



# *The Millennium Project*

## *Global Framework, Future Prospects and Strategies*

Jerome C. Glenn

# Some Key Insights/Actions:

1. Although the world is improving for most, half the world is potentially unstable.
2. We need to make the transitions
  - from fresh water agriculture to saltwater agriculture along the coastlines of the world
  - from internal combustion fissile fuel engines to electrical batteries
  - from growing animals to make meat to growing meat directly from genetic materials
  - from local day/night inefficient electric production with GHG emissions and nuclear waste to an orbital solar satellite system (Japan) to manage the base load electricity of the world
  - from local selfish interest to planetary consciousness with global ethics for decisionmaking.
3. It is time for humanity to grow up and create global strategies to address the challenges facing humanity from global warming to organized crime.
4. We futurists should get our nations to participate in a global collective intelligence for humanity and participate in an international intranet for future strategic unites of government and UN agencies to develop to create the infrastructure for global strategic planning with the UN Secretary-General which could invite international business and NGOs to

- Executive Summary
  1. 15 Global Challenges
  2. State of the Future Index
  3. Real-Time Delphi
  4. Gov Future Strategy Unite
  5. Global Energy Collective Intelligence
  6. Environmental Security
- Plus 6,300-page CD of 12 years' collective research from the Millennium Project



The Millennium Project  
World Federation of UN Associations

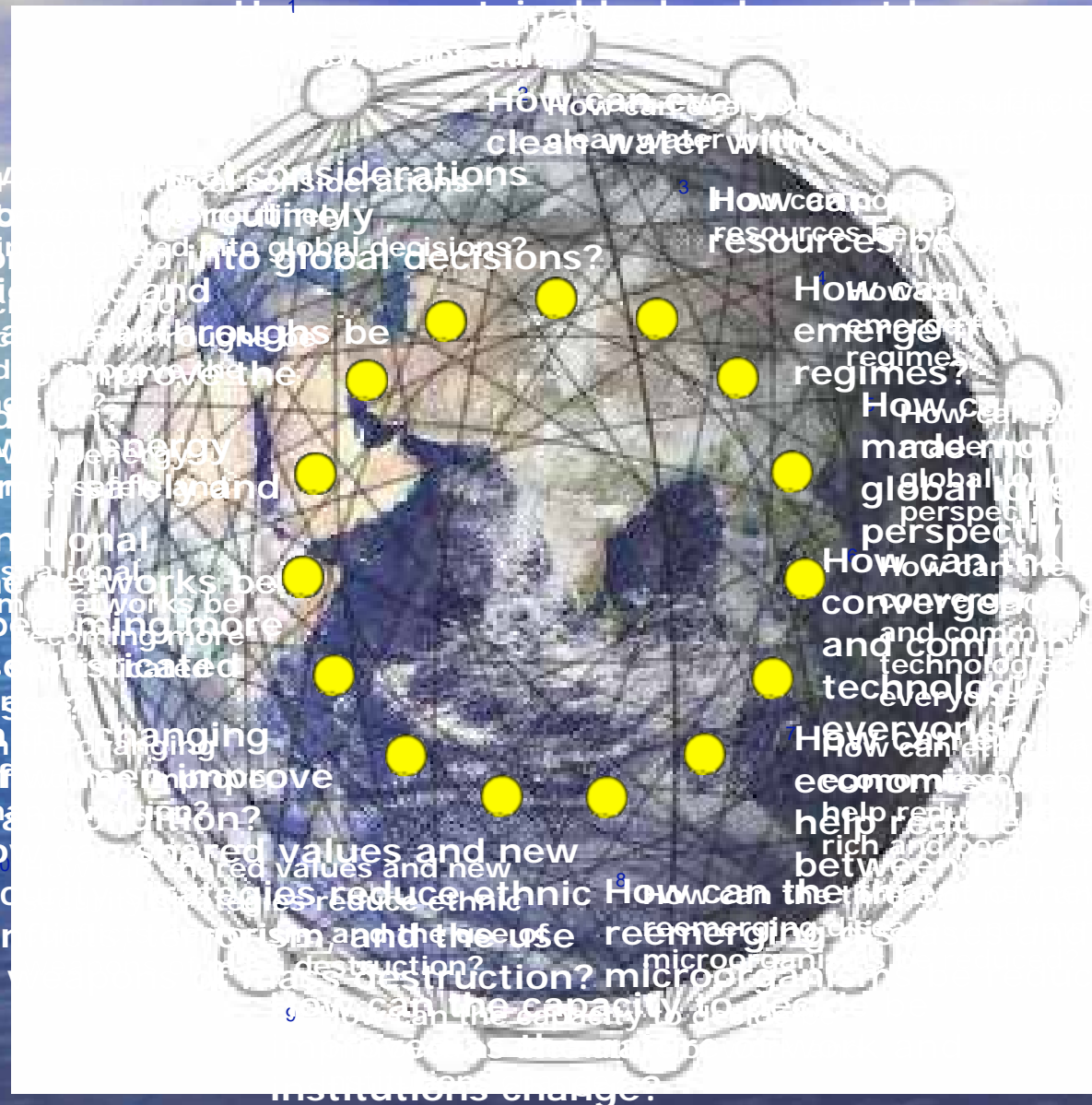
# 2008

## STATE OF THE FUTURE



JEROME C. GLENN, THEODORE J. GORDON,  
and ELIZABETH FLORESCU

# 15 Global Challenges: A Global Framework



How can we ensure that everyone has access to clean water with no loss of natural considerations?  
become a routine  
income and into global decisions?  
How can scientific and technological breakthroughs be accelerated to improve the human condition?  
How can growing energy demands be met safely and efficiently?  
How can transnational organized crime be stopped from becoming more powerful and sophisticated?  
How can the changing status of the human condition?  
How can we ensure that everyone has access to clean water with no loss of natural considerations?  
