

# **Global Collaboration on Combating Emerging Infections**

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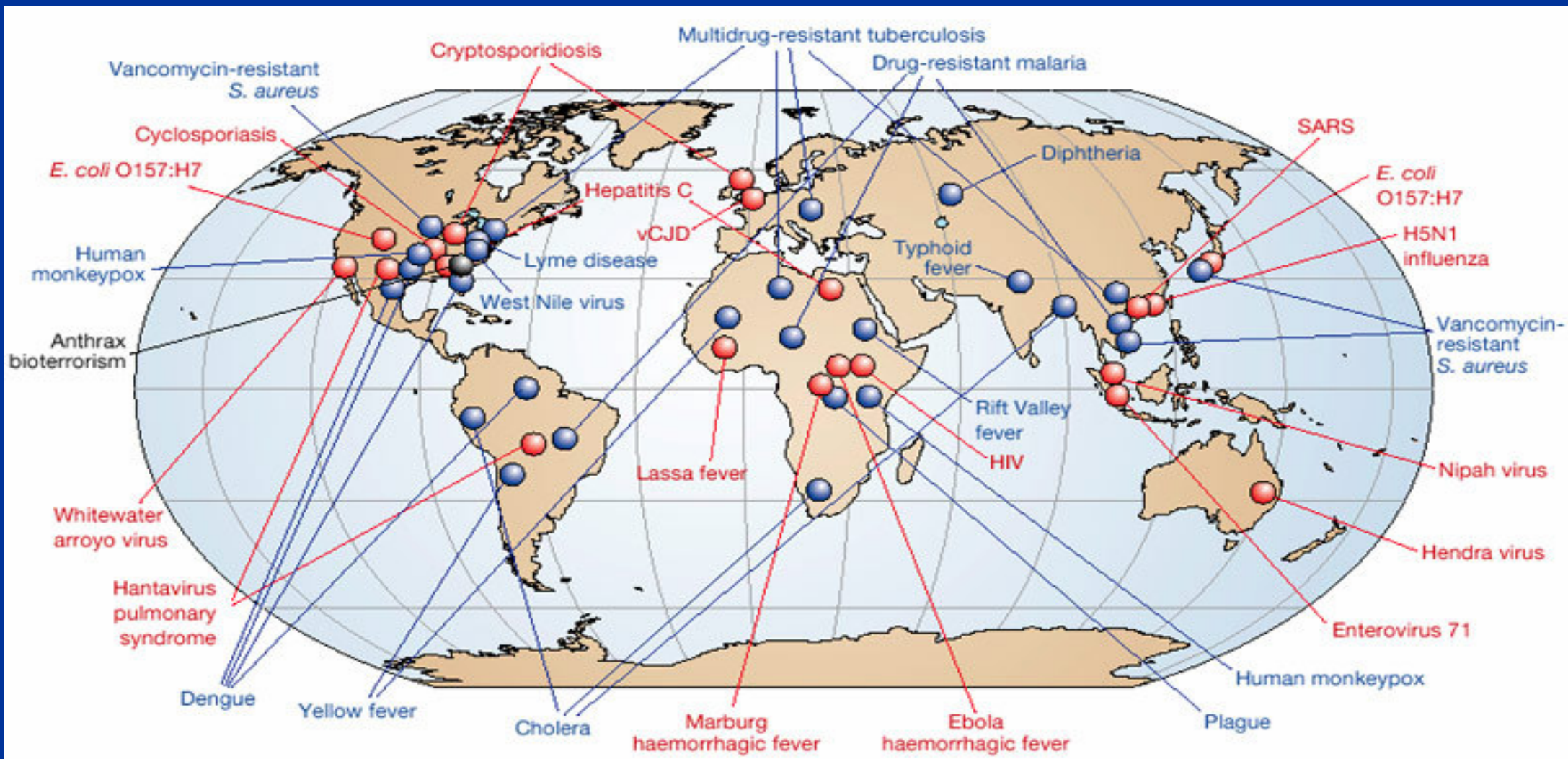
**Center for Health Protection Symposium**

Hong Kong, P. R. C.

