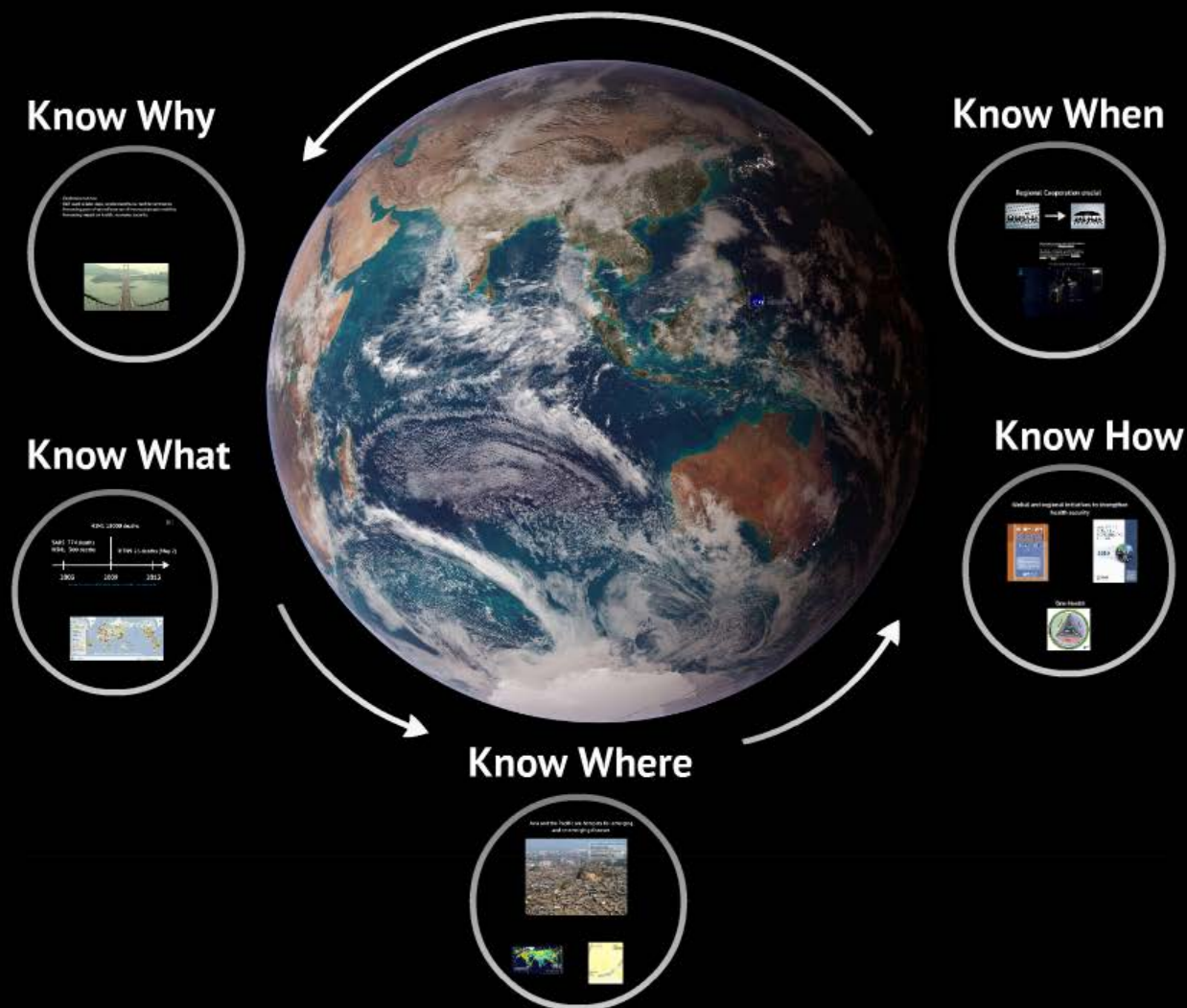


Preparing for the inevitable

Why regional health security matters!




The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.

Know Why



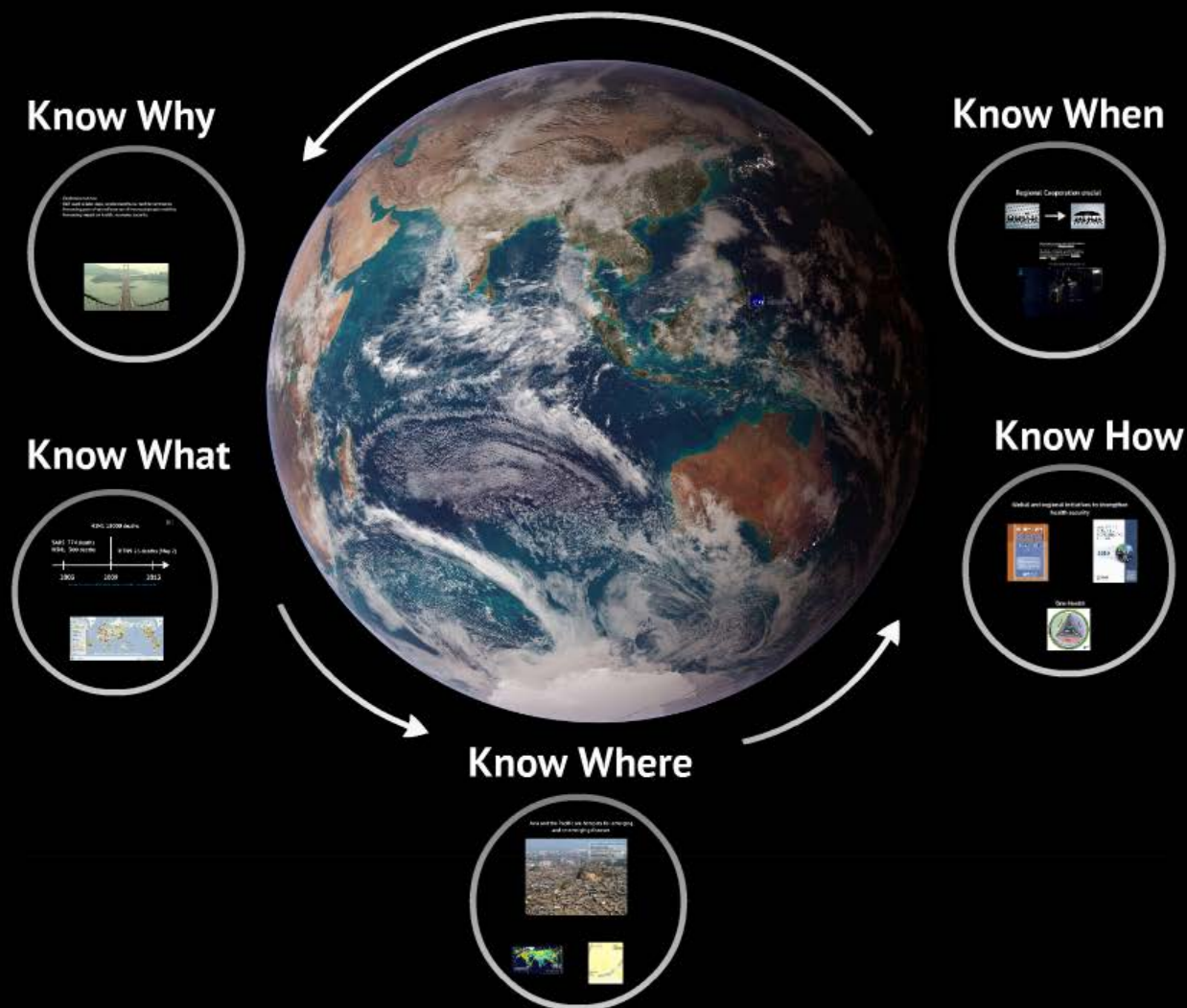
• Epidemics not new



- 
- Epidemics not new
 - BUT used to take days, weeks/months to reach far territories
 - Increasing pace of spread because of increased people mobility
 - Increasing impact on health, economy, security

Preparing for the inevitable

Why regional health security matters!

