in a grueling eight-day trek up the vast extinct volcano in September 2014 to play a full Twenty20

game in the ice-covered crater just below its rugged peak at 5,785 meters.

"Kilimanjaro is definitely not somewhere I thought I'd bowl a few overs, but the challenge, thanks to the altitude, is huge ... bring it on!" said English bowling legend Ashley Giles, one of the captains of the mixed professional and amateur teams.

The eccentric dream, to hear the thwack of willow on leather at more than 5 kilometers high, was the idea of expedition leader David Harper, a British hotel real estate consultant. Harper said

he planned the match in a bar after his wife told him the "only way he was ever likely to play cricket at the highest level would be if he played on the top of a mountain."

Thirty players and umpires, along with a Tanzanian support team of about 100 to help carry kits and food, took part in the expedition. The previous record for the world's highest game was 5,165 meters, played in the Himalayas at Everest base camp in Nepal in 2009.

Agence France-Presse

NEW LEADER PROMISES EQUAL RIGHTS *for* WOMEN

Afghanistan's new president pledged to give women prominent roles in his government and told the nation that women are important to the country's future.

Ashraf Ghani Ahmadzai, elected president in September 2014, clasped the hands of female supporters after his victory speech, and he and others raised their hands over their heads, a notable moment in a country where women are often socially segregated.

Ghani Ahmadzai said he wants Afghan women represented at the highest levels of government, including on the Supreme Court, where no female justice has ever served. He continued the theme during the nationally televised speech.

AFGHANISTAN



THE ASSOCIATED PRESS

"In the face of these girls, I can see future Afghan leaders," he said as he told his "sisters" in attendance that they have equal rights in society and government.

Ghani Ahmadzai, now in his mid-sixties, is viewed as worldly and well-educated. A former finance minister, he has worked at the World Bank and earned a Ph.D. from New York's Colombia University. The Associated Press

A woman in traditional Vietnamese shaman attire is shown in profile, facing right. She wears a tall, dark, intricately decorated headdress with floral and beaded ornaments. Her clothing is dark with colorful, patterned sleeves. She holds several lit torches, which cast a warm, orange glow. The background is dark and out of focus, suggesting an outdoor or semi-outdoor setting at night.

LEN DONG

An Ancient
Shaman Dance
for Modern
Vietnam

AGENCE FRANCE-PRESSE

The Vietnamese spirit medium dances in a trance, attacking invisible enemies with a sword as drums beat, musicians chant and dozens of curious onlookers watch in amazement.

Civil servant by day and practitioner of traditional spiritual possession rituals when the mood takes her, Nguyen Thi Hoa wears a richly embroidered red robe as she performs a Len Dong ceremony at a private Hanoi temple. “I have no idea what I’ve been doing,” Hoa said after the five-hour performance, which involved at least 15 costume changes.

Although Hoa, in her early 50s, is not a professional Len Dong shaman, she undertakes the rituals when the spirits move her. Practitioners and attendees usually turn to the ancient ritual to ease stress or to ask the spirits for help with romantic or professional problems. Historically, French colonial and Vietnamese communist leaders restricted Len Dong, but the tradition, often considered heresy, has surged in popularity since the government relaxed its controls a decade ago.

OLD CURE FOR NEW ILLS

Six years ago, Hoa began suffering from insomnia, lack of appetite and fatigue. Conventional doctors could not cure her. On the advice of a friend, she visited a Len Dong practitioner who told her to try performing the spirit possession ritual herself. “To my surprise, my health started improving at once,” she said, and she saw positive changes at work as well.

The ancient Vietnamese custom involves “calling the spirits of the dead into the bodies of the living to connect past and present,” a leading research book explains. Musicians play traditional songs to help the shaman enter a trance. Multiple assistants help the shaman change costumes or prepare offerings, ranging from chickens to snack cakes, for the altar.

The shaman carefully picks an auspicious date for the event in advance. Len Dong practitioners usually offer their services at temples between Vietnam’s lunar new year, around late January, to the end of the third lunar month in April. During the ceremony, the practitioner will seemingly drift in and out of a trance, singing, chanting and dancing to the minimalist, rhythmic music. “It’s not just the insane dancing of people who have lost their dignity,” said Ngo Duc Thinh, a professor of Vietnamese culture at a research institute.

The practice of Len Dong can help people under intense stress or suffering from low-level psychological disorders, Thinh said. “They practice Len Dong to rid themselves of their problems and return to their normal life. As society develops, spiritual pressures multiply. Stress becomes more serious — and this creates more chances for Len Dong.”

SOCIAL STIGMA

Hoa practices Len Dong at least twice a year. “I don’t dare tell my mother, as she would say I was crazy,” said the bureaucrat, who spends about U.S. \$2,000 to put on each performance. (People can make donations to help cover the costs of a Len Dong performance without having to directly participate).