18 January 2008

“...one can think of the middle of the twentieth century as the end of one of the most important social revolutions in history, the virtual elimination of the infectious disease as a significant factor in social life.”

Burnet, 1962



Morens, et al. Nature 2004;430:242-9.

## 35 Emerging and Re-Emerging Diseases from the Past 35 Years Including:

- Toxic Shock Syndrome
- HIV/AIDS
- Lyme Disease
- Hantavirus Pulmonary Syndrome
- West Nile Virus
- Dengue Hemorrhagic Fever
- Inhalation Anthrax

- Human Monkey Pox
- Vancomycin-Resistant Staph Aureus
- Ebola Hemorrhagic Fever
- Lassa Fever
- Rift Valley Fever
- Avian Influenza (H5N1)
- Severe Acute Respiratory Syndrome
- Etc.....

# Population Growth From 2005 to 2030

Roughly every **46** seconds, world population is forecast to grow by **100** people, distributed as follows:

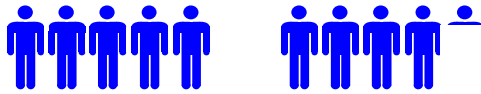
Advanced Economies  
(2.4)



Latin America  
(8.7)



China  
(9.1)



India  
(19.9)



Other Asia  
(29.0)



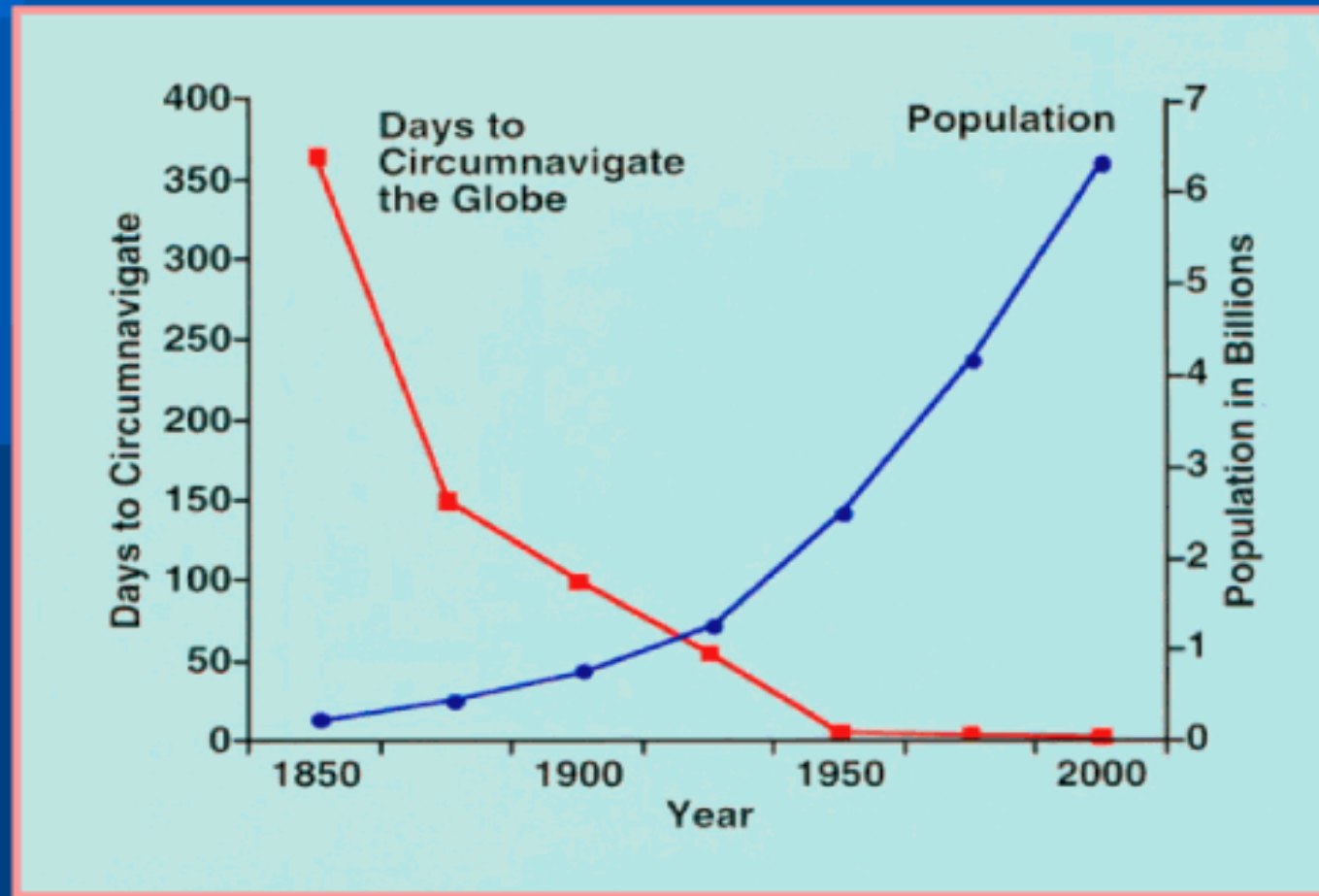
Africa  
(30.8)





