

BY DAN MCNICHOL
CORRESPONDENT

Tsunamis begin with earthquakes, volcanic eruptions, even nuclear explosions. At first, the waves are nearly undetectable. A thousand or more miles later they form into tidal waves destroying whatever stands in the way. Today, academics are tripping the alarms of their early warning systems, alerting us to the doom of “freight tsunamis” coming from across the Pacific Ocean.



Drowning out prosperity

*“Freight tsunamis” heading toward U.S.
threaten its position in global economy*

These tsunamis were triggered by freight movements and manufacturing activity in the 1990s somewhere between the Indian Ocean and the South China Sea. Over the decades, waves of freight of increasing size have been rolling across the Pacific. Soon—perhaps already—they will crash on our western shore in the form of tidal waves creating havoc and destruction to U.S. infrastructure. Predictions are these freight

tsunamis will jam our seaports with cargo containers. City highways will be gridlocked with trucks. And the Interstate System will be broken down by the highest levels of truck traffic ever.

In 2005, while giving a speech at a mobility conference in Long Beach, Calif., Dr. Peter Ruane of the American Road & Transportation Builders Association first applied the phrase “freight tsunami” to the highway bill

debate. Ruane was making the point that the ever-increasing rise in imported goods—met with indifference and disregard in Washington, D.C.—would inevitably jam our ports and highways. As startling as Ruane’s use of freight tsunami is, some say it is not alarming enough.

“I dislike this term because it implies a sharp, one-time surge of freight demand. I’d prefer to describe the future of global trade-driven freight de-

mand as 'relentless,'" explained Paul Bingham, principal of Global Insight Inc. in Washington, D.C. "It is the sustained nature of this long-term trend for the U.S. that presents the real challenge to the U.S. economy and the country's infrastructure." Bingham is not the only one to predict relentless freight tsunamis over a prolonged period.

Michael Gallis, one of the nation's leading experts in transportation development strategies, sees the freight crisis in the most dramatic terms.

"This nation has already been hit by a few freight tsunamis over the past decade. The storms are only just beginning. We are going to see more and more freight tsunamis, each one getting more intense than the ones before it."

Gallis explained that predictions of intense global growth have been grossly underestimated.

"In 2000, predictions were that the world economy, a \$30 trillion affair, would grow to \$40 trillion by 2010. Well, we had a \$40 trillion worldwide economy on our hands as early as 2004. The world is consuming goods at rates faster than anyone predicted."

This hyper-industrial activity creates the transportation logistics equivalent to space junk. Thousands of parts and pieces of manufactured goods are floating about, polluting the outer orbits of the global supply chain. Gallis said, "As a result, our transportation channels are swamped with a myriad of parts needed to produce a final product. Products being consumed today—computers, televisions, automobiles—are much more complex than their antecedents and require many more parts and pieces than previously consumed goods. However, even simple articles of clothing are being built differently.

"Today, thread arrives by truck from one location, the weaving is done in another and the cutting and assembly in still other locales around the world. Several assembly plants are required to make just about any product. Less than 20 years ago a single factory did the work of all the assembly plants. The truck movements between today's assembly plants tax the worldwide logistical supply chain—especially roads and

bridges."

Gallis concluded, "Look at product labels today. They often say 'assembled in' not 'made in,' meaning many parts to a single product being shipped from China and India and landing at U.S. ports. This poses a heavy burden on our infrastructure."

The consequences are clear. Because infrastructure investment is

"In Bangalore it takes an hour to go a mile. While traveling on highways from Delhi to the Taj Mahal we were subjected to three hours of crappy, rugged roads."

—Lynn Moloney

not a national priority here at home, the U.S. becomes less competitive each year.

Growing global giants

China has the largest population in the world. It is one of the world's oldest civilizations. India is the world's largest democracy. It has the second largest population. Together, with nearly 2.5 billion citizens, these two nations are the future of the global economy. They are wildfires of production and consumption. Today, they are the world's factories. Their economies are starting to dictate a new world order. Their infrastructure greases the wheels of their assembly

plants, which in turn ship billions of goods to the U.S., the same goods that are overwhelming our aged infrastructure.