Her work colleagues, mostly communist party members, are also largely unaware of her Len Dong practice. The communists banned Len Dong until the 1980s although rituals continued in secret. Even now, practicing Len Dong can carry a government fine of about U.S. \$250, levied to discourage private, for-profit practitioners more than genuine Len Dong devotees like Hoa. “The government tried to ban it, but they in fact have failed. It’s impossible to ban Len Dong,” Thinh said.

Practitioners and attendees usually turn to the ancient ritual to ease stress or to ask the spirits for help with romantic or professional problems.



Facing page and above: Len Dong dancers perform at a Hanoi temple in March 2014.

Regulations might be necessary, however, experts say. Since restrictions were lifted, business has been booming. Some newly wealthy Vietnamese are willing to pay up to U.S. \$50,000 for a Len Dong service, and it is difficult for people to tell the difference between genuine Len Dong practitioners and con artists. “Several practitioners, who have only some ability, have used that to cheat people for money,” one practitioner said. “That makes people confused. They can’t differentiate between real and fake Len Dong.”



TRADITIONAL INDIAN GAME GETS MAKEOVER

AGENCE FRANCE-PRESSE

Despite years as one of India's top players of kabaddi — a traditional contact sport that mixes tag and wrestling — Ajay Thakur remained relatively unknown in his homeland.

He became an overnight sensation in July 2014, however, after the high-profile launch of a new Pro Kabaddi League, with live television coverage, corporate sponsors and brightly colored spandex uniforms. The professional league has given new life to kabaddi, played in sandy backyards across India for generations. "It feels great when kids ask me for an autograph," 27-year-old Thakur said after a game with the Bengaluru Bulls, one of eight teams in the new league. "It is all new to me and makes me hungry for more of all this."

Although the sums involved represent only a fraction of the funding that cricket attracts in India, commercial sponsors are transforming the game's once dowdy image — and the lives of its players. "I never thought sponsors would put money on kabaddi," said Thakur, who weighs 80 kilograms and is now able to afford the food he needs to perform at his best.

Kabaddi features two seven-member teams facing off on a tennis court-size pitch. A "raider" from each team dashes into the rival half and touches players from the opposing team without being tackled, before escaping back to safety on their sides of the court.

Players traditionally chant "kabaddi" repeatedly to prove they are not breaking the rules by drawing breath during that time.

SCREAMING FANS

Other versions of the game come with a high-tech flair. At the Thyagraj Indoor Stadium in New Delhi, the screaming fans have booming music, pyrotechnics and plumes of smoke, while colored spotlights focus on the players' tight spandex outfits. There are no shouts of "kabaddi." Instead, an overhead screen provides a 30-second countdown, turning the sport into a slick show for audiences in the stadium and at home. Team owners include a media mogul, a top industrialist and a popular Bollywood star. The league is inspired by the Indian Premier League (IPL), cricket's cash-rich Twenty20 tournament.

Charu Sharma, a veteran commentator who devised the new league, said the comparison only goes so far. "We do not have that kind of money. But the IPL did make us realize that sport works well if you package it better."

The top kabaddi player is paid nearly U.S. \$20,000 for the two-month season. By comparison, the Delhi Daredevils cricket team paid U.S. \$1.4 million for England star Kevin Pietersen in the 2014 IPL.

Sharma got the idea after seeing kabaddi's popularity at the 2006 Doha Asian Games. "The world hasn't yet woken up to the charms of this game," he said, adding that it would be a shame for India, the homeland of the sport, to ignore such a cultural gem. "If we don't give due respect to it and don't take pride in our achievements, it's a shame."

The game is played in about 35 countries, including Bangladesh, Pakistan and South Korea, but India has won all seven gold medals at the Asian Games since kabaddi's introduction in 1990. Local media reported that 22 million people tuned in to watch the first day of the season in July 2014.

Radha Kapoor, entrepreneur and owner of the Delhi franchise, said it was time India saw the potential of its indigenous games. "I am sure a lot of people have doubts, but that is where the opportunity lies," she said. "See what the U.S. has done with baseball and American football."

A World Kabaddi League launched in August 2014, targeting the large Indian diaspora, with a first leg in London and stops in the U.S. and Canada, among others. "It is like a kids' game being played by grown-ups," Francis Britschgi, a teenage American and recent convert, said in Delhi. "It has all the elements that make for a great spectator sport."

Scientists Discover Method to Erase Bad Memories

AGENCE FRANCE-PRESSE

Emotions connected to memories can be rewritten, making bad events in the past seem better and good things appear worse, scientists from Japan and the United States have found. The discovery of the mechanism behind the process helps explain the power of current psychotherapeutic treatments for mental illnesses such as depression or post-traumatic stress disorder (PTSD) and could offer new avenues for psychiatric help. “These findings validate the success of current psychotherapy by revealing its underlying mechanism,” research leader Susumu Tonegawa said.