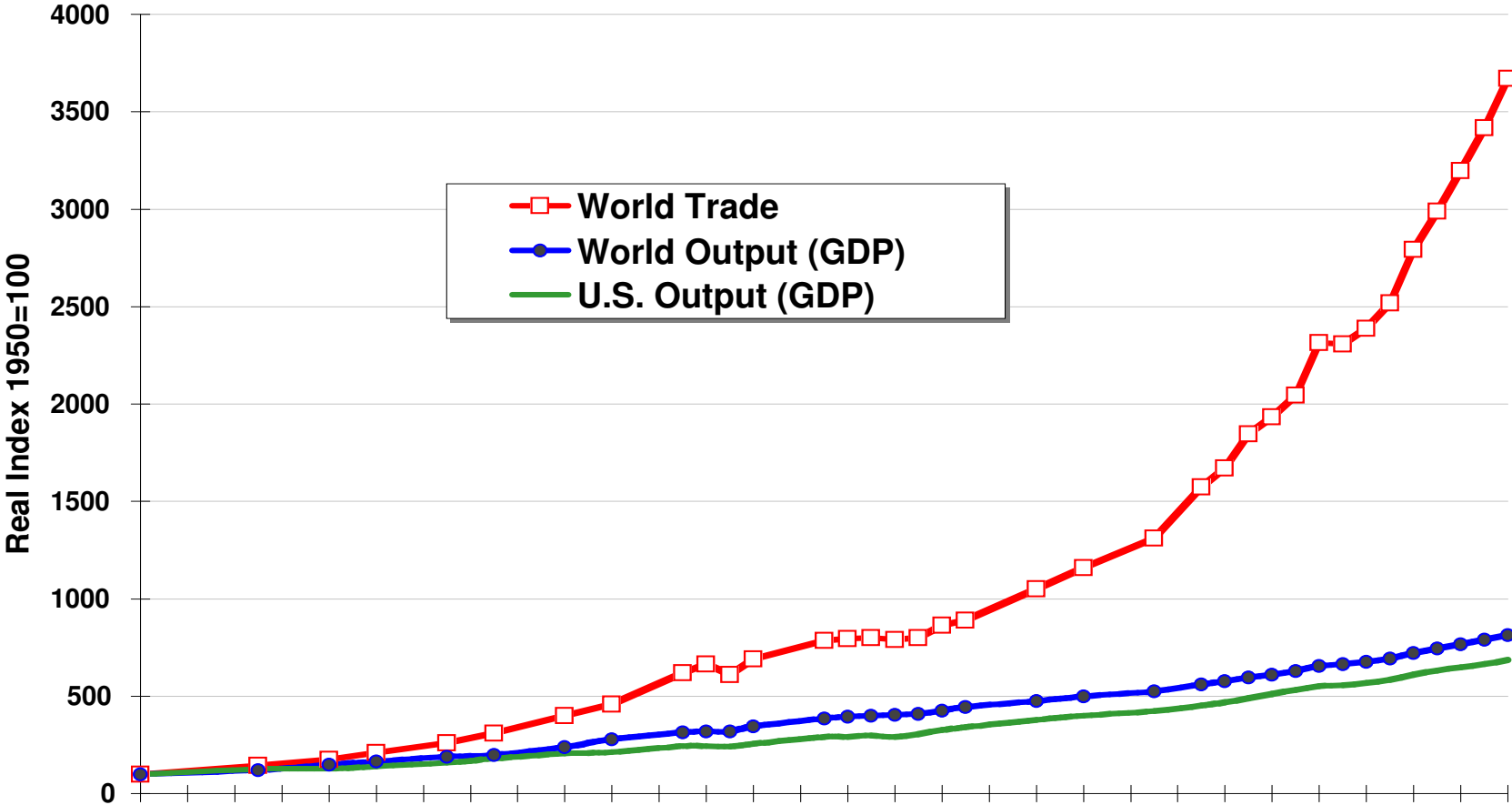


# Global Travel in Relation to World Population Growth



From: *Murphy and Nathanson. Semin. Virol. 5, 87, 1994*