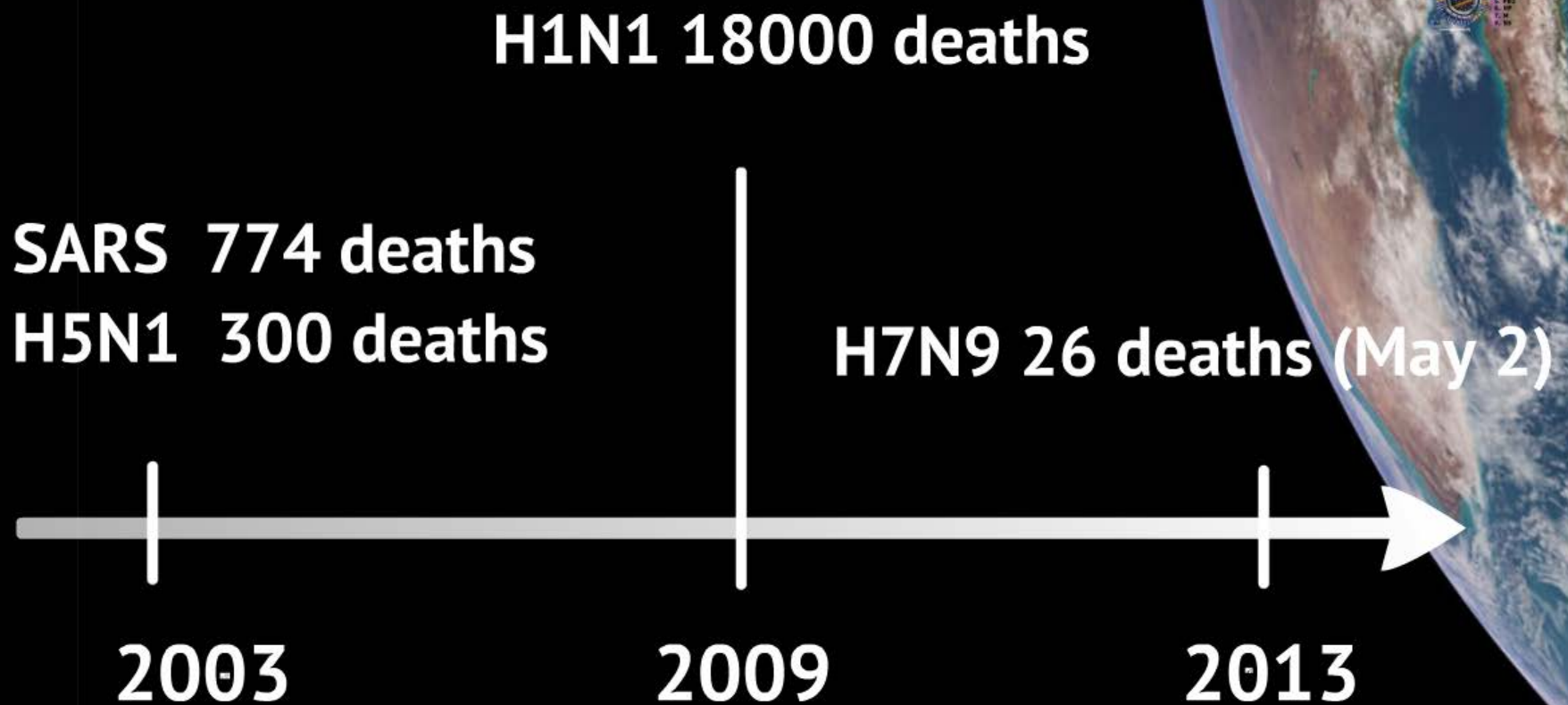


Know What

H1N1 18000 deaths

SARS 774 deaths





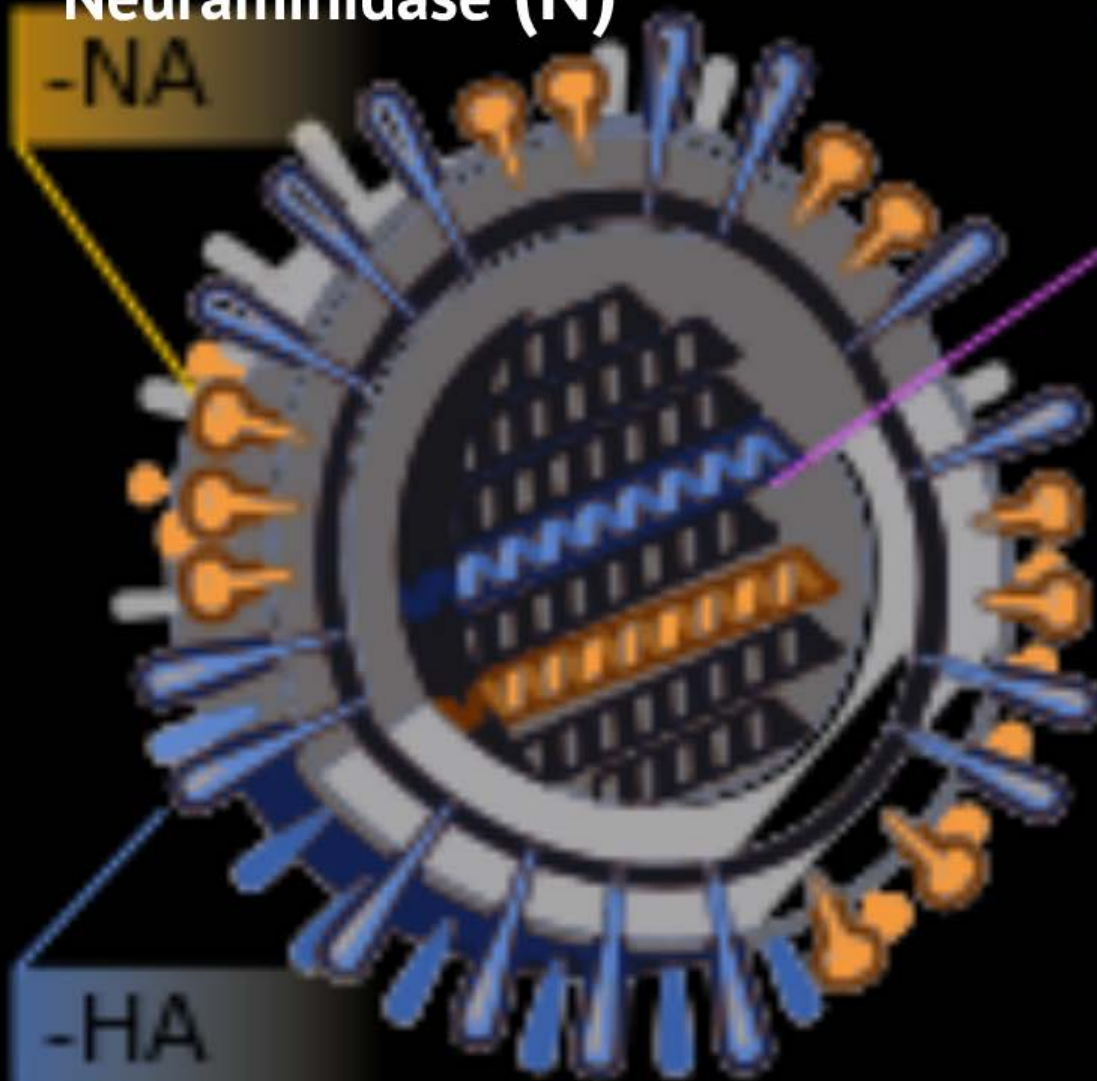
Compared to around 38000 deaths happening annually from seasonal flu.

Influenza A

8 Gene

Neuraminidase (N)

-NA



-HA

Haemagglutinin (H)