How can we ensure that everyone has access to energy and that the energy demands do not become a burden on the environment?  
How can we ensure that everyone has access to food and that the food is produced in a sustainable way?  
How can we ensure that everyone has access to healthcare and that the healthcare system is sustainable?  
How can we ensure that everyone has access to education and that the education system is sustainable?  
How can we ensure that everyone has access to employment and that the employment system is sustainable?  
How can we ensure that everyone has access to social services and that the social services system is sustainable?  
How can we ensure that everyone has access to housing and that the housing system is sustainable?  
How can we ensure that everyone has access to transportation and that the transportation system is sustainable?  
How can we ensure that everyone has access to information and that the information system is sustainable?  
How can we ensure that everyone has access to communication and that the communication system is sustainable?  
How can we ensure that everyone has access to technology and that the technology system is sustainable?  
How can we ensure that everyone has access to culture and that the culture system is sustainable?  
How can we ensure that everyone has access to leisure and that the leisure system is sustainable?  
How can we ensure that everyone has access to sports and that the sports system is sustainable?

How can we ensure that everyone has access to clean water with no loss of natural considerations?

How can we ensure that everyone has access to energy and that the energy demands do not become a burden on the environment?

How can we ensure that everyone has access to food and that the food is produced in a sustainable way?  
emerging authoritarian regimes?

How can we ensure that everyone has access to healthcare and that the healthcare system is sustainable?  
made more sensitive to global long-term perspectives?

How can we ensure that everyone has access to education and that the education system is sustainable?  
convergence of information and communications technologies work for everyone?

How can we ensure that everyone has access to employment and that the employment system is sustainable?  
economics encouraged to help reduce the gap between rich and poor?

