

CCRTS

2004

POTENTIAL METRICS MODEL FOR DETERMINING THE ACTIONS AND STATUS OF TOOLS FOR NATIONAL POWER FOR HOMELAND AND NATIONAL SECURITY

Models, Granularity, Metrics, Bayes, and Outcomes

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OUTLINE

- **Why Address ‘Tools of National Power’**
- **Traditional Sources**
- **Additional Sources & Models**
 - Mahan, Hartman, and Friedman
- **Comparison with Cross-Walk**
- **Some Linkages**
- **Strategic to Tactical Framework**
- **Available Tools - Connected Paths**
- **Future Opportunities**

Why - Tools National of Power?



Regarding the prosecution of the Global War on Terror, “. . . That’s the reason the 90-nation coalition is doing what it’s doing *using all the elements of national power*, putting pressure on bank accounts, putting pressure on law enforcement around the world, and seeking out terrorist heavens and attacking the terrorist networks. That’s the only way to deal with the problem.”

Donald H. Rumsfeld, Defense Secretary
March 4, 2004 News Briefing following attacks in Korbala and Baghdad
(Emphasis added)

Traditional Sources

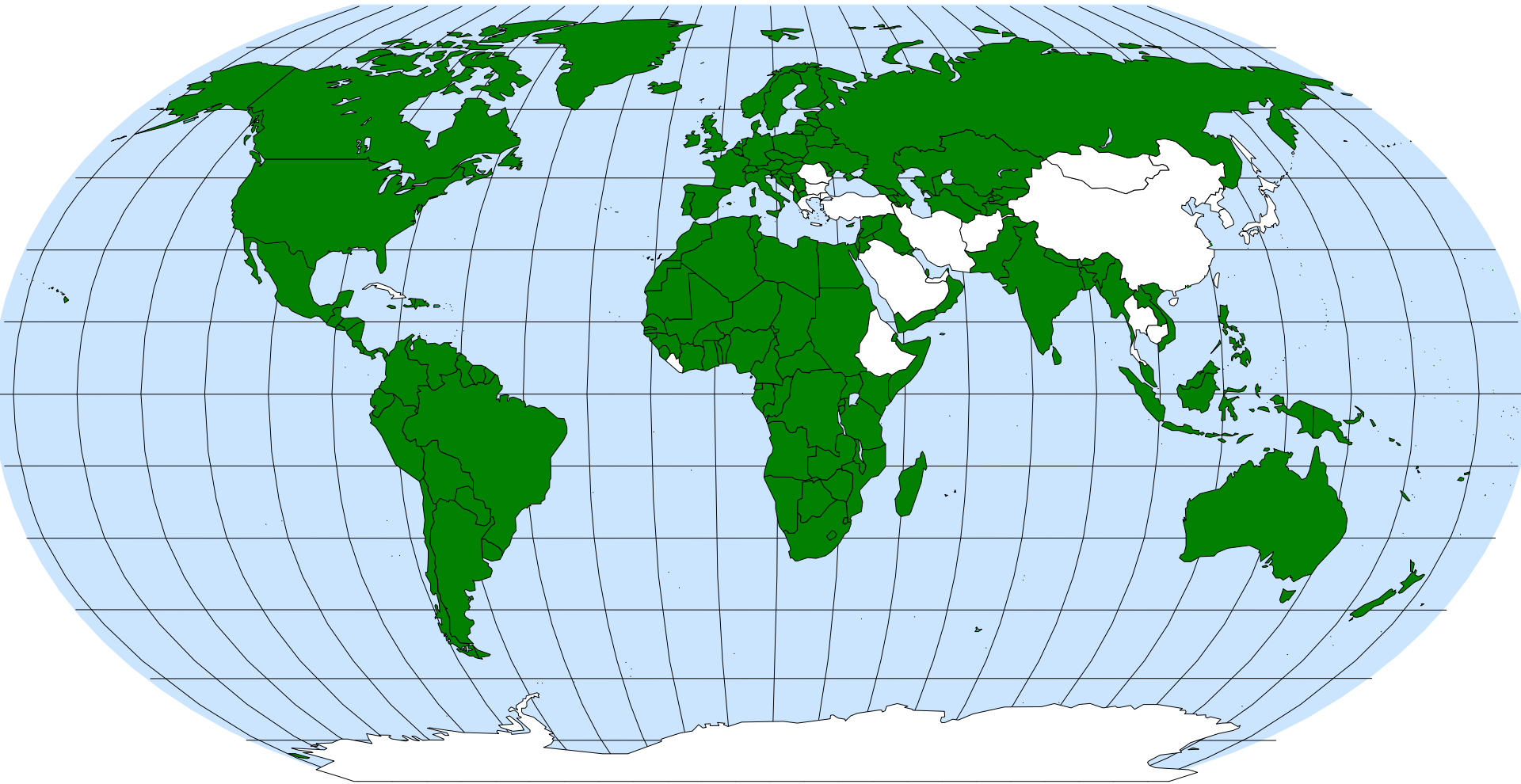
- **Von Clausewitz**
 - Gave us the tripod - Government, the People, and the Military
- **Stated in another frame**
 - Diplomatic, Economic, and Military
 - Sometimes referred to as Talking, Trading, and Fighting
- **Recently some other Factors added:**
 - Information; or,
 - International Relations Solutions

Additional Sources and Models with Context

- **Alfred T. Mahan (1892)**
 - **The Influence of Sea Power on History 1660-1783**
 - **Six Factors**
- **Frederick H. Hartman (1957)**
 - **The Relations of Nations**
 - **Seven Factors**
- **Thomas L. Friedman (1999)**
 - **The Lexus and the Olive Tree**
 - **Eight Factors**