1. HA

2. NA

3. PA

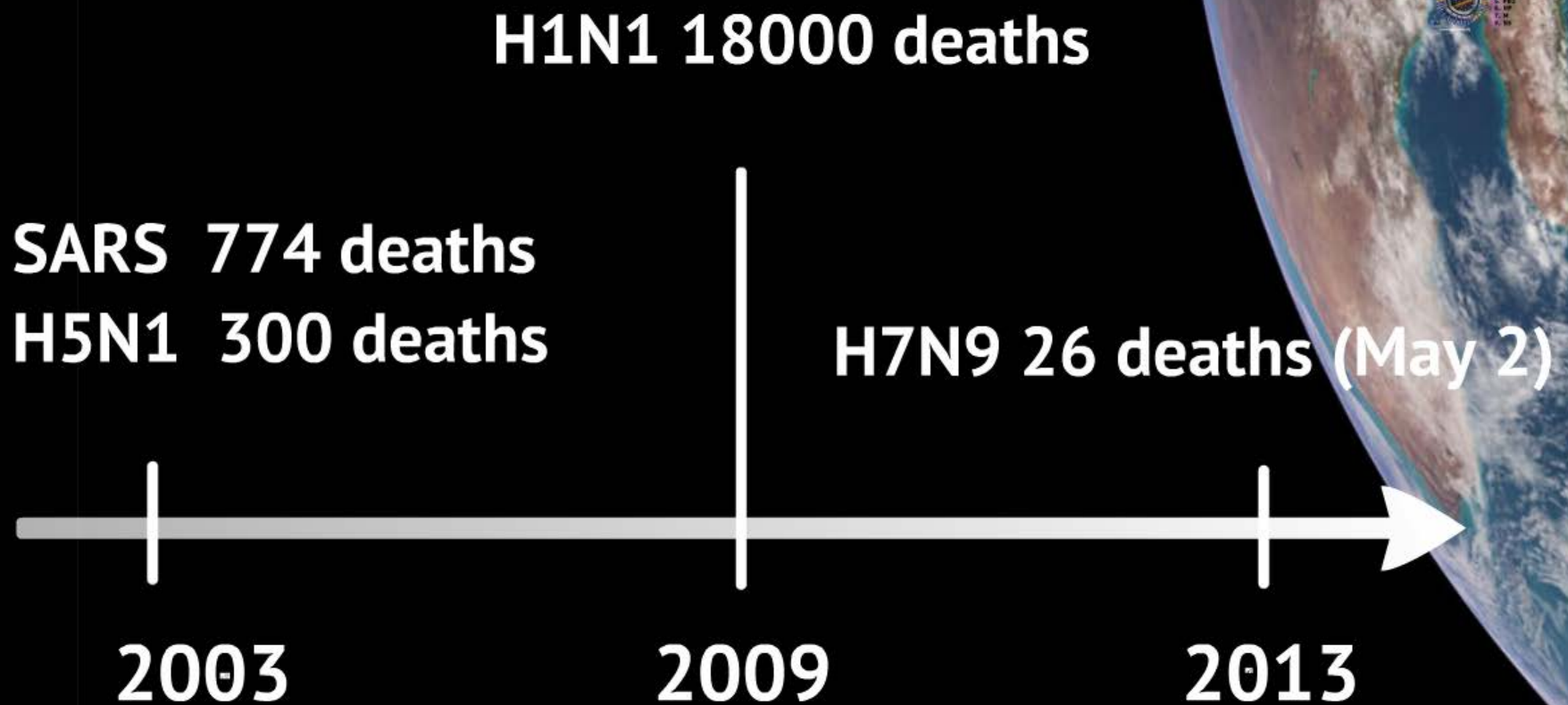
4. PB1

5. PB2

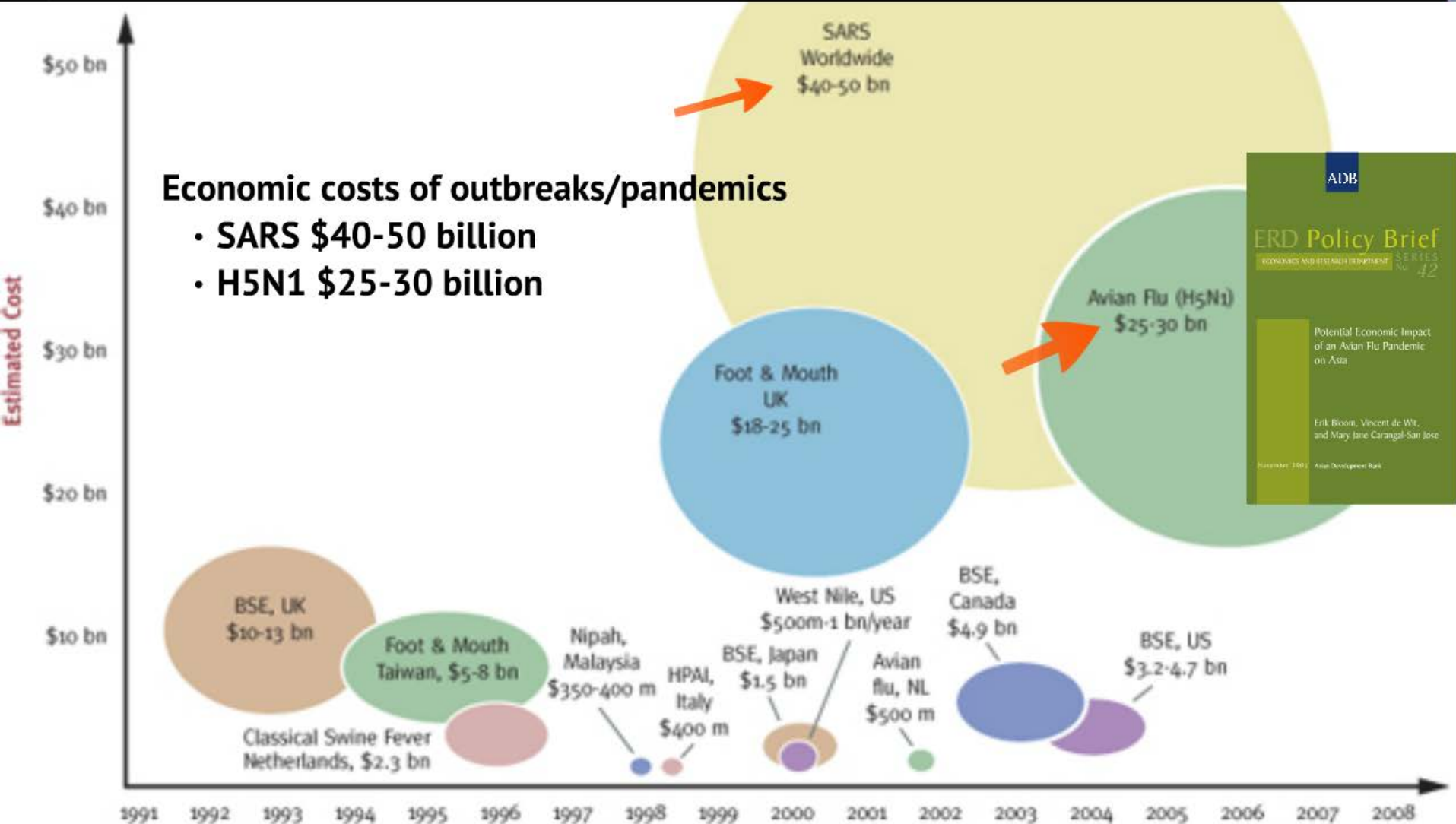
6. NP

7. M

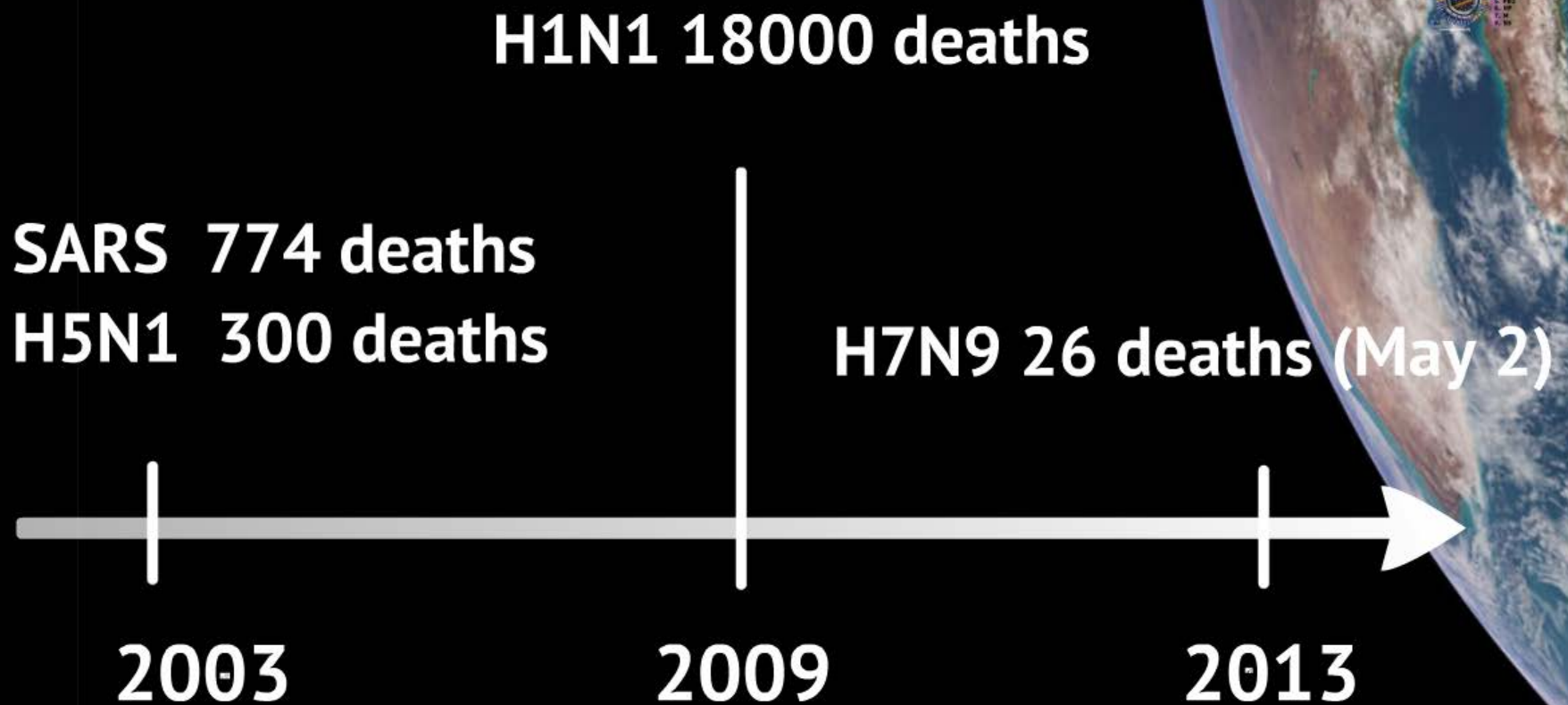
8. NS



Compared to around 38000 deaths happening annually from seasonal flu.



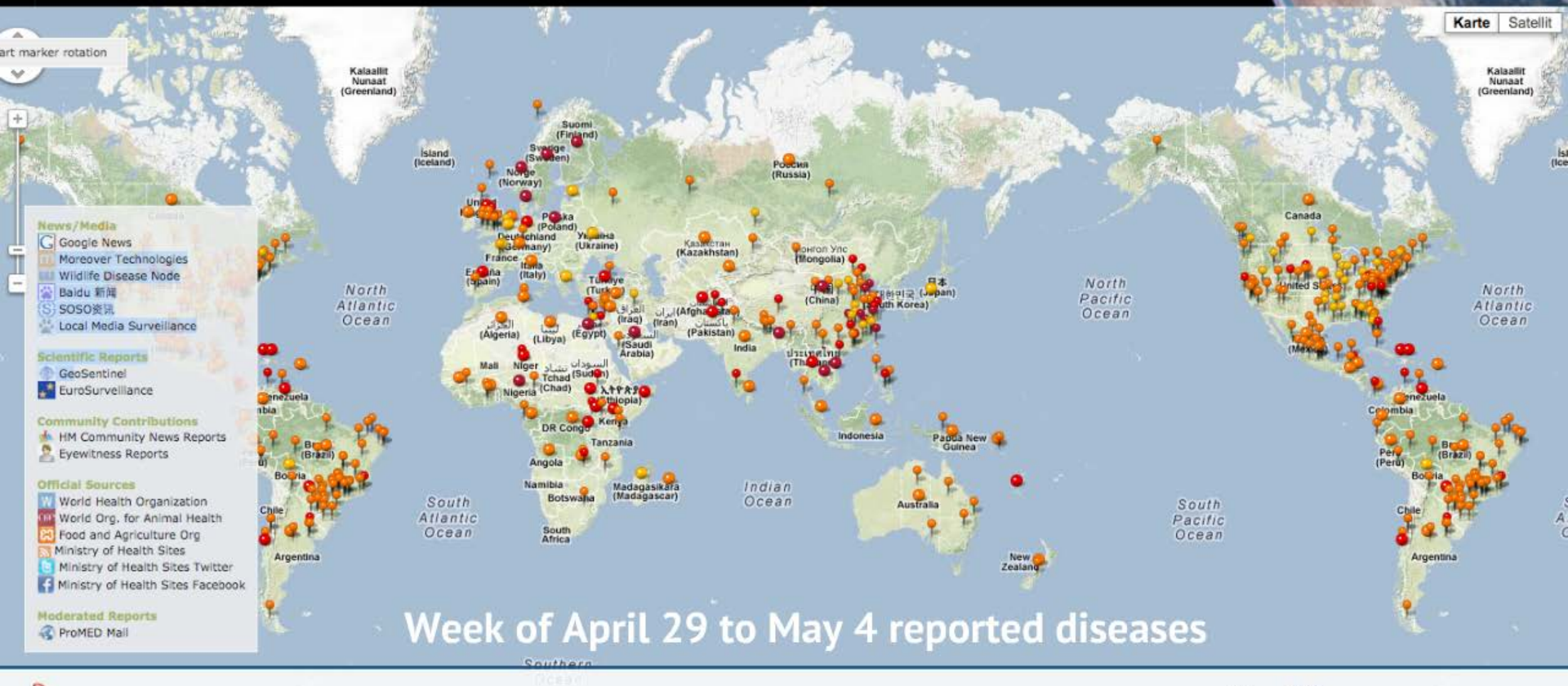
Figures are estimates and are presented as relative size.