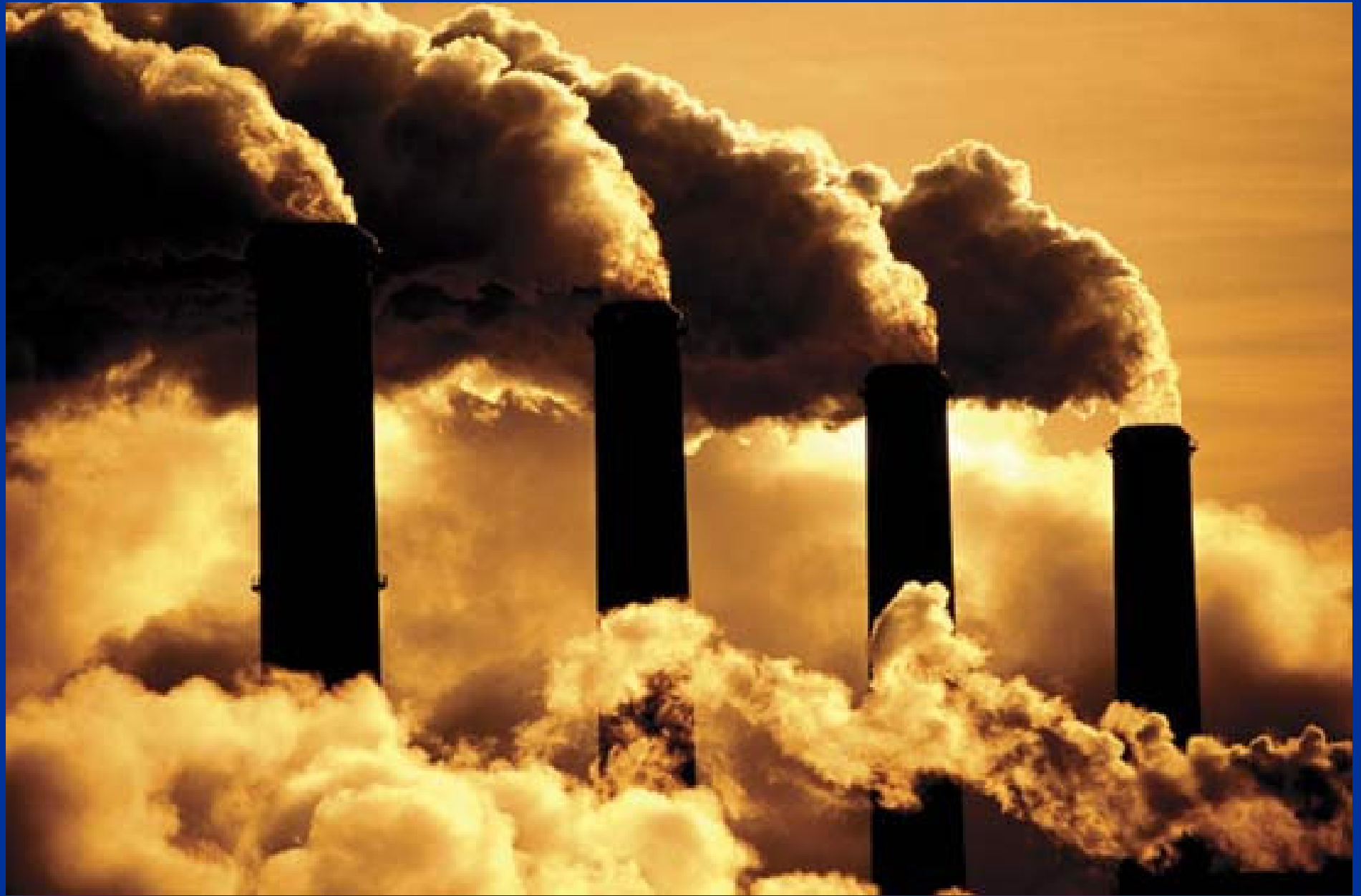
# World Trade Has Boomed



Prof. Jeff Rosensweig, Emory University. Data sources: World Trade Organization, IMF