The West and the Rest: 1920

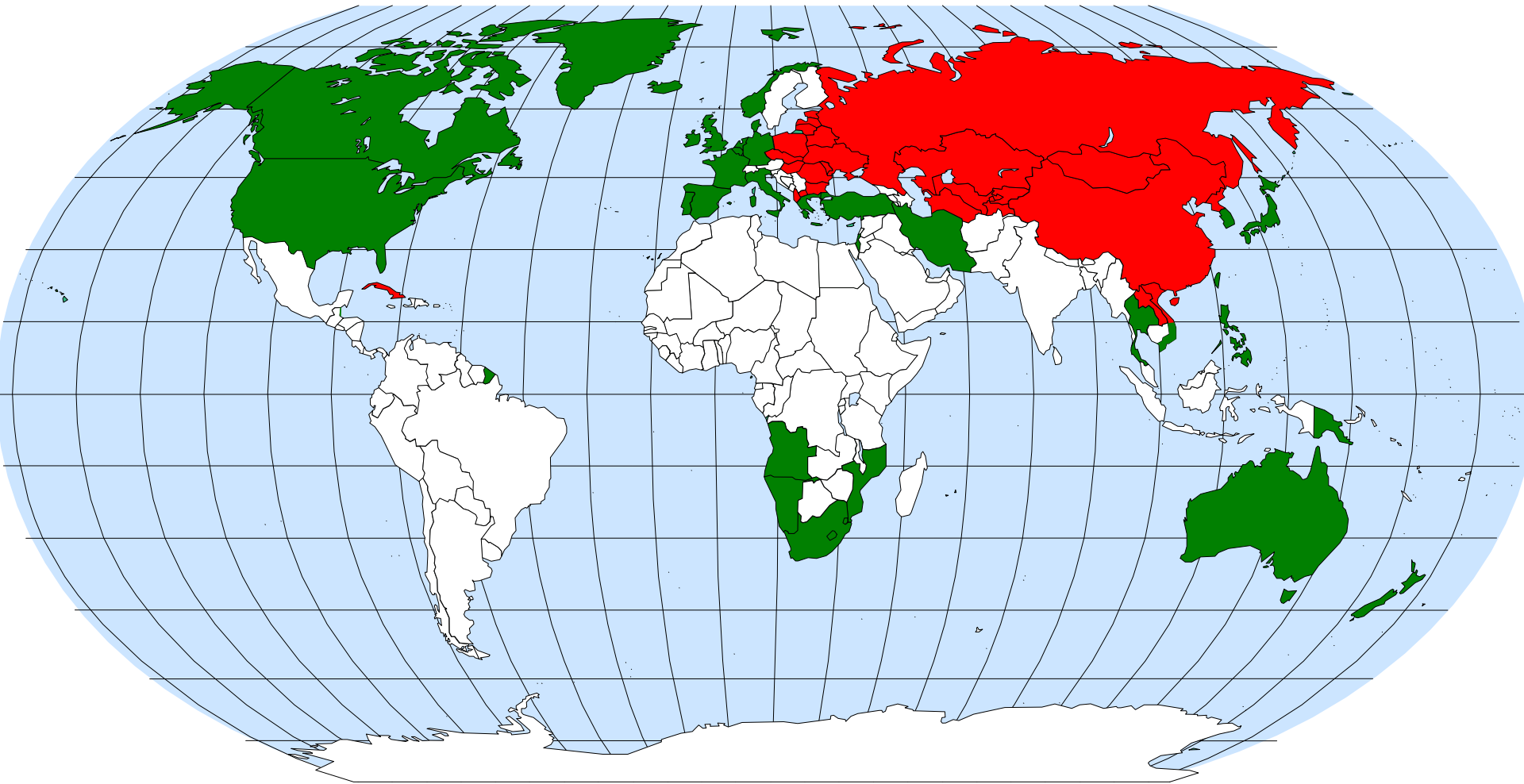
(A. T. Mahan)



■ **Ruled by the West** □ **Actually or Nominally Independent of the West**

The Cold War World: 1960s

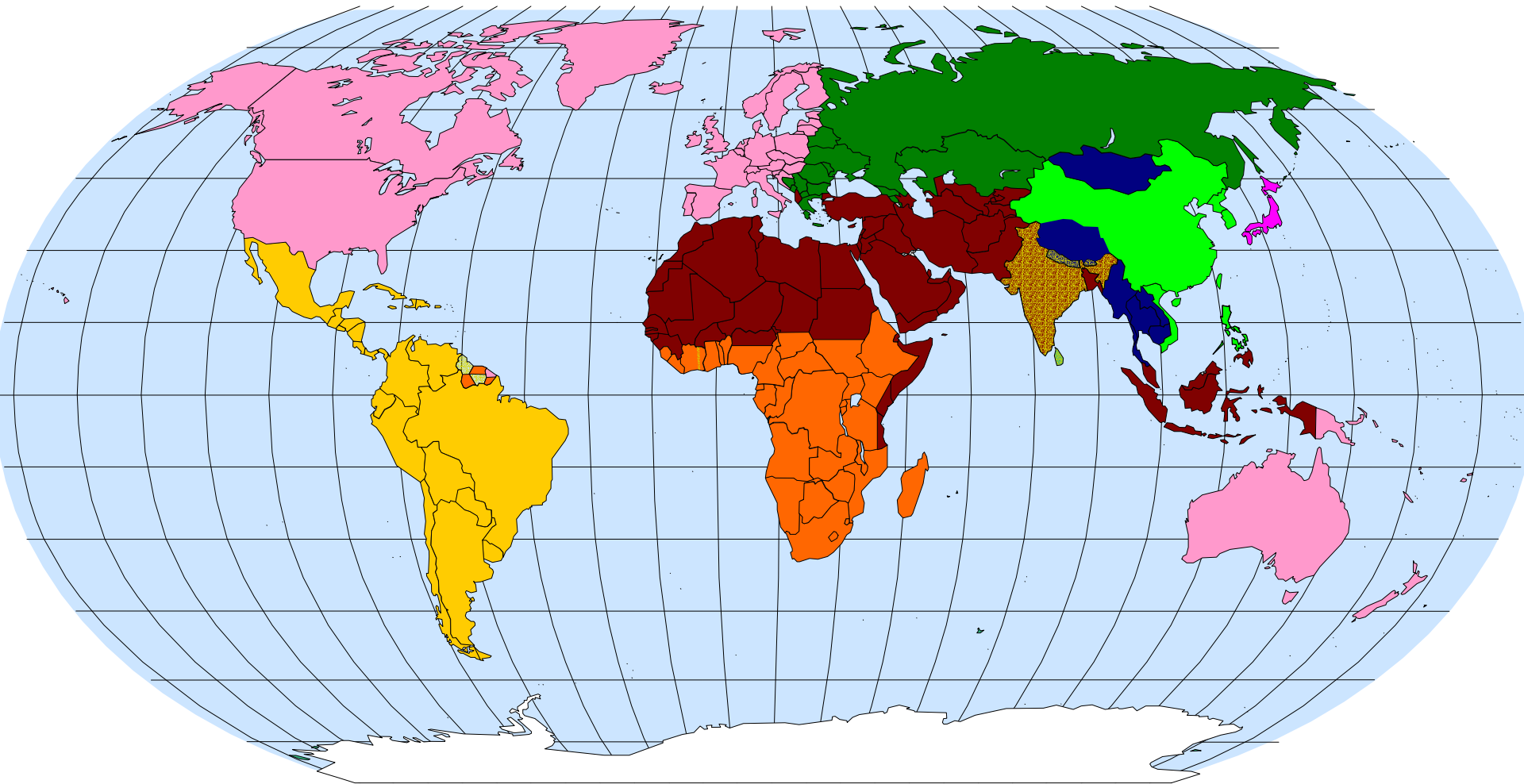
(F. H. Hartman)












