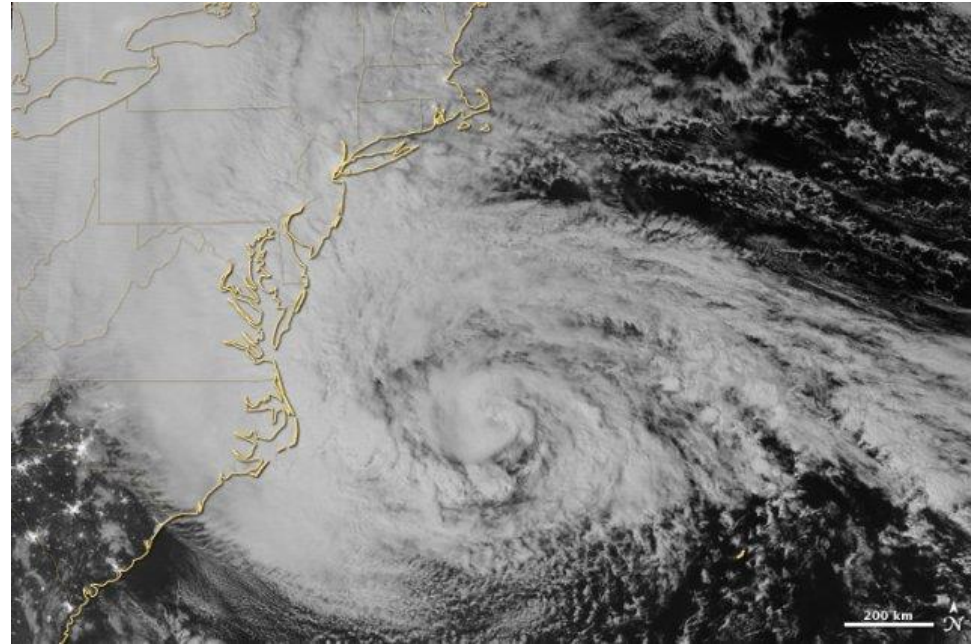


Megacities: Strategic Influence and MDB Implications



Seoul 1953 and
1996



Hurricane Sandy Strikes NYC, October 2012

Dr. Russell W. Glenn
G2, U.S. Army Training and Doctrine Command
Fort Hamilton, NY
Multi-Domain Battle in Megacities Conference
April 3, 2018

Simple Agenda

What is a megacity?



View of Seoul from Namsan tower road

**What are its implications for
Multi-Domain Battle (MDB)?**

In Support of Partnership



Common Definitions of a Megacity

“...defined as exceeding 8 million.”

Ronan Paddison,
“Cities in Transition”

“Cities with more than 10 million inhabitants...”

United Nations,
“The World’s Cities Data Booklet,”
2016

mega-venti Frappuccino
= 10M population



venti Frappuccino
= 1M population



Megacities Worldwide (2017)



USARPAC and Australia's Tough Neighborhood

“Between 1970 and 2014, natural disasters accounted for more than 2 million deaths in the Asia-Pacific, 57 percent of the global total. [Former PACOM commander] Admiral Locklear routinely told his subordinate commanders, ‘While you’re here you may not have a conflict with another military, but you will have a natural disaster that you have to either assist in or be prepared to manage the consequences on the other side.’”

Timothy McGeehan,

“A War Plan Orange For Climate Change”

Why Focus on Megacities (or a Country's Largest City)?

Primate (or primary) city: A country's city that is at least twice as large as the next largest city and more than twice as significant.
(Mark Jefferson, 1939)

Zipf's Law: If all cities in a country are placed in order from the largest to the smallest, each one will have a population half the size of the preceding city. (1935)

- New York-Los Angeles-Chicago: 21.4M – 15.5M – 9.1M
- **Tokyo-Osaka-Nagoya: 37.9M – 17.1M – 10.1M**
- Seoul-Busan-Daegu: 24.1M – 3.22M – 2.24M
- Manila-Davao-Cebu City: 24.2M – 1.6M* – 0.95M*
- Jakarta-Surabaya-Bandung-Medan: 31.8M – 2.9M – 2.5M – 2.2M
- Bangkok: Over 14x size of next largest Thai city



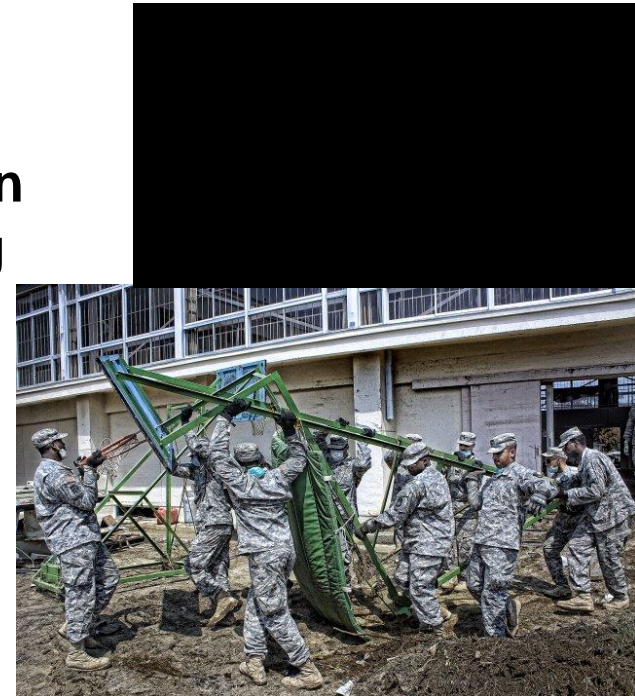
Exemplar Tokyo: Natural and Manmade Disasters