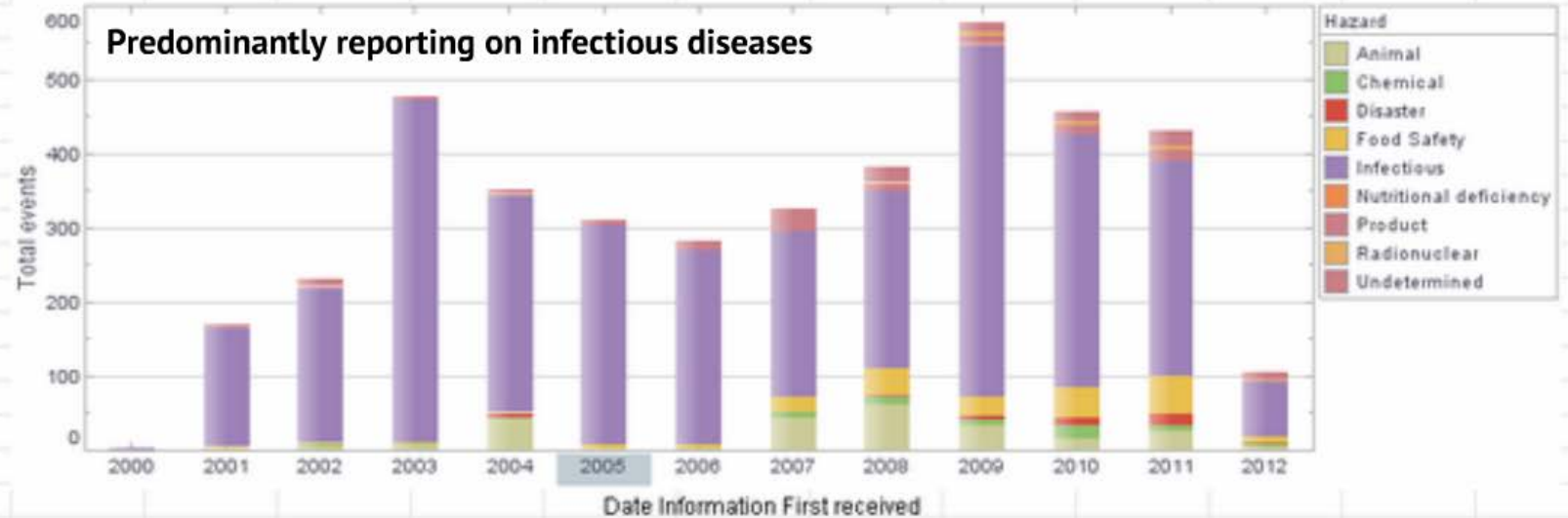


Compared to around 38000 deaths happening annually from seasonal flu.

WANG XIAOYING



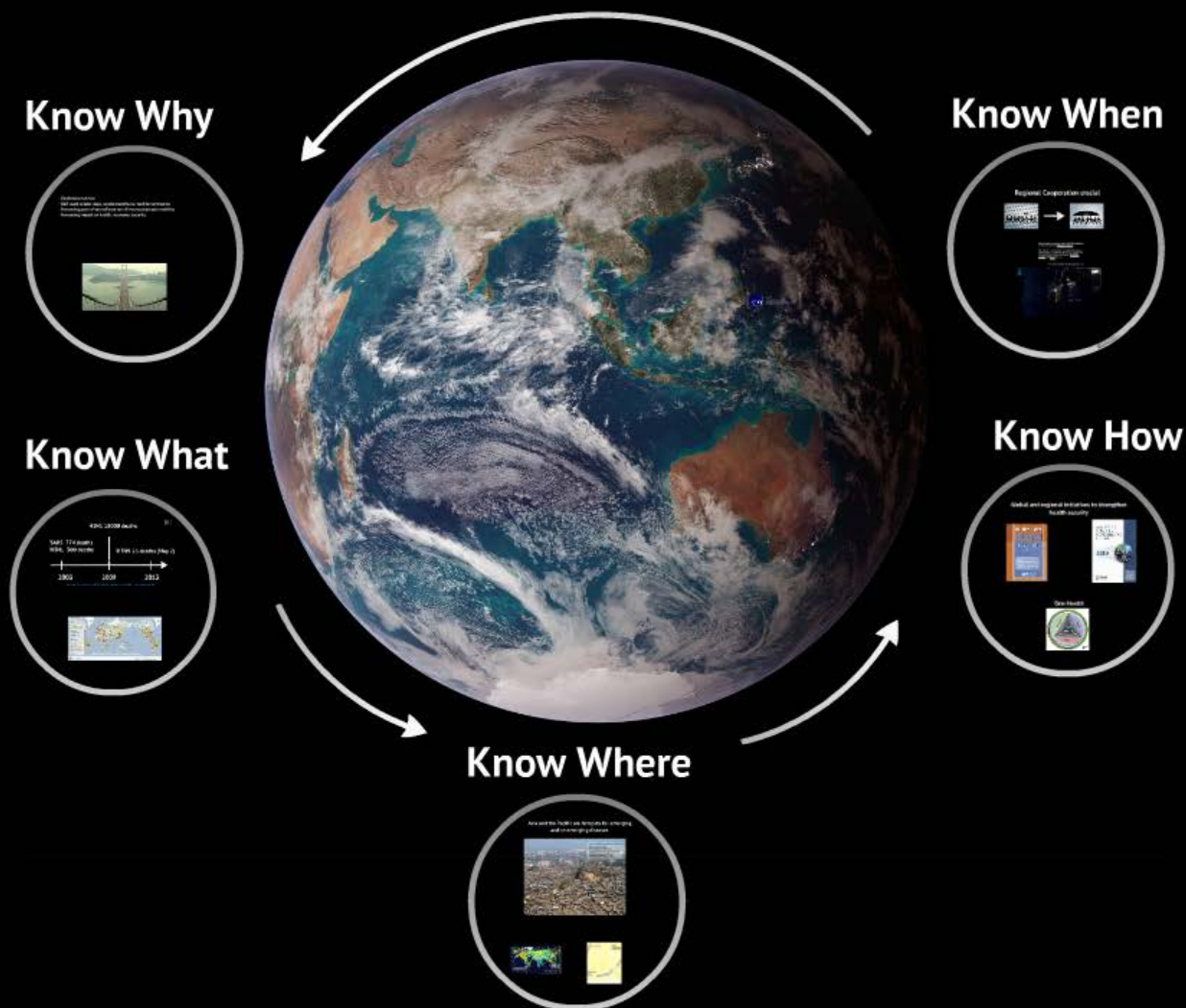




WHO Events by Hazard – global (as of 24 April 2012; N = 4099)

Preparing for the inevitable

Why regional health security matters!





Know Where

Asia and the Pacific are hotspots for emerging
and re-emerging diseases



- Around 4.2 billion people live in Asia/Pacific
- High population density
- Rapid unplanned urbanization
- 100,000 people move to cities every day
- Close human and animal contact
- Increasing consumption of meat
- Increasing impact of climate change

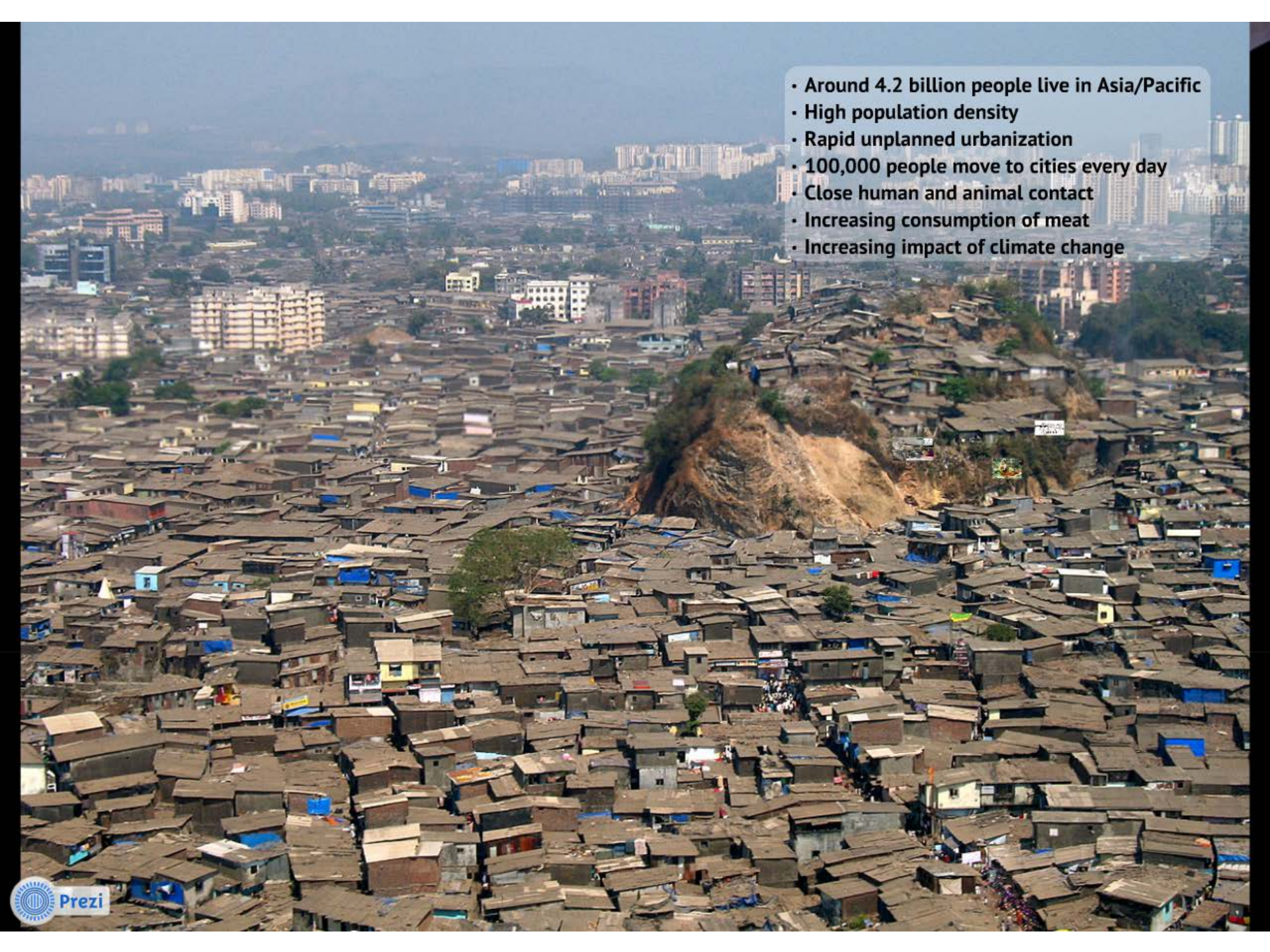



Asia and the Pacific are hotspots for emerging and re-emerging diseases



- Around 4.2 billion people live in Asia/Pacific
- High population density
- Rapid unplanned urbanization
- 100,000 people move to cities every day
- Close human and animal contact
- Increasing consumption of meat
- Increasing impact of climate change