■ **Free World** ■ **Communist Bloc** □ **Unaligned Nations**

The World of Civilizations: Post-1990

(T. L. Friedman)



- | | | |
|---|--|---|
|  Western |  Islamic |  Orthodox |
|  Latin American |  Sinic |  Buddhist |
|  African |  Hindu |  Japanese |

Derived from 'The Clash of Civilizations and the Making of World Order, Samuel P. Huntington, Touchstone, 1997, Map 1.3, p. 26-27.

Comparison with Cross-Walk

Mahan

- Geographic Position
- Physical Conformation
- Extent of Territory
- Number of Population
- National Character
- Character of Government

Hartman

- Demographic Element
- Geographic Element
- Economic Element
- Scientific-Technical Element
- Historical-Psychological-Sociological Element
- Organizational-Administrative Element
- Military Element

Friedman

- How Wired Is Your Country?
- How Fast Is Your Country?
- How Much Does Your Country Weigh?
- Does Your Country Dare To Be Open?
- How Good Is Your Country At Making Friends?
- Does Your Country's Management Get IT?
- How Good Is Your Country's Brand?

Some Linkages

Mahan

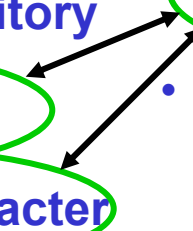