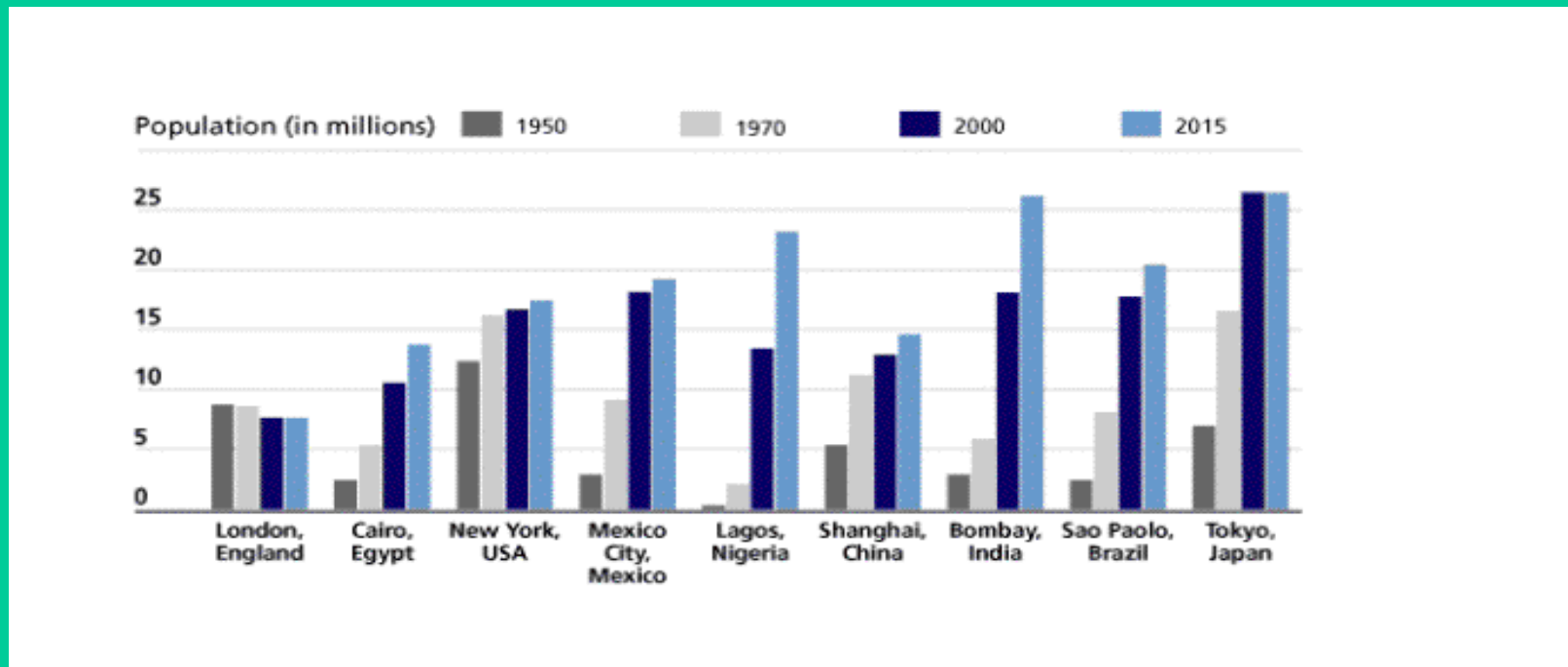
2005 - 2008 = EIU estimate





# Urbanization Will Lead to New Global Health Threats

By 2025, 61% of Humanity Will Live in Cities



Source: United Nations World Urbanization Prospects, The 1999 Revision

# FOREIGN AFFAIRS

JULY/AUGUST 2005



## The Next Pandemic?

LAURIE GARRETT

Probable Cause

MICHAEL T. OSTERHOLM

Getting Prepared

WILLIAM B. KARESH and ROBERT A. COOK

The Human-Animal Link

LAURIE GARRETT

The Lessons of HIV/AIDS

**Regime Change and Its Limits** RICHARD N. HAASS

**Europe's Angry Muslims** ROBERT S. LEIKEN

**A Trade War with China?