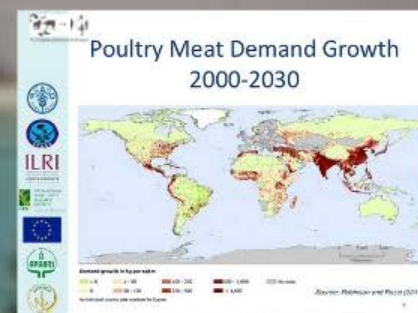
- 
- An aerial photograph showing a vast, densely packed urban area, likely a slum. The foreground and middle ground are filled with a sea of small, closely situated buildings with dark, flat roofs. A prominent, steep, and somewhat barren hillside rises in the center-right of the image. In the background, more organized urban structures, including taller apartment buildings, are visible under a hazy sky. A semi-transparent text box in the upper right corner contains a bulleted list of facts related to urbanization in Asia/Pacific.
- Around 4.2 billion people live in Asia/Pacific
 - High population density
 - Rapid unplanned urbanization
 - 100,000 people move to cities every day
 - Close human and animal contact
 - Increasing consumption of meat
 - Increasing impact of climate change

- 
- **Around 4.2 billion people live in Asia/Pacific**
 - **High population density**
 - **Rapid unplanned urbanization**
 - **100,000 people move to cities every day**
 - **Close human and animal contact**
 - **Increasing consumption of meat**
 - **Increasing impact of climate change**

- Avian influenza driven by poultry and wild birds
- More than 10 billion chickens in PRC
- Many more domestic and wild birds



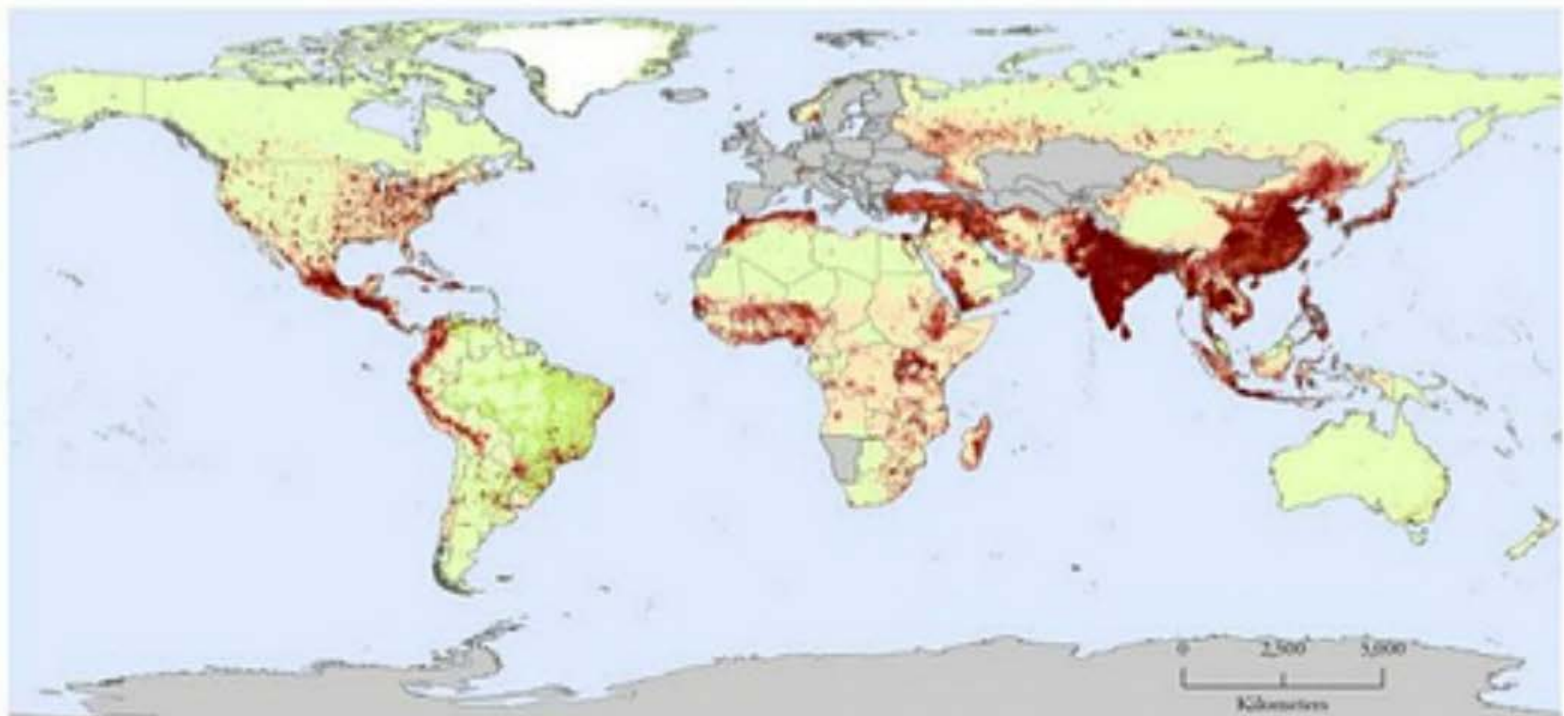
- 
- Avian influenza driven by poultry and wild birds
 - More than 10 billion chickens in PRC
 - Many more domestic and wild birds





75% of emerging human infections come from animal sources.

Poultry Meat Demand Growth 2000-2030

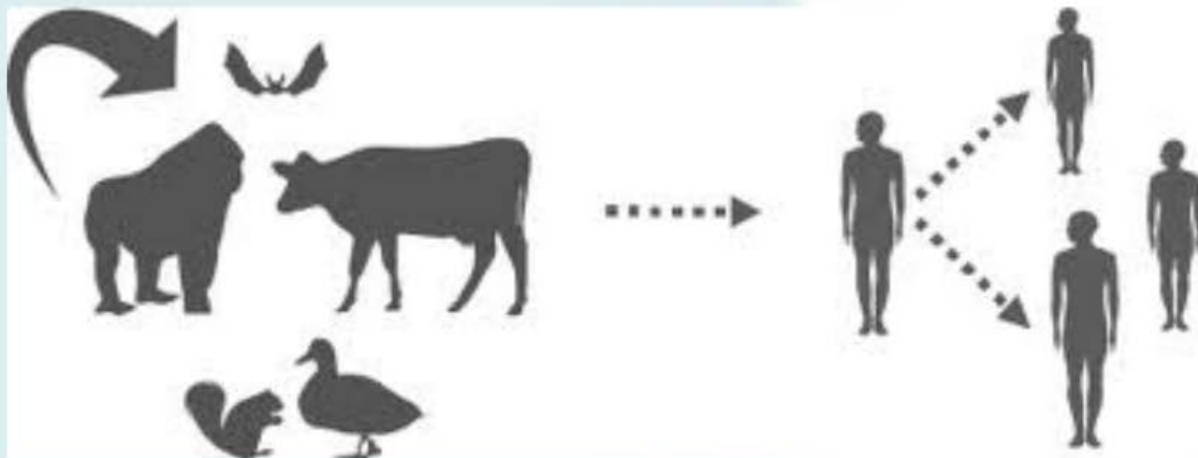


Demand growth in kg per sqkm



No individual country data available for Europe

Source: Robinson and Pozzi (2011)




75% of emerging human infections come from animal sources.

Po

- 1.8 billion people at risk of dengue in the region
- Dengue has increased threefold in GMS in 2012
- Around 12,500 death per year in Asia and the Pacific
- Economic cost 17 times higher than for cough/cold



- 
- **1.8 billion people at risk of dengue in the region**
 - **Dengue has increased threefold in GMS in 2012**
 - **Around 12,500 death per year in Asia and the Pacific**
 - **Economic cost 17 times higher than for cough/cold**

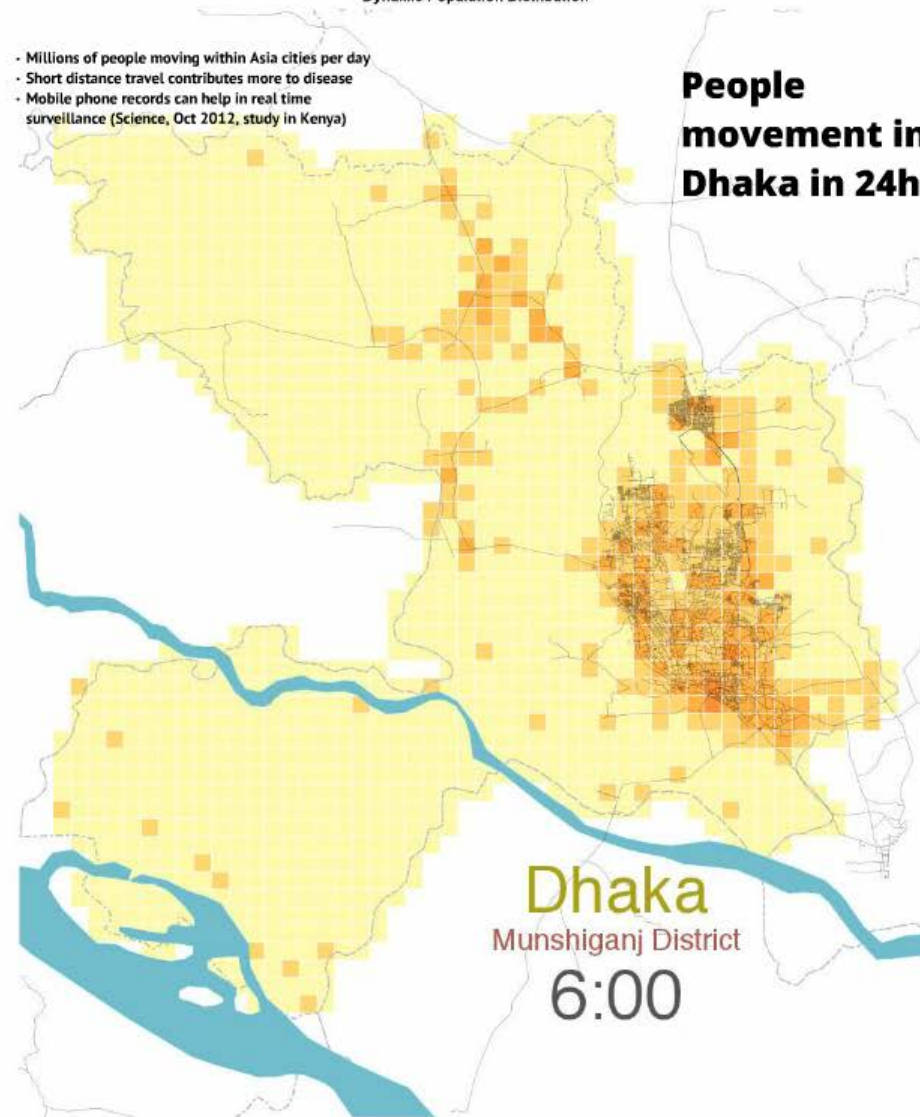


- Malaria causes 40,000 deaths per year in Asia/Pacific
- Artemisinin resistant strains increasing in GMS

Dynamic Population Distribution

- Millions of people moving within Asia cities per day
- Short distance travel contributes more to disease
- Mobile phone records can help in real time surveillance (Science, Oct 2012, study in Kenya)


People movement in Dhaka in 24h.

