

7 reasons WHY the Growth of Infectious Diseases is an inevitable national security threat requiring a whole world approach:

- 1. Travel and Trade.**
- 2. Poverty**
- 3. Changing microbes**
- 4. Environmental factors:**
5. Reliance on Technology:
6. War.
7. Lack of political will. Government dysfunction.

In a nut shell: The failure of human systems and structures to adhere to the Laws of Nature and Nature's God (Liberty and justice for all).

Infectious diseases are the best teacher that our concept of independence is lethally flawed.

1. Travel and Trade: Today, the number of people living outside their country of birth is over 120 million. Some two million people cross an international border each day^[1]. One million people travel between developed and developing countries each week^[2]. The United States receives some 70,000 foreigners each day and some 57 million Americans travel abroad each year.

For the past 20 years, air travel has grown by about 7% per year.^[3] The World Travel and Tourism Council claims that tourism is the world's largest industry, having generated 11.7% of global GDP in 1999.^[4] They predict annual industry growth rates of 4.5% per annum over the next decade.^[5]

AIDS and West Nile Virus are examples of diseases that were imported to the United States. Up to 92% of multi-drug resistant TB in Canada is imported.^[6] Fujiwara and Frieden have noted that New York City has traced TB cases back to 91 countries.^[7]

The trade in goods has risen equally dramatically at the local and international levels, with implications for the spread of disease. US food imports have doubled in the last five years, creating greater opportunities for the rapid spread of disease around the world. More than 75% of the fruits and vegetables in stores and restaurants in the US are imported. Food-borne diseases afflict some 76 million people in the US each year. In developing countries the growth in trade links between urban and rural areas has been closely correlated with the spread of disease. For example, HIV/AIDS and other sexually transmitted disease rates are significantly higher along truck routes throughout the developing world.

2. Poverty is fostering the growth of the sex industries that spread disease. It is also facilitating black markets for medicines, which are often of poor quality, over-used and misused, aiding the emergence of drug resistant bacteria. Poverty is also straining the

health systems in many countries; as a result, unhygienic health centers are becoming vectors for the transmission and spread of disease.

3. Changing microbes: HIV virus has a one percent mutation rate. In an infected human there are approximately 2 billion replications of the virus per day. That works out to approximately 20 million potential variations of the virus per day, per person infected. The flu virus changes frequently as well. Each year virologists try to predict the changes and develop a new vaccine for testing, approval and distribution in a very short time. It usually works but given the speed of viral change and the lack of money to accelerate this barely acceptable form of vaccine development, inevitably a slight mutation or an entirely new strain will emerge and cause everyone on earth a significant lethal problem.

4. Environmental factors: Exacerbating the situation are environmental and land use changes, which are altering the habitats for disease-carrying agents. The range for the dengue fever-carrying mosquito has expanded to cover almost all of Latin America in the last thirty years. Malaria-carrying mosquito were found for the first time this year in the mid-Atlantic United States. Land use change in the United States has facilitated the spread of Lyme Disease in the US and Europe, and malaria, yellow fever and the plague around the world. Climate change will likely increase the distribution of malaria, yellow fever and dengue hemorrhagic fever as well as water temperature-dependent diseases like cholera^[8].

5. Reliance on Technology: Industrial processing and production of food dramatically increases the effects of contamination, especially in the absence of adequate inspections or methods of testing. The same for pharmaceutical products.

6. Lack of political will. Elected officials are rarely scientists or health professionals. Budget constraints and trade offs are not always weighted properly against the inevitable costs in lives and dollars. Most American's believe our military and national borders will keep us safe. They won't. Our nation's reactionary policies that fail to address root issues (putting the protection of national sovereignty and capitalism above the protection of human rights and nature will not end well.

7. Government dysfunction is the product of greed, corruption and any laws humans make via a dictatorship or democratic process — that fails to abide by the "Laws of Nature and Nature's God (justice or the Golden Rule)— will ultimately fail us and eventually our species survival. Time is not on our side.