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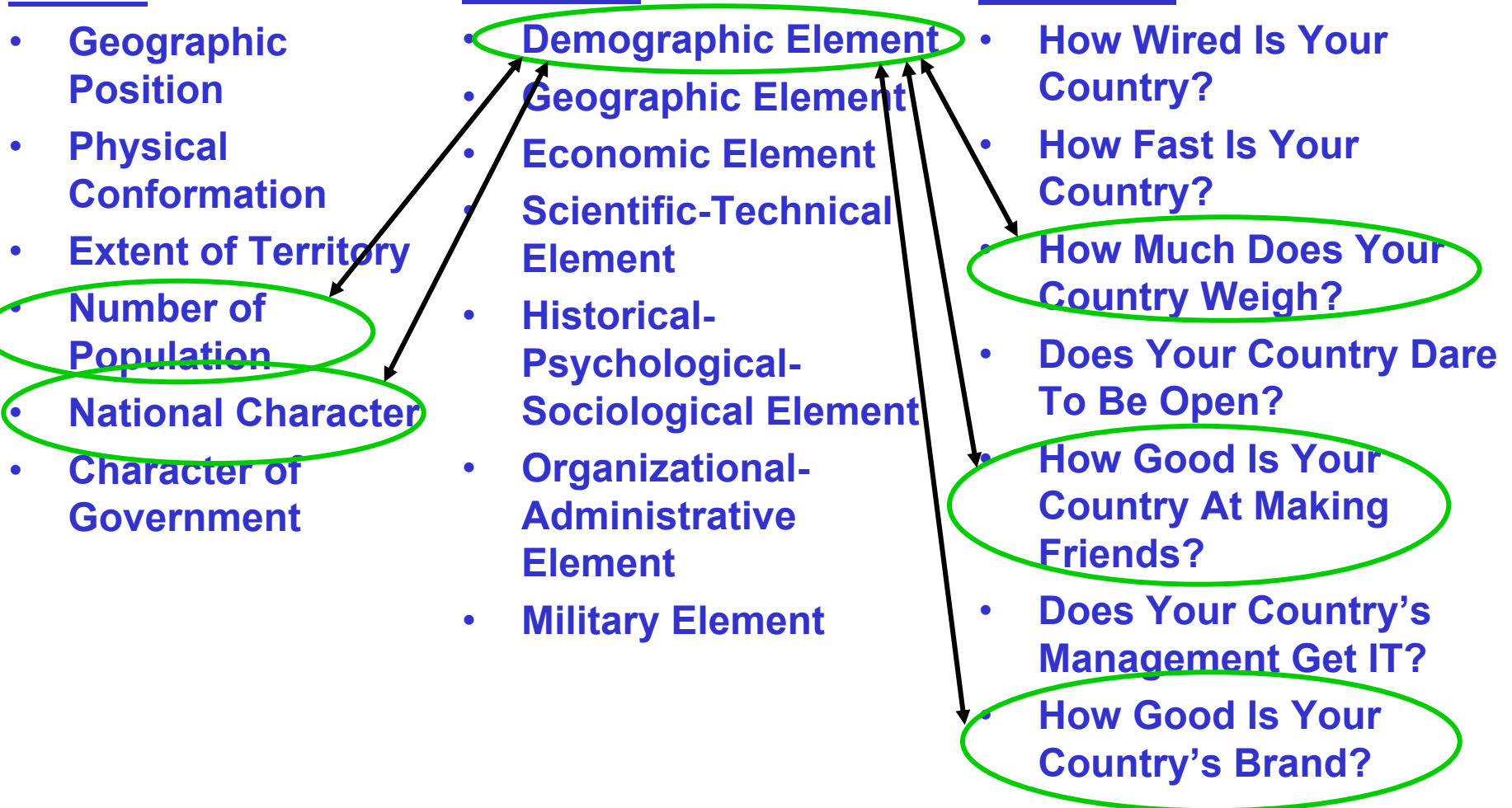
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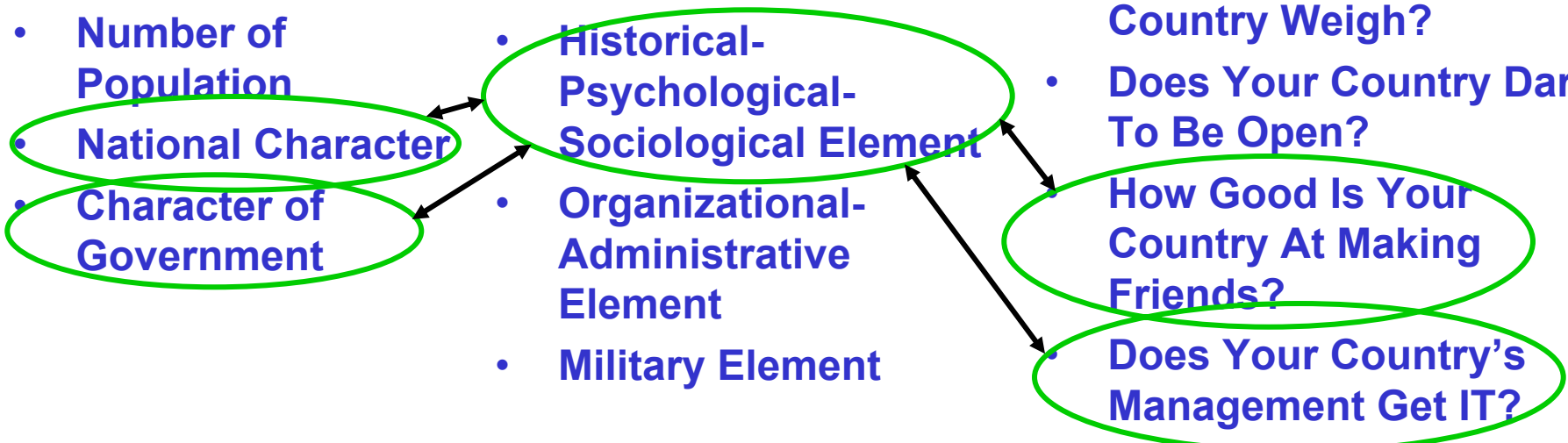
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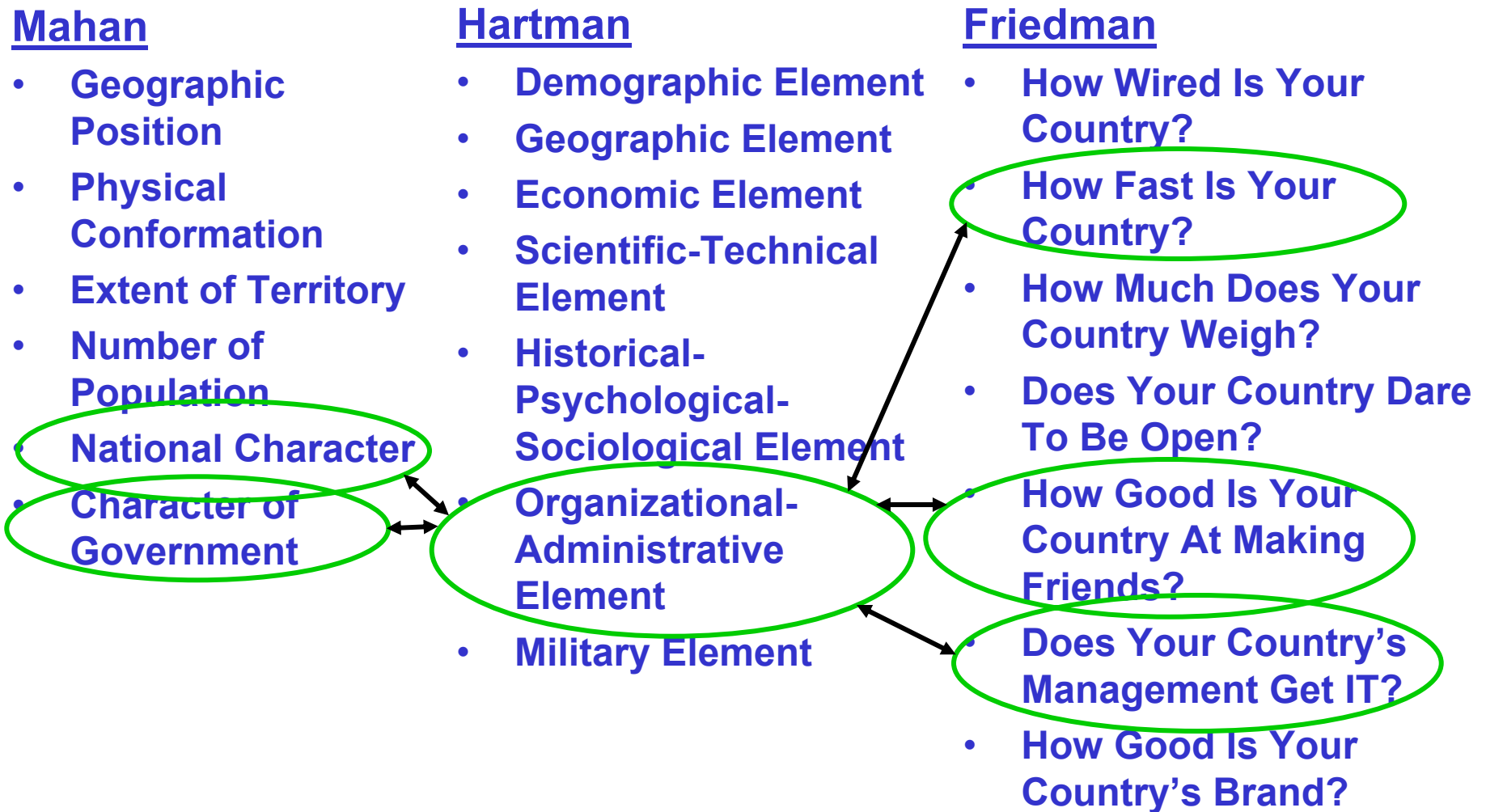
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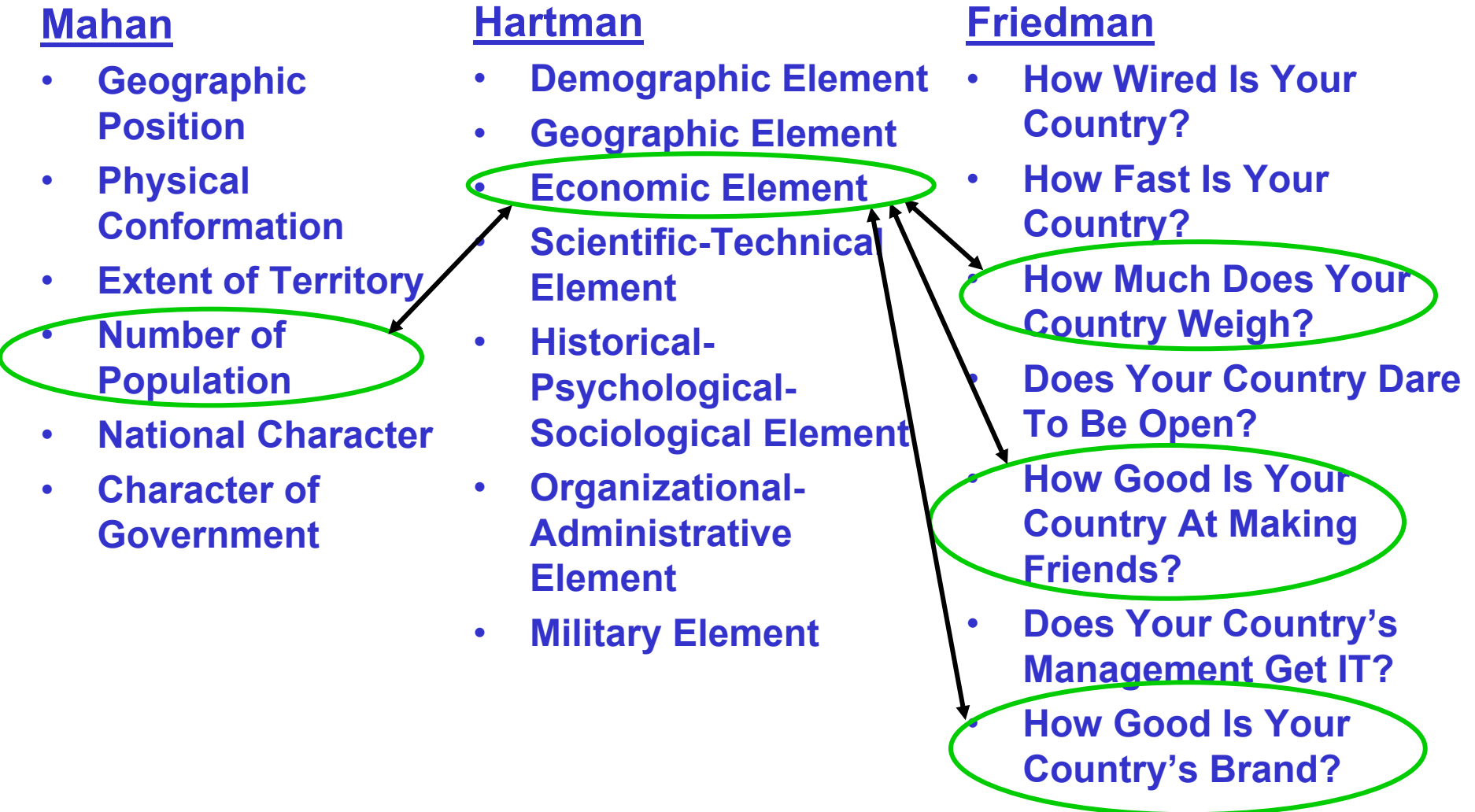
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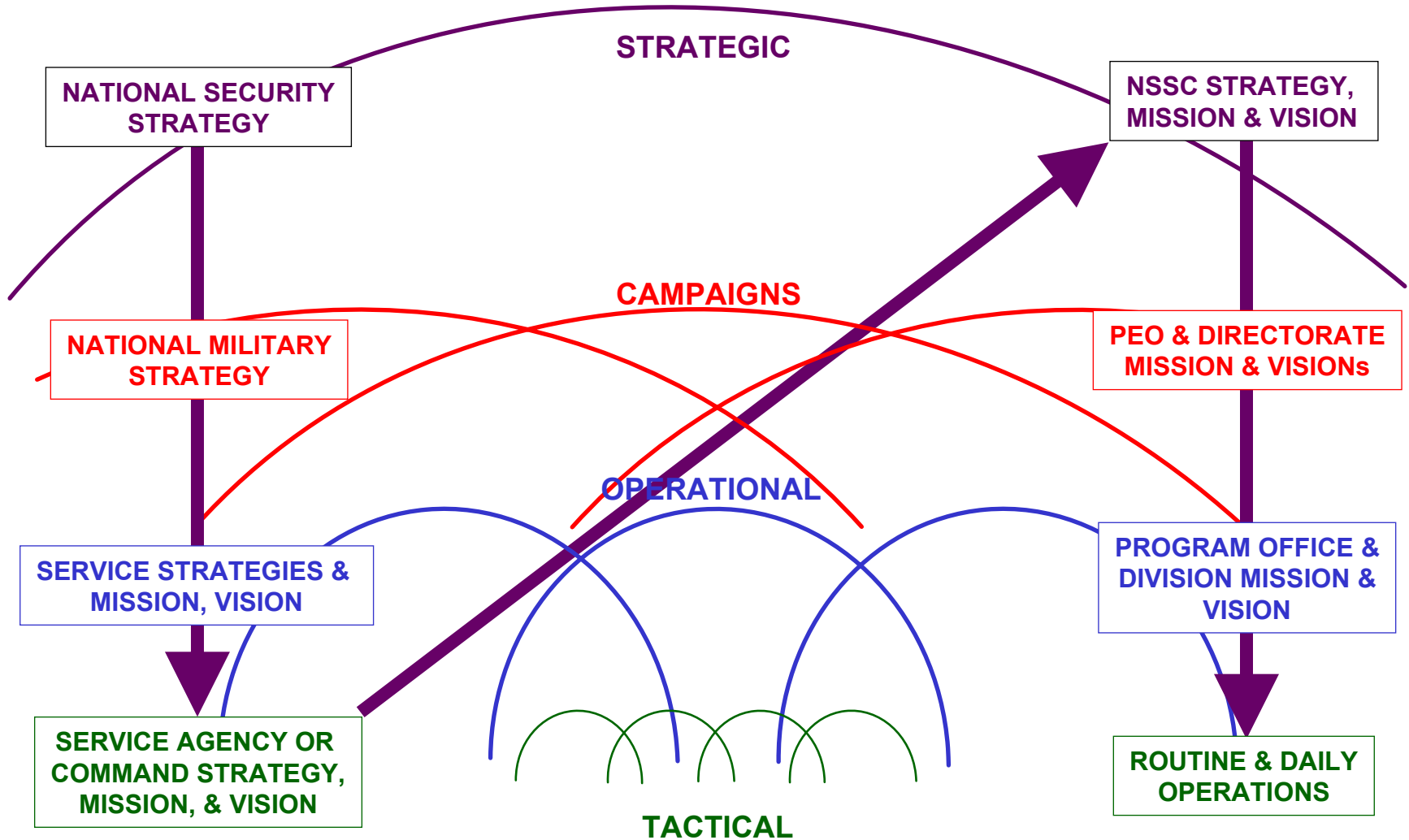
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Strategic to Tactical Framework