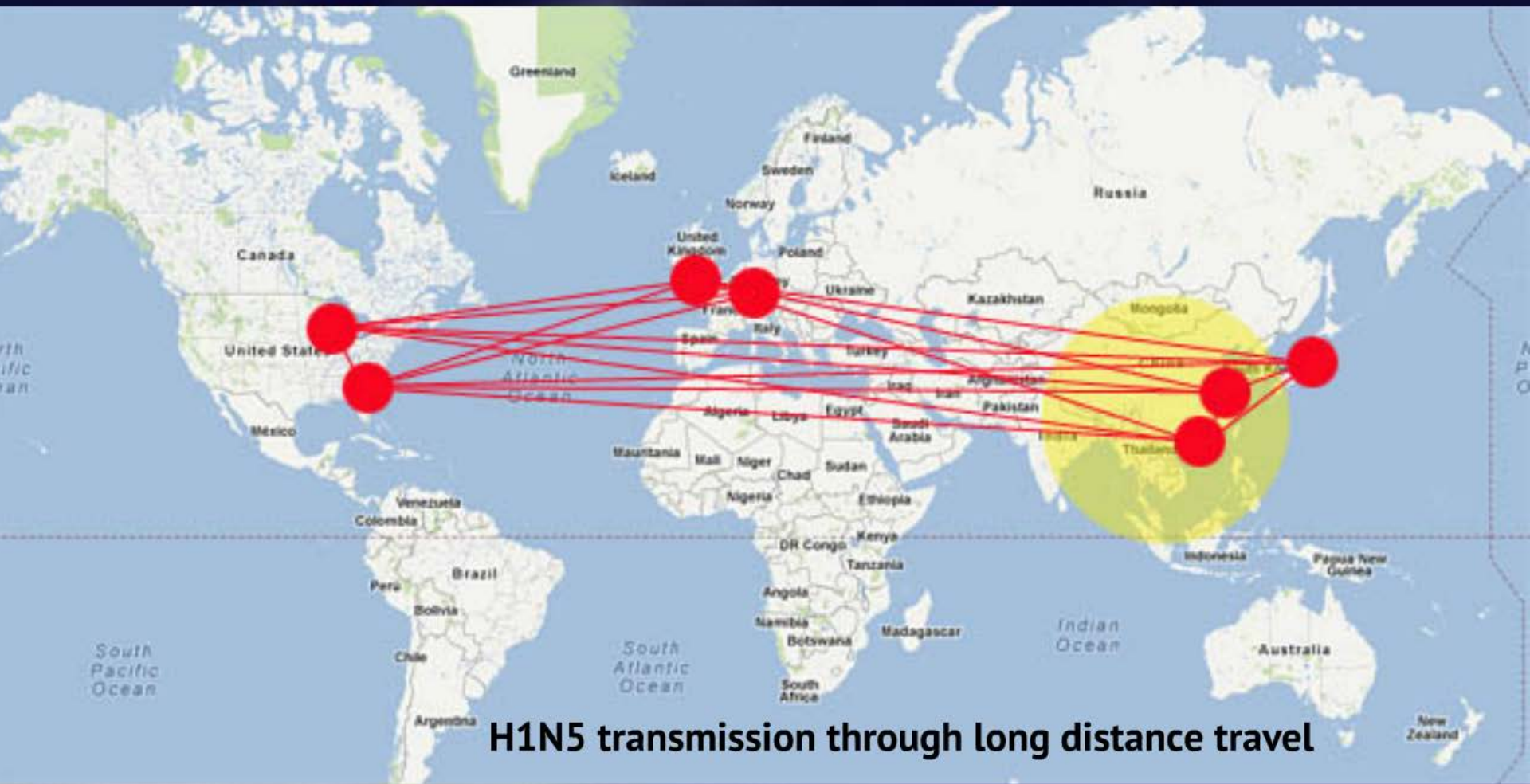


Dhaka
Munshiganj District
6:00

- **Millions of people moving within Asia cities per day**
- **Short distance travel contributes more to disease**
- **Mobile phone records can help in real time surveillance (Science, Oct 2012, study in Kenya)**



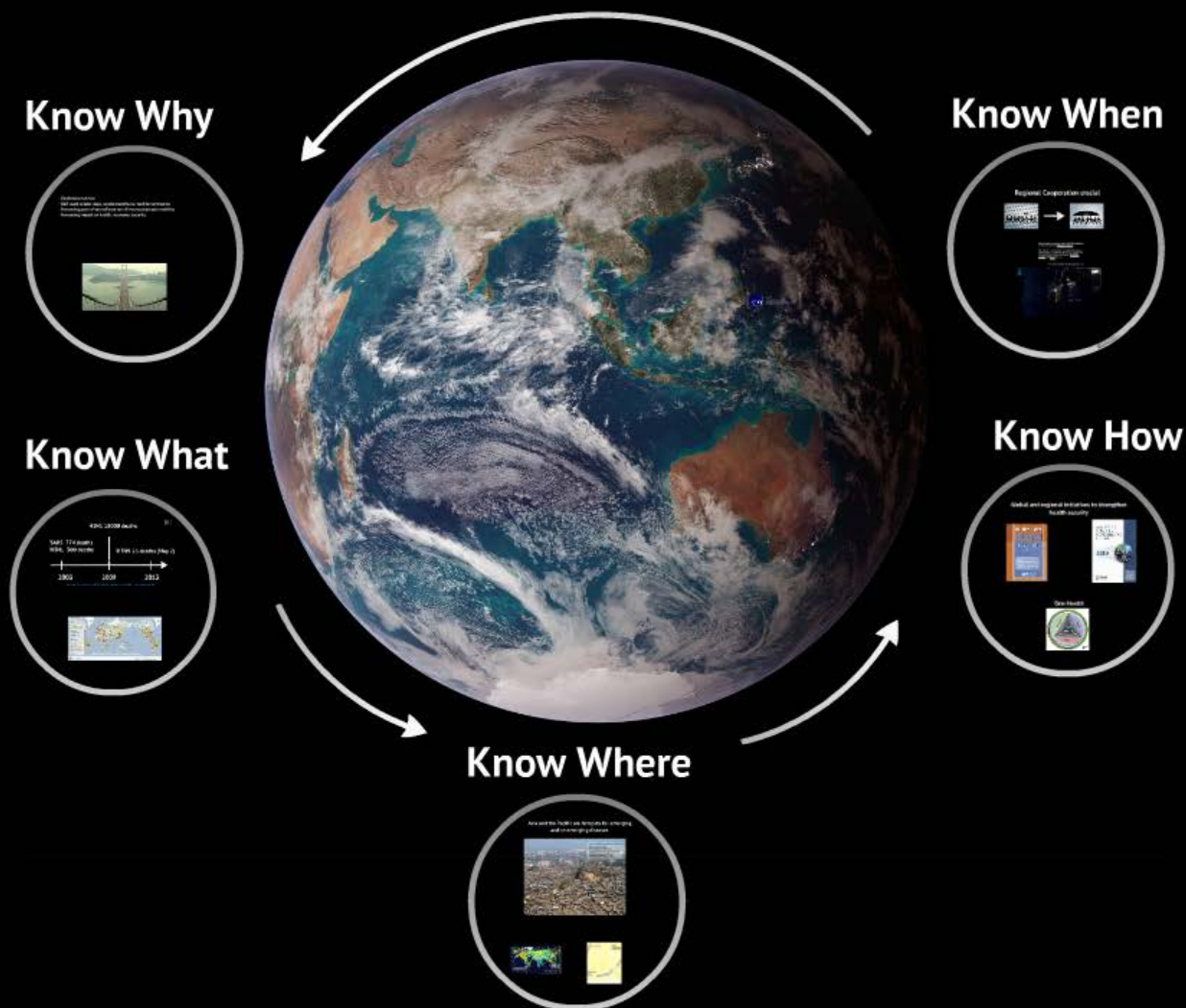
- 
- **2 million flights per week from the 500 busiest airports among which are:**
 - **Singapore, Hongkong, Shanghai, Tokyo**



H1N5 transmission through long distance travel

Preparing for the inevitable

Why regional health security matters!