** NEIL C. HUGHES

**Iraq: Occupational Hazards** PHEBE MARR

**A Debate: How Scary Is the Trade Deficit?**

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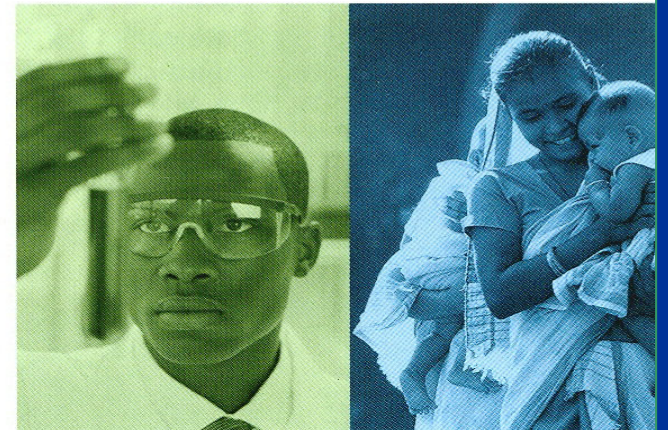
# IANPHI

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The Public Health Institutes  
of the World

[www.ianphi.org](http://www.ianphi.org)

IANPHI is a **global organization** dedicated to creating, strengthening, and linking national public health institutes **to improve** the scientific basis for **public health policies and programs.**