The team, formed from a collaboration between Japan’s RIKEN institute and the Massachusetts Institute of Technology in the U.S., used optogenetics — a new brain-control technology that uses light — to better understand what happens when we reminisce.

They found that memories of warm feelings or intense fear triggered by the interaction between the hippocampus, the brain’s diary room, and the amygdala, the place believed to encode positivity or negativity, are more flexible than previously thought.

“It depends on how strongly the [good or bad aspect] dominates ... there is competition between the two circuits’ connection strengths,” Tonegawa said.

The researchers injected two groups of male mice with light-sensitive algae protein. This allowed them to identify the formation of a new memory as it was happening and then use pulses of light to reactivate it at various intervals. One group of rodents played with female mice, creating a positive memory. The other group received a small but unpleasant electric shock through the floor.

Researchers then artificially reactivated the memory using the light pulses — effectively making the mice remember what had happened to them.

While the mice were “remembering” their event, they

were given the opposite experience — the mice with the nice memory got a shock, while those with the painful memory were introduced to females.

Tonegawa said his team discovered that the emotion of the new experience overpowered the original emotion, rewriting how the mice felt about it. “We did a test in the original chamber, and the original fear memory was gone,” he said.

However, the overwriting of a memory was only possible by manipulating the hippocampus, which is sensitive to context. The same result could not be achieved by manipulating the amygdala.

Tonegawa said the connection between the contextual memory in the hippocampus and the “good” or “bad” emotions in the amygdala became stronger or weaker depending on what was experienced.

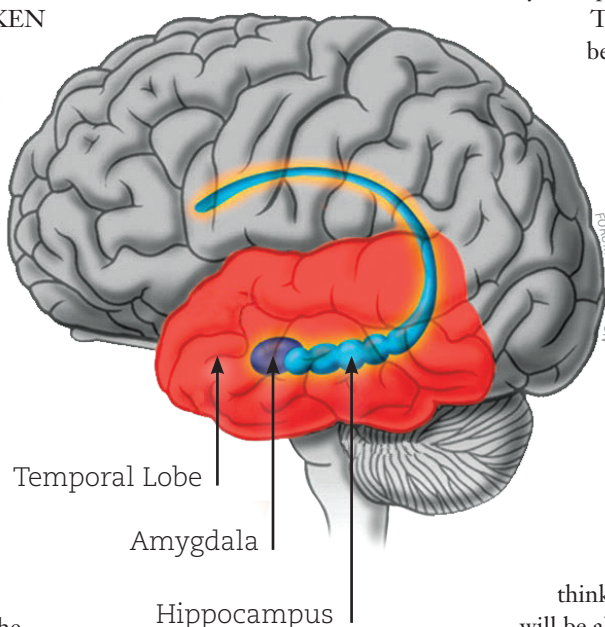
The researchers hope their findings might open up new possibilities for treatment of mood-affecting disorders such as depression or PTSD, a condition found in people such as Soldiers who have undergone life-threatening or particularly horrific events.

“In the future, I would like to think that with new technology we will be able to wirelessly control neurons

in the brain, without intrusive tools like electrodes,” said Tonegawa, who won the Nobel Prize for Physiology and Medicine in 1987. “We could possibly augment good memories over bad ones.”

The research paper was published in the August 27, 2014, issue of the scientific journal *Nature*. In a commentary also carried by *Nature*, cognitive researchers Tomonori Takeuchi and Richard Morris at the University of Edinburgh in Scotland said the study broke new ground in exploring the mechanisms of memory, although optogenetics had limitations as a tool for doing this.

“Molecular engineering is nonetheless shedding light on our understanding of the underlying physiological networks of memory,” they wrote.



Sweet DELIVERY

South Korean activists launched balloons across the North Korean border to deliver thousands of Choco Pies — a favored chocolate snack that became the target of a reported crackdown.

About 200 anti-Pyongyang activists released 50 large helium balloons carrying 350 kilograms of snacks in July 2014 from a park in the border city of Paju. The delivery included 10,000 Choco Pies — a saliva-sapping confection of chocolate-coated cake and marshmallow.

Offered as perks to North Koreans working in South Korean factories in the Kaesong joint industrial zone, Choco Pies spawned a black market and were traded at sharply inflated prices.

The emergence of the South Korean snack as an unofficial currency became too much for Pyongyang authorities: They ordered the factory owners to stop handing them out, according to South Korean news reports.

Agence France-Presse



THE ASSOCIATED PRESS

WEIRD SCIENCE

A Japanese scientist accepted a prize in September 2014 for his peculiar study on the slipperiness of banana peels. "I have gotten ... evidence that the friction under banana peels is sufficiently low to make us slip," said Kiyoshi Mabuchi, a professor of biomedical engineering at Kitasato University in Japan.