How can we ensure that everyone has access to social services and that the social services system is sustainable?  
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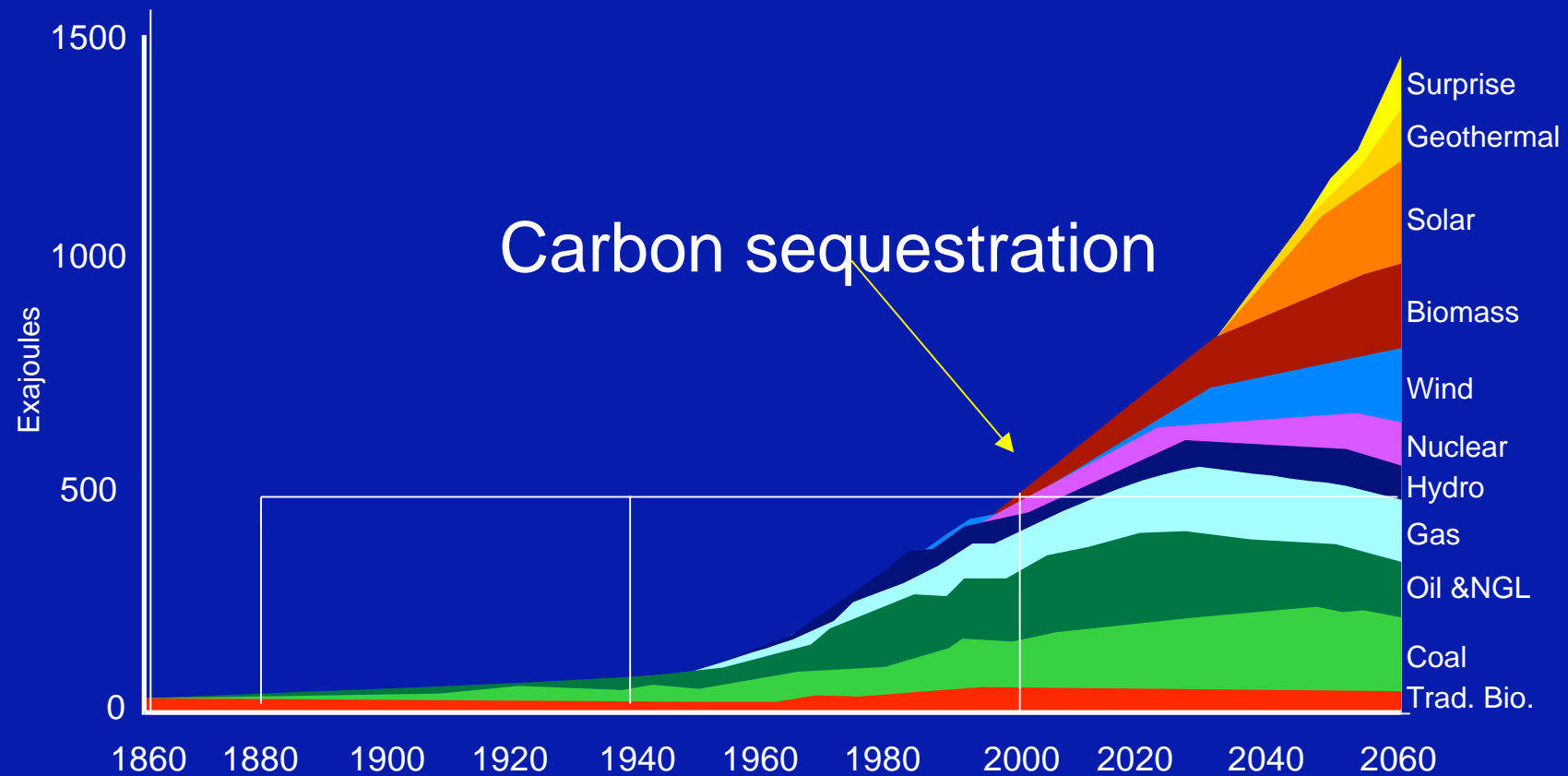
How can we ensure that everyone has access to clean water with no loss of natural considerations?

# 1. Sustainable Development for all while addressing Climate Change

- CO2 emissions are increasing faster—and the world is warming faster—than the IPCC estimated.
- Atmospheric CO2 is now 387 ppm, with increasing impacts around the world; hence, targets like 550 ppm or even 450 ppm are insufficient
- Need US-China 10-year Apollo-like Goal with global R&D strategy – and the EU should push them in it. (China+US = 46% of GHG emissions)
- Global GHG: China-24%, US-22%, EU-12%, India-8%, Russia-6%.
- Tremendous “green business” opportunities worldwide
- China loses 12% of its GDP due to environmental damage; India loses 10%
- Brazil should benefit from cap and trade (Amazonian forests)