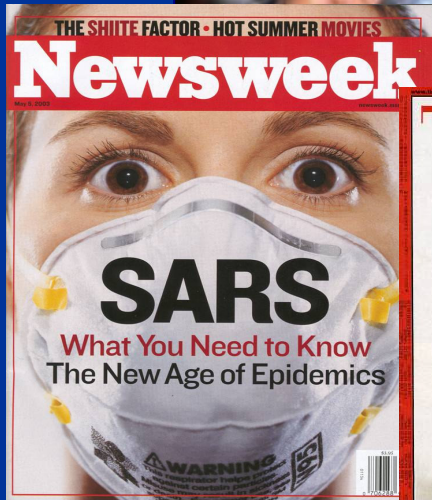


# International Association of National Public Health Institutes (IANPHI)

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- Global organization that aims to strengthen public health capacity worldwide by strengthening and connecting national public health institutes (NPHIs)
- Professional association for NPHI directors
- Growing membership; 49 current members

Many modern-day public health threats confront high- and low-resource countries alike



In low-resource countries, inadequate public health infrastructure thwarts efforts to address these challenges



# Substantive improvements to public health infrastructure require an *organizational focus*



# National Public Health Institute (NPHI)

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- In most cases, part of the government (usually under MOH) or closely attached to it
- Central focus and organizational structure
- Promotes evidence-based decision-making, policies, and programs

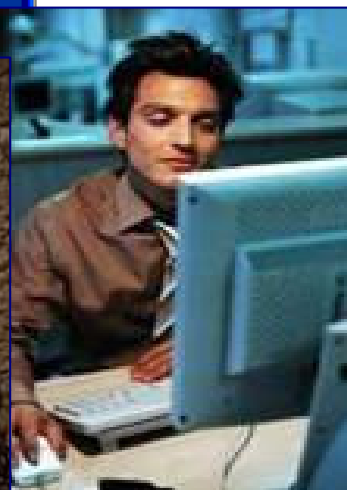
# IANPHI Approach

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- Optimize delivery of core public health functions and improve health outcomes worldwide by:
  - Working collaboratively with low-resource countries to develop or enhance NPHIs
  - Supporting all of the world's NPHIs by sharing information and approaches and promoting opportunities for collaboration and advocacy

# Objective 1. Develop an internationally accepted framework for an NPHI

- Evidence-based NPHI Framework (“gold standard”)
- NPHI models
- Toolkit



The Public Health Institutes of the World

# IANPHI

[Toolkit Home](#)

## IANPHI Toolkit

Welcome to the *NPHI Toolkit*, a resource guide for strengthening public health institutes (NPHIs). The *Toolkit* provides ready access to resources that countries, NPHIs, and IANPHI peer-assistants can use to assess, develop, and improve NPHIs and build a stronger public health system. Resources have been selected based on their availability, relevance, and availability at no cost on the internet.

The *Toolkit* has four main sections:

- General Resources** includes basic information on public health literature as well as tools for planning, communications, and training.
- Tools for Enhancing NPHI Infrastructure and Leadership** covers topics as human resource development, financial management, and governance, as well as building partnerships and collaboration.

WHO involvement critical

# NPHI Framework

- Core Attributes (9)
  - National scope of influence
  - Focus on major health problems
  - Scientific basis
  - Resources
  - Linkages
- Core Functions (11)
  - Surveillance and response
  - Evaluation and analysis
  - Research



## Objective 2. Strengthen existing NPHIs and create new ones

- Short-term assistance, training, expert consultation
  - Quickly resolve priority gaps
  - 7 projects per year
- NPHI capacity building
  - Up to 3 years
  - 4 projects per year
- NPHI creation
  - Up to 5 years
  - Creation of 4 new NPHIs or networks



# Technical Assistance Grant Awards

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## Short-Term Assistance 2007

- Uganda
- Iran
- Bangladesh
- Brazil
- Thailand
- Mexico & Central America
- Ethiopia

## Medium-Term Capacity Building 2007

- Colombia
- Nigeria
- Tanzania

## Long-Term NPHI Creation 2007

- Guinea Bissau
- Malawi

# Objective 3. Create an international peer-assistance and advocacy community

- Annual meeting
- Leadership development
- Website, newsletter
- Collaborative projects