In less than 20 years some predict China's economy will eclipse Japan's, becoming the second largest in the world. Worldwide, China controls 25% of all cargo-container traffic and owns as much as 60% of the import- and export-container traffic between Asia and Europe. China provides America with 62% of its footwear and 65% of its toys. Nearly half of the world's clothing exports originate in China. Meanwhile in India the stock market has been increasing by an average of over 45% every year since 2005. Car sales will triple in the next seven years. Suzuki is already selling more cars in India than they are back home in Japan. And housing has been booming in both countries for years.

China's economy, however, has left India's in the proverbial dust, growing to nearly three times its size. Back in the 1980s, the two economies were similar in size, but today China's economy has the highest sustained growth of its magnitude in world history. Twenty years after opening its economy, capital income increased by 400%. Gross domestic product doubled in China between 1980 and 1990 and then doubled again between 1990 and 2000. More importantly to the Chinese, this has meant 175 million of its citizens finally had more than just a dollar a day to live on. Making the world a better place to live, this miracle has reduced the world's poverty 75%.

The Chinese miracle is mostly credited to the nation's commitment to its superstructure investment. Remarkably, over the past 10 years about 60% of governmental expenditures on infrastructure has gone toward highway construction. The Chinese government, along with the World Bank, see highways as having reduced poverty while creating a strong market economy.

Understandably, the Chinese are determined to keep building. Highways are at the center of the country's economic successes, which have reduced poverty. In a similar way, but in a different time, the world saw what rebuilding the auto-

bahn and investing in other critical infrastructure did for western Europe after World War II. In June 1963, while in Frankfurt, Germany, John F. Kennedy told the citizens of another rising economy, "As they say on my own Cape Cod, a rising tide lifts all the boats."

In 25 years, China was able to lift the boats of some 400 million of its

citizens, pulling them out of poverty by putting them on the road to being a world superpower.

Not the Taj Mahal of roads

American infrastructure projects are taking decades longer to complete than they should. The "Big Dig" in Boston was to be completed by 1998. In 2008, the project is just now wrap-

ping up with serious questions about the quality of work. In contrast, the Chinese government is more than a decade ahead of schedule on a project that makes the Big Dig look small. Originally, China's 21,700-mile-long National Trunk Highway System, a project of 12 interstate highways, was to be completed by 2020. Today, 12 years ahead of schedule, the work is done.

Instead of sitting back, the Chinese government has increased the scope of their new interstate system. The World Bank reported, "In 2004 the Chinese government approved an expanded Highway System, or the '7918 Highway Network.' The plan to build seven capital radials, nine north-south major highways and 18 east-west corridors, totaling some 85,000 km of high-grade expressways, is expected to be completed in 2020."

This plan means that all 1 billion-plus Chinese living in 30 provinces will be connected to one another by a 52,700-mile interstate system. The goal is to put the people in the cities of 500,000 close to a modern expressway. Along the eastern coast, heavily populated cities will be no more than 30 minutes from a major expressway, the central areas within an hour and the sparsely populated western areas within two hours of a superhighway on the 7918 system.

Only 20 years ago, China's road infrastructure was lagging behind India's. Today, India is making a desperate attempt to catch up by growing its own highway system. They have a long way to go.

Harvard Business School graduates Lynn Moloney and Kartik Seshan were married in India in fall 2007. The couple spent their honeymoon in China.

"The differences in roadways between India and China were astounding," explained Moloney, a world traveler and magazine editor. "The Chinese are masters of infrastructure. Their centralized government is planning far ahead of India's democracy. It's no surprise that their highways in China are big and beautiful. In India, it takes a lot longer to get where you are going. Even the new ring roads around cities are already jammed to capacity.

America's most recycled product

THE NEW ASPHALT



America's most recycled product doesn't fit into that blue bin.

Those curbside containers are certainly well-intentioned.