- **Von Clausewitz**
 - Objectives, Centers of Gravity, and Fog of War
- **Sun Tzu**
 - Lots of Calculations, Knowing Yourself, and Where and How to Prepare
- **Mahan, Hartman, and Friedman**
 - Granularity, Metrics, and Understanding/Knowledge
- **Government Performance and Results Act**
 - Strategic Goals, Ways and Means, and Objectives
 - Sort of a melding of them all

A Visualized Framework - STRATEGIC Through TACTICAL



Strategic to Tactical Framework

- **Constitution; National Security Strategy; and National Military Strategy**
- **Executive Agency Strategic Plans; Missions, Visions, and Goals; and Guidance Documents**
- **Service Strategic Plans, Missions, Visions, and Goals; and Guidance Documents**
- **Service Agency and Command Strategic Plans; Missions, Visions, and Goals; etc.**
- **Etc.**
- **Trough layers Down to the Offices with their Routine and Daily Operations**

The Power Game

<u>CATEGORY</u>	<u>METRIC</u>	<u>LEAD POSITION</u>
Military Power	<ol style="list-style-type: none"> 1. Military Spending 2. Nuclear Warheads 3. Weapons Exports 	<ol style="list-style-type: none"> 1. United States 2. United States 3. Russia
Economic Power	<ol style="list-style-type: none"> 1. Total Gross Domestic Product 2. Competitiveness (WEF Index) 3. Exports 	<ol style="list-style-type: none"> 1. United States 2. Finland 3. United States
Resource Power	<ol style="list-style-type: none"> 1. Oil Reserves 2. Freshwater Reserves 3. Agricultural Exports 	<ol style="list-style-type: none"> 1. Saudi Arabia 2. Iceland 3. United States
Technological Power	<ol style="list-style-type: none"> 1. Nobel Prizes in Science 2. Patents Granted 3. Internet Users 4. Personal Computers 	<ol style="list-style-type: none"> 1. United States 2. Japan 3. Iceland 4. San Marino
Diplomatic Power	<ol style="list-style-type: none"> 1. Donors of Foreign Aid 2. U.N. Security Council 3. Environmental Treaties 	<ol style="list-style-type: none"> 1. United States 2. 5 Permanent Members 3. Norway
Movie Power	<ol style="list-style-type: none"> 1. Feature Film Production 2. Film Investment 3. Movie Tickets Sold per Year 	<ol style="list-style-type: none"> 1. India 2. United States 3. India
Social Power	<ol style="list-style-type: none"> 1. University Students 2. Quality of Life (U.N. Index) 3. Housing: People per Room 	<ol style="list-style-type: none"> 1. Canada 2. Norway 3. Canada