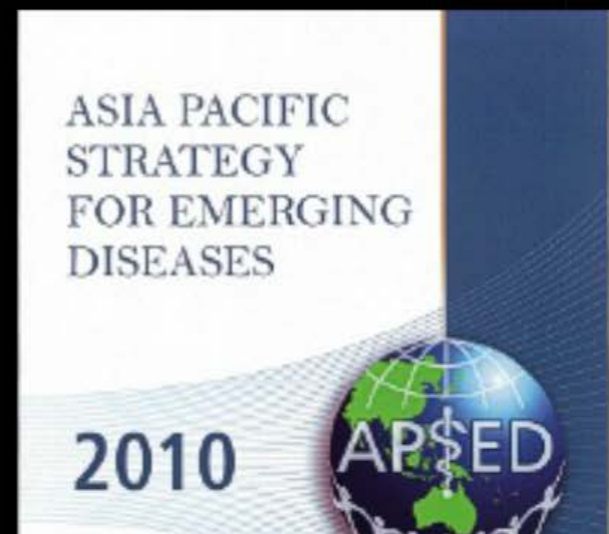
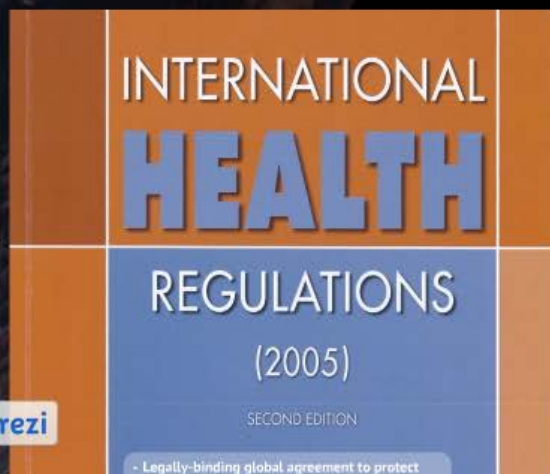


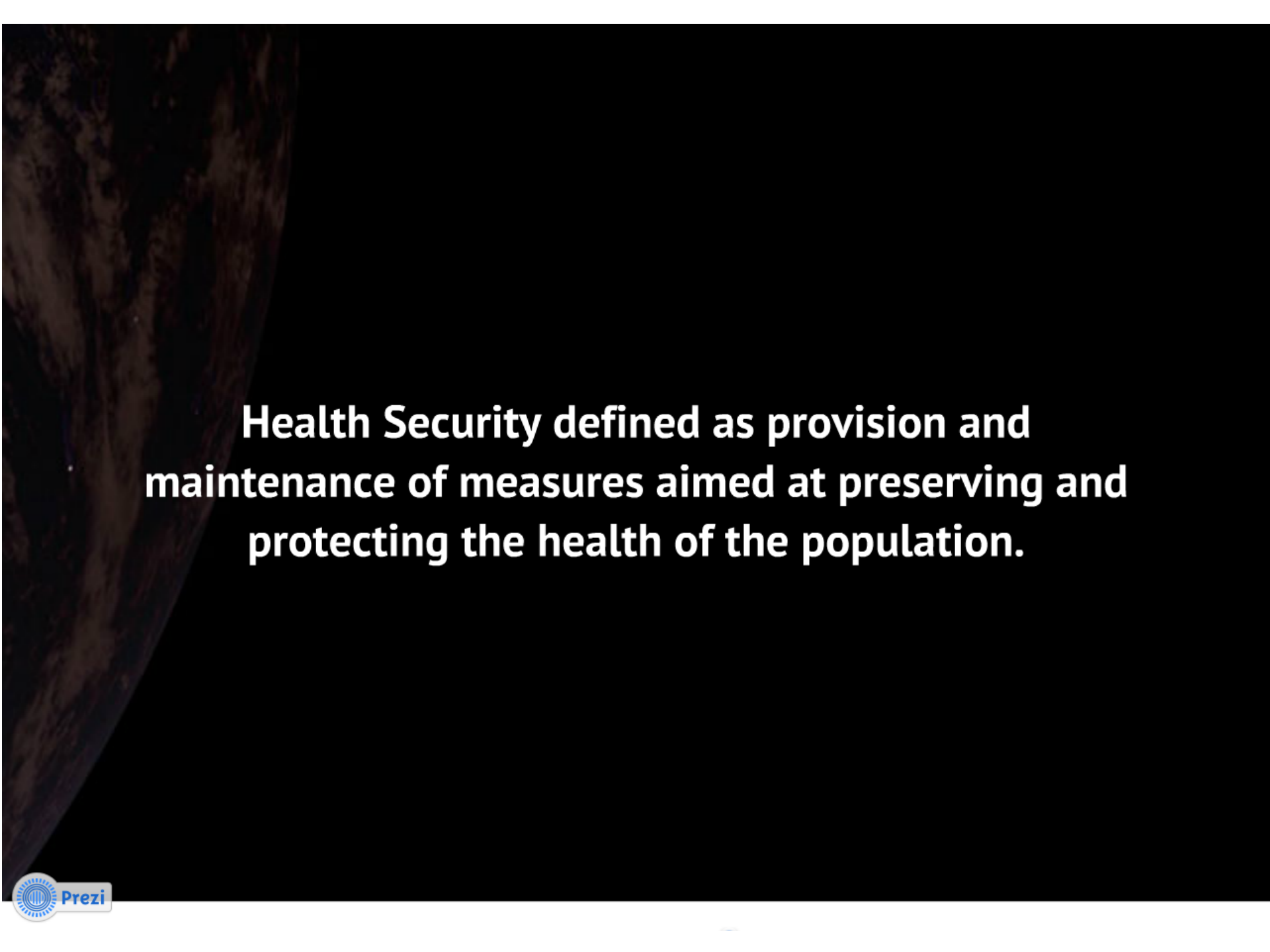
A satellite view of Earth from space, showing the Eastern Hemisphere. The African continent is visible on the left, with the Indian Ocean to its east. The background is black, representing space. Two large, light gray, semi-transparent arcs are overlaid on the image, one at the top and one at the bottom, framing the central text.

Know How

Global and regional initiatives to strengthen
health security

Global and regional initiatives to strengthen health security





Health Security defined as provision and maintenance of measures aimed at preserving and protecting the health of the population.



INTERNATIONAL HEALTH

REGULATIONS (2005)

SECOND EDITION

- Legally-binding global agreement to protect public health
- An international commitment for shared responsibilities and collective defense against disease spread
- Good achievements through experience with SARS and H1N1
- BUT much remains to be done....



World Health
Organization

- Legally-binding global agreement to protect public health
- An international commitment for shared responsibilities and collective defense against disease spread
- Good achievements through experience with SARS and H1N1
- BUT much remains to be done....

ASIA PACIFIC STRATEGY FOR EMERGING DISEASES

2010

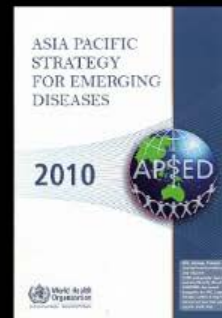


- PRC, Vietnam, Thailand strengthened surveillance and response
- H7N9 was quickly reported and viral identify shared
- HOWEVER, the overall budget for the PRC Center of Disease Control is only \$18 million/per year and only 30 experts work there

- PRC, Vietnam, Thailand strengthened surveillance and response
- H7N9 was quickly reported and viral identify shared
- **HOWEVER**, the overall budget for the PRC Center of Disease Control is only \$18 million/per year and only 30 experts work there

Know How

Global and regional initiatives to strengthen health security



One Health



- Looks at human-animal bond which impacts on health of people and animals
- Research and partnerships (FAO, OIE, WHO etc.)
- Information exchange



call

- Looks at human-animal bond which impacts on health of people and animals
- Research and partnerships (FAO, OIE, WHO etc.)
- Information exchange



WAHID home page

Country information

Disease information

Disease control measures

Countries sanitary situation comparison

Data between 1996 and 2004

> Info by Country/Territory

Choose by:

Single country

Region :

Entire World

Country :

Mexico

Reporting for countries: Afghanistan; Bahrain; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; China (People's Rep. of); Chinese Taipei; Hong Kong (SAR - PRC); India; Indonesia; Iran; Iraq; Israel; Japan; Jordan; Kazakhstan; Korea (Dem. People's Rep.); Korea (Rep. of); Kuwait; Kyrgyzstan; Laos; Lebanon; Macau; Malaysia; Maldives; Mongolia; Myanmar; Nepal; Oman; Pakistan; Palestinian Auton. Territories; Philippines; Qatar; Saudi Arabia; Singapore; Sri Lanka; Syria; Tajikistan; Thailand; Timor-Leste; Turkmenistan; United Arab Emirates; Uzbekistan; Vietnam; Yemen

> Choose Disease:

☒ Terrestrial: Nipah virus encephalitis (2006 -)