But every time you see one, you might want to remember that the asphalt pavement industry recycles more than 73 million tons of material every year – and that's more than twice as much as the total for paper, glass, plastic, and aluminum combined.

Reclaimed asphalt pavement, or RAP, is milled from old streets and highways, then given new life as a key ingredient in asphalt mixes that are used on new and rehabilitated roadways. RAP saves the taxpayers hundreds of millions of dollars a year while conserving our precious natural resources.

So, the next time you drive on an asphalt road that looks brand new, remember that it may actually be an old road that's been given new life through recycling. Visit our Web site for more information.



877-272-0077

www.AsphaltAlliance.com

Circle 752

“In Bangalore it takes an hour to go a mile. While traveling on highways from Delhi to the Taj Mahal we were subjected to three hours of crappy, rugged roads. Trucks, cars and scooters kicked up dust pollution that was as bad as I’ve ever seen.”

India’s roads, wrote *New York Times* reporter Amy Walden, are “better suited to bullock carts than motor cars. In the 50 years after independence, the government built just 334 miles of four-lane roads.”

Walden reported that India is in the process of building an American-style interstate highway called the Golden Quadrilateral, a 3,625-mile highway system that is redefining travel in the transportation-challenged nation. According to Walden the new super-highway will run through 13 states and the nation’s four largest cities.

She explained, “The highway was conceived in 1998, soon after a Hindu nationalist-led government took power. The prime minister at the time, Mr. Vajpayee, quickly ordered a series of nuclear tests and later that year announced the highway project.” She added that Vajpayee proclaimed to the inexperienced builders of the new superhighway, “You are not only making money, you are building a nation.”

According to UPS, however, it is still very slow-going. “You could be stuck in traffic and get overtaken by a cow. Sometimes it’s difficult to tell the difference between parked vehicles and those that are meant to be moving,” explained Andy Connelly to the *Wall Street Journal*. Connelly, who is a senior vice president at UPS Asia, is charged with mastering the logistics of chaos. India, with its more-than-1 billion potential customers, is too great a market to ignore.

Connelly explained, “it’s absolutely worth the effort. We pride ourselves on our efficiencies, and we have to rewrite the rule book.”

India and China are the best bets to expand lackluster growth for nearly every sector of U.S. industry—even the package-delivery business.

Regardless of India’s recent progress, it will be unable to keep pace with China’s development. The reason is simple: right-of-way. India, a democracy, must struggle with due process. Roadway or runway expansion

plans run afoul of individual rights in India. In Mumbai, planes waste time flying in circles and burning fuel as they hang in suspense for clearance to land. The skies around the airport are notoriously congested because Indian aviation authorities have been unable to expand the runways into neighboring slums. Meanwhile in China, a decision to build a single project may displace thou-

sands of people in little time—putting them ahead of their already ambitious schedules—making China a new world superpower. ■

McNichol is a freelance writer based in Boston.

LearnMore!
For more information related to this article, go to: www.roadbridges.com/lm.cfm/rb030806

Rapid Set®
Advanced Cement Technology
• STRONGER • FASTER • MORE DURABLE

More Durable
Compared to Portland Cement
• Less Shrinkage
• More Sulfate Resistant Than Type V
• Better Freeze Thaw Resistance
• Lower Permeability
• Higher Bond Strength

Kiewit uses Bulk Rapid Set® Cement concrete batched with volumetric mixers for 18" thick, full-depth pavement repairs at the Atlanta Hartsfield Airport.

3000-psi in 1-hour
10,000 psi in 28 days
Adjustable working time from 10 minutes to 2 hours using Set Control® admixture

The Contractors Choice for:
Structural Concrete Repair
Vertical & Overhead Repair
Precision Grouting
Slab & Pavement Repair
Skim Coating & Patching
Precast Casting & Patching
Bridge Deck Overlays
Anchoring & Doweling

Available Nationwide
To find your local supplier, go to:
www.rapidset.com
CTS CEMENT MANUFACTURING CORP. 800-929-3030

Bag Products and Bulk Cement

Circle 760