- **Natural**

- Earthquakes
 - September 1, 1923 (7.9 on Richter scale)
 - **Over 140,000 killed**
 - 1M homeless
 - 300,000 Tokyo buildings destroyed
 - October 5, 1985 (6.2 on Richter scale)
 - **No deaths**

- **Manmade**

- 2011 Fukushima radiation threat
 - “The country came within a ‘paper-thin margin’ of a nuclear disaster requiring the evacuation of 50 million people.”
 - U.S. supports with Operation *Tomodachi* (“friendship”)
- nK missiles



The Worldwide Reach of Megacity Tokyo

- Largest urban population in the world: 37.9M (2016)
- **29.8% of Japan's population(2016)***
- **2.3% of Japan's geographic area (2016)**
 - **48 times the size of Washington, D.C.**
- **34.7% of Japan's GDP (2015)**
- **10.1% of country's employed persons(2010)**
- **35.1% of national annual commercial sales (2014)**
- **50.1% of corporations capitalized over 1B yen (2014)**
- **83.9% of foreign countries' companies in Japan (1995)**
- **Megacity spread over multiple prefectures in addition to encompassing 23 wards and other urban authorities**

* Japan 2016 population: 127M

Bottom line:

Population Size is not the Critical Factor, so...

Megacity:

“An urban area of extraordinary population size, geographic spread, physical and social complexity, and similarly exceptional characteristics, to include influence with at least national and broader regional scope.”

“Non-traditional” Exemplar: Singapore (2017 population ~ 6M)

- World’s top oil bunkering (ship fueling) port by volume
- Second largest container port
- 130,000 ships call annually
- Singapore Strait monitored by the country’s Maritime and Port Authority's Port Operations Control Centre

What is Multi-Domain Battle (MDB)

“Multi-Domain Battle is fundamentally about how U.S. forces will deter and defeat adversary strategies below the level of armed conflict and, when necessary, fight and win to overcome rapidly evolving challenges posed by powerful and intelligent peer rivals.”

“Multi-Domain Battle: Evolution of Combined Arms for the 21st Century 2025-2040” (Ver. 1.0, December 2017)

Implications of Megacities for MDB

- **View a megacity as a system *and* subsystem.**
 - Account for 2nd and higher order effects.
 - The pool table metaphor
 - Social infrastructure is as important as that physical.
 - Decisive terrain may not be ground...or in the urban area.
- **Recognize that MDB's armed conflict and competition challenges will occur simultaneously.**
 - GEN Krulak's "3 block war" for the operational and strategic levels
 - The battle (or operations) will put demands on all domains.
 - Look beyond departure of coalition forces in planning and execution.
- **We need innovative thinking**
 - Maneuver as it is: employment of forces "in the operational area through movement in combination with fires to achieve a position of advantage in respect to the enemy"
 - Maneuver as it should be: "employment of relevant resources to gain advantage with respect to select individuals or groups in the service of achieving specified objectives"

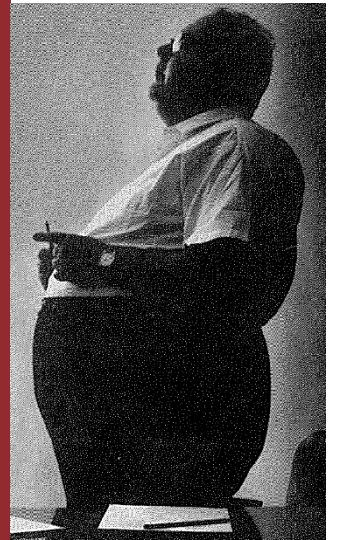
Western Militaries Have Never Fought in Megacities

“Military doctrine serves to codify best military practices from primarily historical experiences.”

Dr. Cathy Downs, “Strategic Blind-Spots...”

“When [U.S. military] officers objected that [Herman] Kahn was ill-equipped to speak on military affairs...he'd shoot back, 'How many thermonuclear wars have you fought recently?'... They admitted they had no actual experiences with these weapons. 'O.K., Kahn would grin, 'Then we start out even.'”

Ghamari-Tabrizi
*The Worlds of
Herman Kahn*



...but we fortunately have much in the way of urban operations experience upon which to build.

Questions for the Panel?