MAKING TRACKS: MIGRATION IN THE 1990S

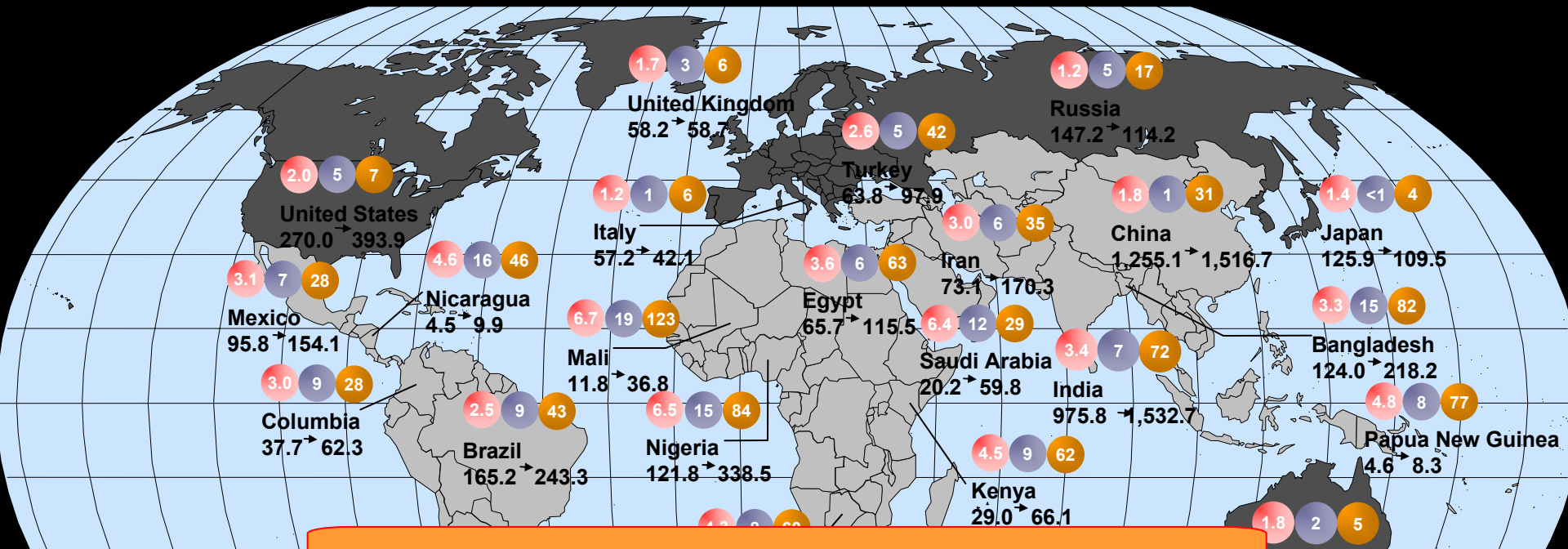
**“Desperate People Can Resort
To Desperate Solutions.”**

Klaus Toepfer, UN Environment Programme



POPULATION TRENDS

HEALTH, WEALTH, AND POPULATION



WILL 'DEVELOPING COUNTRIES' POPULATION GROWTH OR THE 'VIRTUOUS CYCLE' PREDOMINATE?

MAYBE A COMBINATION?