# Carbon Sequestration

## Shell Oil's "Sustainable" Growth



800-1,000 Coal plants without carbon capture and storage are in planning or construction

## 2. Sufficient clean water without conflict

- 700 million people face water scarcity (less than 1,000 cubic meters per person per year), which could grow to 3 billion by 2025
- Water tables are falling on all continents
- 40% of humanity's water comes from international watersheds
- Groundwater aquifers are being polluted; urbanization is increasing water demands on aging water infrastructures
- More than 70% of China's waterways and 90% of its groundwater are contaminated (Russia could supply fresh water to China)
- Agriculture uses 70% of water available (urban/rural conflicts)
- Business as usual will lead to disasters and mass migrations.
- Transition from fresh water agriculture to saltwater agriculture (food for humans and animals, algae biofuels, paper pulp, CO2 sink)
- Other vast markets for water solutions – agricultural efficiencies, filters and membranes for large-scale water treatment, desalinization, household sanitation, water storage (Singapore), drought-tolerant plants

# 10. How can shared values and new security strategies reduce ethnic conflicts, terrorism, and the use of weapons of mass destruction?

- Half the world is vulnerable to instability and violence
  - Rising prices of food and energy
  - Scarcity of water and food
  - Falling water tables                      Desertification
  - Climate change                              Failing states
  - Political, economic, and environmental migrations
- SIMAD (Single Individuals Massively Destructive) implications linkage of education, mental health, and security
- Future communications technology, marketing strategies, competitive intelligence, information warfare, info-terrorism, and organized crime may be inter-linking
  - How will people know who to trust? Methods of authentication?
  - Some new ethical responsibilities for companies and the media  
Democratization reduces nation-state wars
- Internet self-organization – e.g., mine treaty
- Counter-terrorism strategies should include many personal conversations with hardliner groups
- Ubiquitous computing and satellite communications

### 3. Population growth and resources brought into balance

- Current world population of 6.7 billion is expected to reach 9.2 billion by 2050, then fall dramatically to as low as 5.5 billion by 2100, according to the UN lower forecast.
- There will be more people over 60 than under 15 by 2045, according to the UN medium forecast.
- The First World got rich before it got old, but the Third World is also getting older (although more slowly) before it got rich
- Retirement will give way to many forms of tele-work, part-time work, and job rotation, since the social contract cannot be met.
- Current agriculture, water, and land usage cannot supply an addition 2.5 billion people; hence, new approaches to food will be necessary, such as producing meat without growing animals and saltwater agriculture
- Animal rights group has offered \$1 million for first commercially viable animal meat without growing an animal by 2012. International conference on Invitro meat production held in Norway April 2008.

## 4. Genuine democracy emerging from authoritarian regimes

- The majority of the world now lives in electoral systems; however, democracy and freedom declined over the last 2 years in 1/5 of the world's countries, according to Freedom House.
- The culture of democracy is lagging the spread of electoral systems
- Four times as many countries showed declines during 2007 as improved, and press freedom continued a six-year negative trend across the world.
- Elements of global governance: ISOs, international treaties, multi-lateral organizations, self-organizing via the Internet are augmenting governments' democratization
- Sovereignty of nations is changing with the WTO, environmental agreements, and the ICC.
- New requirement for globally informed public
  - ♣ Global information, relevant for healthy democratization
  - ♣ Separation of the "signal" from the "noise"
- The increasing ability to manipulate information threatens democracy

## 12. Transnational organized crime stopped from becoming more powerful global enterprises

- Over US\$2,000,000,000,000.00 (US\$2 trillion) annual income to transnational organized crime (all military = US\$1.4 trillion)
- What kind of future will it buy? What new product lines?
- Governments can be thought of as a series of decision points; these are vulnerable to transnational organized crime
- If crime is just a cost to business, then it will continue to grow
- Alternatively, business, government, and international organizations could agree to a new global system
- Implement Palermo Treaty with a new mechanism that upgrades check transfer software, prioritizes collaborative enforcement, and deputizes courts (maybe with ICC or new protocol to the Palermo Treaty)