# IANPHI

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The Public Health  
Institutes  
of the World

[www.ianphi.org](http://www.ianphi.org)

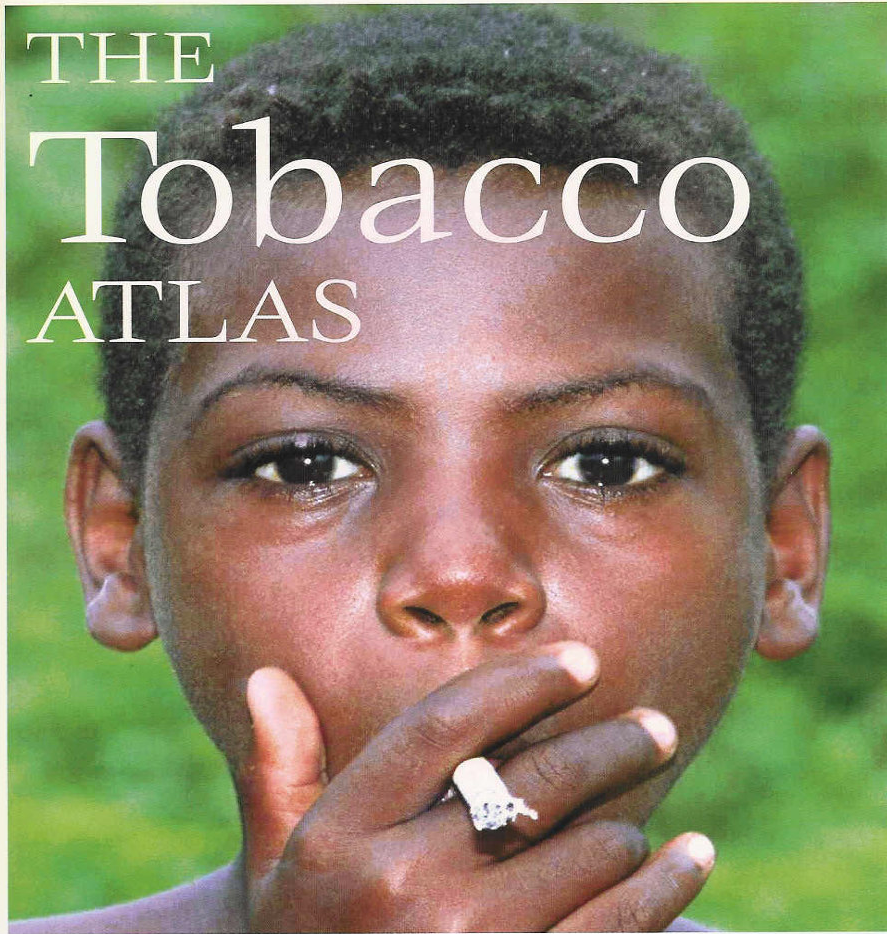
# Marlboro

特醇萬寶路

# Lights



# THE Tobacco ATLAS



DR JUDITH MACKAY & DR MICHAEL ERIKSEN



WORLD HEALTH ORGANIZATION



# Most smokers live in developing countries

*Current smokers in 1995 (in millions)*

<u>Region</u>	<u>Number</u>
<i>Low/Middle income</i>	<b>933</b>
<i>High Income</i>	<b>209</b>
<i>World</i>	<b>1,142</b>

## **Quit rates low in low income countries**

- ◆ *5-10% in China, India*
- ◆ *30-40% in UK*

# Growing number of deaths from smoking

*Past and future tobacco deaths (in billions)*

<u>Time</u>	<u>Billions of deaths</u>
1901-2000	<b>0.1</b> (mostly in developed countries)
2001-2100	<b>1.0</b> (mostly in developing countries)

- ◆ **0.5 B** among people alive today
- ◆ *1 in 2 of long-term smokers killed by their addiction*
- ◆ *1/2 of deaths in middle age (35-69)*