☐ Aquatic: --- Aquatic ---

Legend

> Choose control measure

Disease Monitoring

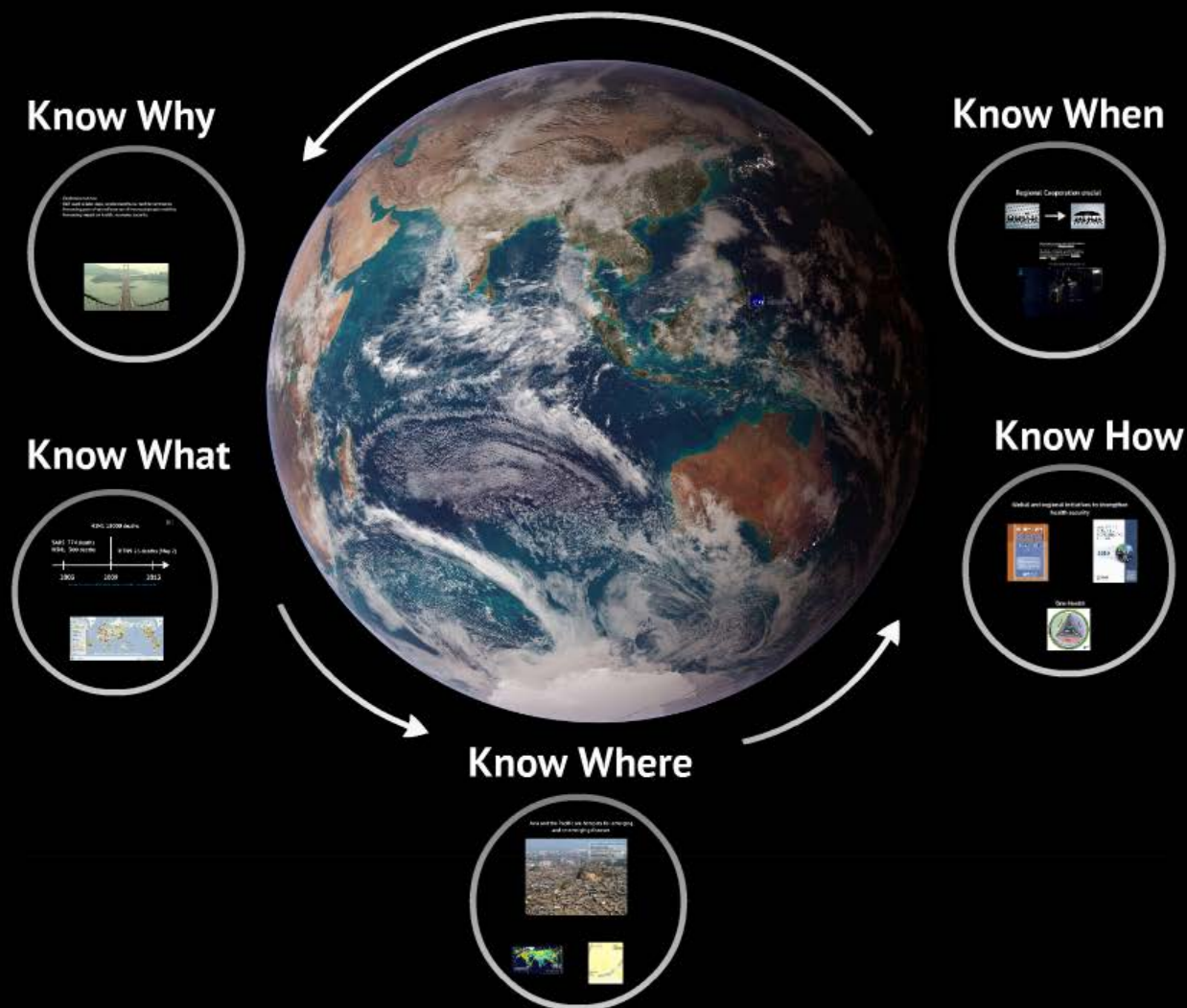
Control measures maps



World Organisation for Animal Health provides excellent databases

Preparing for the inevitable

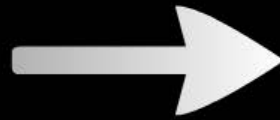
Why regional health security matters!



Know When

Regional Cooperation crucial

Regional Cooperation crucial



- Need to prepare for the next event, which will inevitably be different and which will INEVITABLY HAPPEN.
- PRC, Vietnam—Asia in general—is an epicenter because of the interactions of populations (human, pigs, poultry, wild animals), but these events could happen ANYWHERE, ANYTIME and IMPACT all of us.

STRATEGY 2020

- Highlights ADB's role to mitigate adverse health impacts from infrastructure and trade facilitation project
- ADB needs to support regional public goods and the cross-border nature of health

ADB's REGIONAL COOPERATION AND INTEGRATION STRATEGY

Pillar 4: Cooperation in Regional Public Goods (RPGs)
Long-term impact: Improved regional environments, health, and social conditions

OPERATIONAL PLAN FOR IMPROVING HEALTH ACCESS AND OUTCOMES UNDER STRATEGY 2020

Support for regional public goods including such challenges as pandemic preparedness, and global health security issues in this region

STRATEGY 2020

- **Highlights ADB's role to mitigate adverse health impacts from infrastructure and trade facilitation project**
- **ADB needs to support regional public goods and the cross -border nature of health**

ADB's REGIONAL COOPERATION AND INTEGRATION STRATEGY

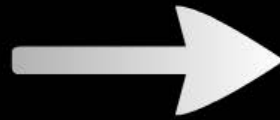
Pillar 4: Cooperation in Regional Public Goods (RPGs)

**Long-term impact: Improved regional environments, health,
and social conditions**

OPERATIONAL PLAN FOR IMPROVING HEALTH ACCESS AND OUTCOMES UNDER STRATEGY 2020

Support for regional public goods including such challenges as pandemic preparedness, and global health security issues in this region

Regional Cooperation crucial



- Need to prepare for the next event, which will inevitably be different and which will INEVITABLY HAPPEN.
- PRC, Vietnam—Asia in general—is an epicenter because of the interactions of populations (human, pigs, poultry, wild animals), but these events could happen ANYWHERE, ANYTIME and IMPACT all of us.

KM and Partnerships

- Asia/Pacific Health Observatory in collaboration with World Bank and WHO
- ADB is discussing with SIDA and AusAID to expand the existing HIV/AIDS trust fund to include health security initiatives in general to provide rapid response, and decrease economic impact of outbreaks

Investments

Second GMS Regional Communicable Disease Control protect 2

Capacity Development

- CWRD/RSDD TA to support IHR implementation in Central Asia (1,8 million)
- EARD TA on cross border animal health and IHR implementation
- RSDD TA GIS based initiative for improved surveillance and response to dengue and malaria in GMS

ADB played major role in
survivor due to SARS
and H5N1 pandemics

**ADB played major role as
convener during SARS
and H5N1 pandemic**

KM and Partnerships

- Asia/Pacific Health Observatory in collaboration with World Bank and WHO
- ADB is discussing with SIDA and AusAID to expand the existing HIV/AIDS trust fund to include health security initiatives in general to provide rapid response, and decrease economic impact of outbreaks

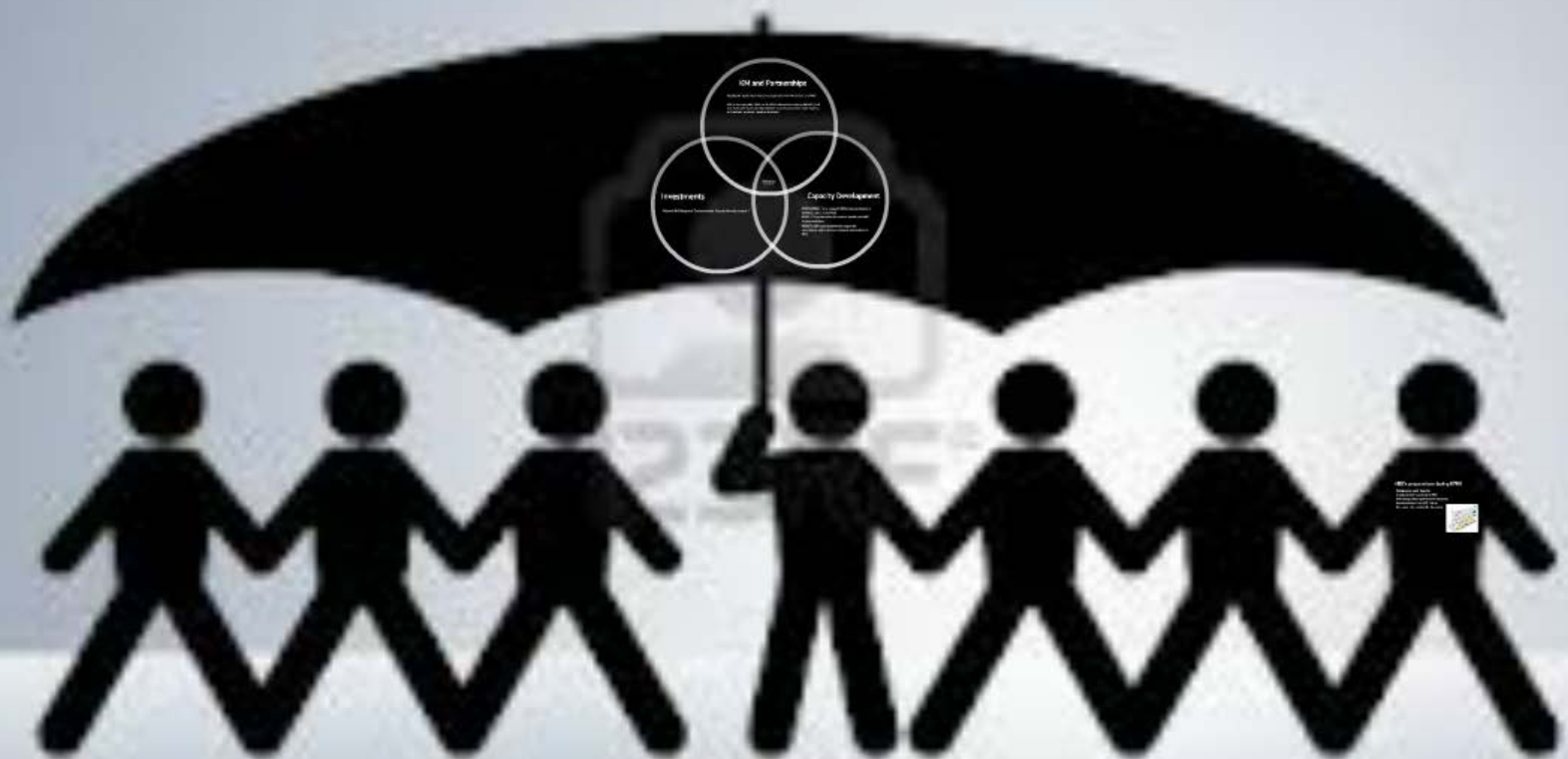
Investments

Second GMS Regional Communicable Disease Control protect 2

Capacity Development

- CWRD/RSDD TA to support IHR implementation in Central Asia (1,8 million)
- EARD TA on cross border animal health and IHR implementation
- RSDD TA GIS based initiative for improved surveillance and response to dengue and malaria in GMS

ADB played major role in
survived due to SARS
and H5N1 pandemics



© 2015 Universität für Wirtschaft und Technik
Wirtschaftsinformatik
Prof. Dr. Ingrid Isenhardt
Prof. Dr. Grottel
Prof. Dr. Hees
Prof. Dr. Krcmar
Prof. Dr. Lohmann
Prof. Dr. Meyer
Prof. Dr. Reuter
Prof. Dr. Schödl
Prof. Dr. Strohmann
Prof. Dr. Thiele
Prof. Dr. Wimmer
Prof. Dr. Zanker

ADB's preparations during H7N9

- Stocking up with Tamiflu
- Tracking staff traveling to PRC
- Providing info on preventive measures
- Announcements in ADB Today
- For more info contact Dr. Bernatas



- Need to prepare for the next event, which will inevitably be different and which will INEVITABLY HAPPEN.
- PRC, Vietnam—Asia in general—is an epicenter because of the interactions of populations (human, pigs, poultry, wild animals), but these events could happen ANYWHERE, ANYTIME and IMPACT all of us.

"By failing to prepare, you are prepared to fail"

Benjamin Franklin



- **Contagion movie simulates a virulent Nipah virus pandemic.**
- **Remember the OIE database, there is nearly NO monitoring for Nipah in animals in Asia and the Pacific in place...**



Susann Roth

**Senior Social Development Specialist
Poverty Reduction, Gender, and Social Development Division
Regional and Sustainable Development Department**

Preparing for the inevitable

Why regional health security matters!