**For further information**

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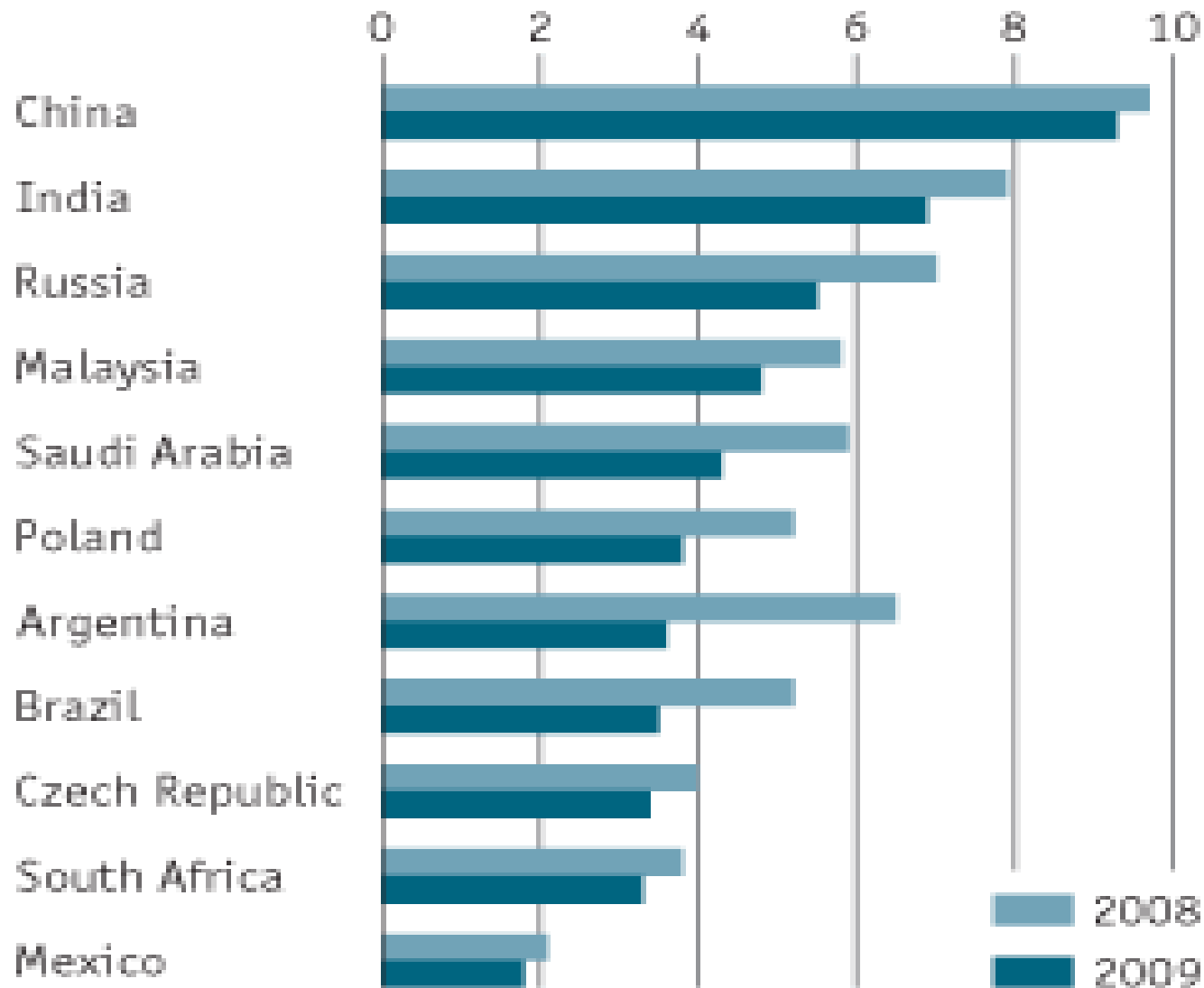
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WEB 1.0 [www.StateoftheFuture.org](http://www.StateoftheFuture.org)

WEB 2.0 [www.mpcollab.org](http://www.mpcollab.org)

## Emerging economies' GDP

Forecasts, % increase on previous year



Sources: IMF