Mabuchi won an Ig Nobel prize, an annual award for sometimes inane, yet often surprisingly practical, scientific discoveries.

Mabuchi said his study also served as an extension of his research into the human



THE ASSOCIATED PRESS

joint lubrication system. The other good thing was that his colleagues got to eat the bananas.

Winners honored at Harvard University by the *Annals of Improbable Research* magazine included a team of researchers who wondered if owning a cat was bad for your mental health and scientists who discovered that stuffing noses with cured pork stops nosebleeds.

The Associated Press

Crocodile ARK

One of the Philippines' top crocodile breeders has created a "Noah's Ark" for an endangered species.

Glenn Rebong and his team care for Philippine crocodiles, artificially hatched by incubators from eggs poached from mothers' nests. Rebong's center in the southwestern city of Puerto Princesa is home to about 500 fresh- and saltwater crocodiles, all raised in metal tanks.

The Philippine crocodile once lived in large numbers in freshwater lakes and rivers across the Southeast Asian archipelago. Illegal hunting

for the fashion industry nearly annihilated the endemic species. Rebong said fewer than 250 of the crocodiles could be left in the wild. Agence France-Presse



AFP/GETTY IMAGES

Life in the Cellphone Lane

The Chinese city of Chongqing has created a smartphone sidewalk lane, offering a path for those too engrossed in messaging and tweeting to watch where they're going.

The property manager says it's intended to be ironic — to remind people that it's dangerous to tweet while walking the street.

"There are lots of elderly people and children in our street, and walking with your cellphone may cause unnecessary collisions here," said Nong Cheng, the marketing official with Meixin Group, which manages the area in the city's entertainment zone.

Meixin has marked a 50-meter stretch of pavement with two lanes: one that prohibits cellphone use next to one that allows pedestrians to use them — at their "own risk." The Associated Press



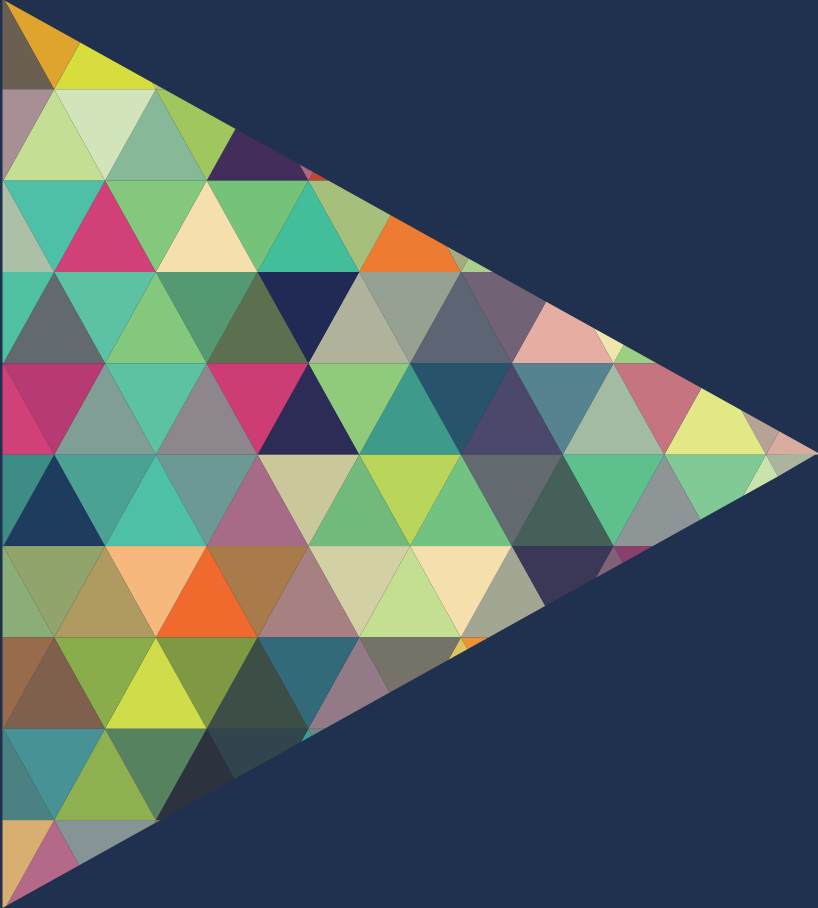
REUTERS

CATCH OF THE DAY

Indonesian and U.S. Marines compete in chasing ducks after a joint military exercise in Sidoarjo on eastern Java island, Indonesia, in September 2014. To prepare for disaster relief and other missions as well as to foster cooperation between the two forces, 66 military personnel from both countries participated in the 10-day 2014 Marines Tactical Warfare Simulation.

Photo By
JUNI KRISWANTO
AFP/Getty Images

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