Developed countries



Developing countries



Average number of births per woman



Percentage of teenage girls (15-19) giving birth each year



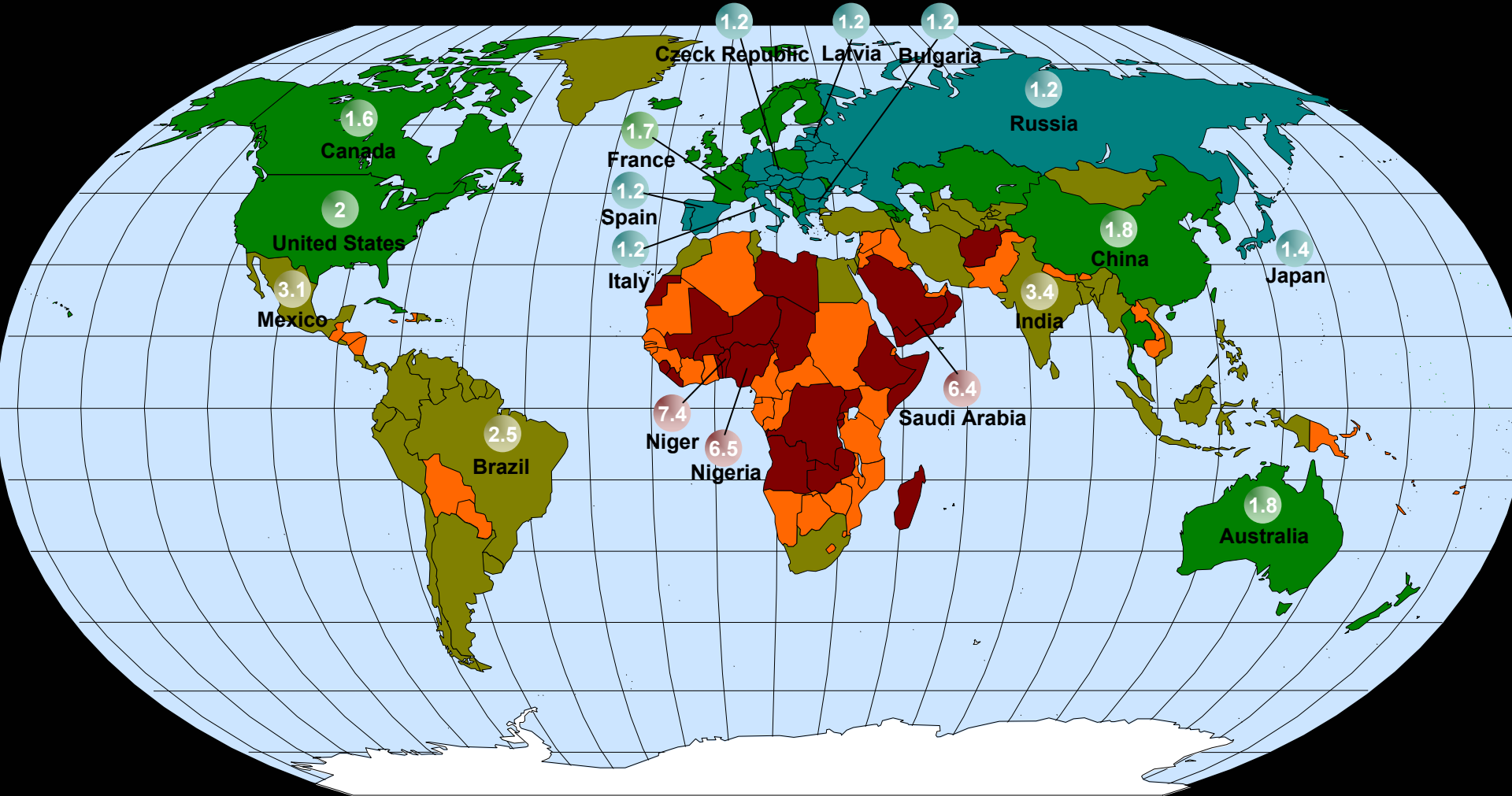
Infant mortality per 1,000 births

Country

1998 population → 2050 population (in millions)

Derived from National Geographic, October 1998

FERTILITY: SMALLER FAMILIES



Fertility (Average births to women during lifetime)

6 and above

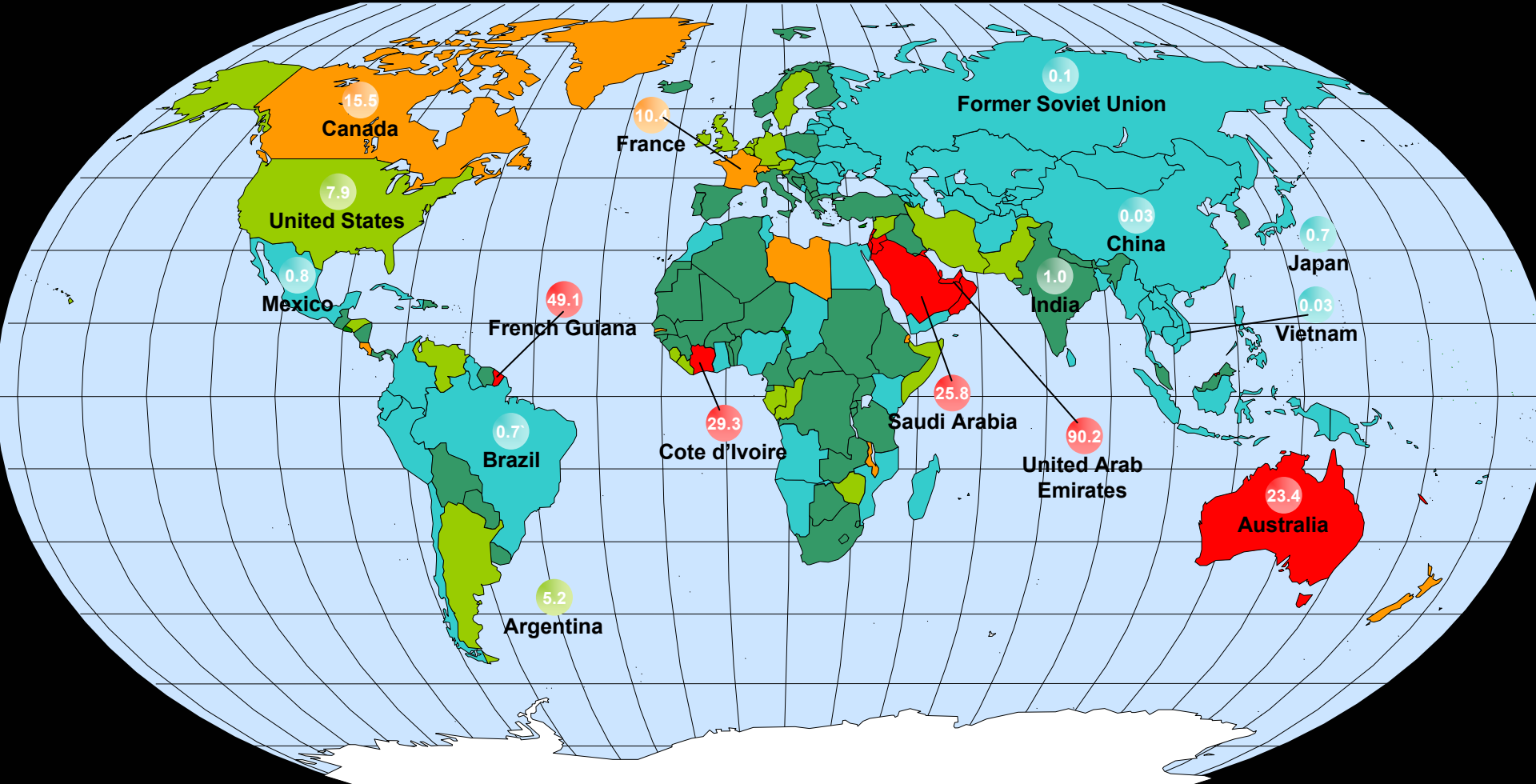
4 – 5.9

2.2 – 3.9

1.6 – 2.1

Less than 1.6

WORLD MIGRATION: DISTANT HOMES

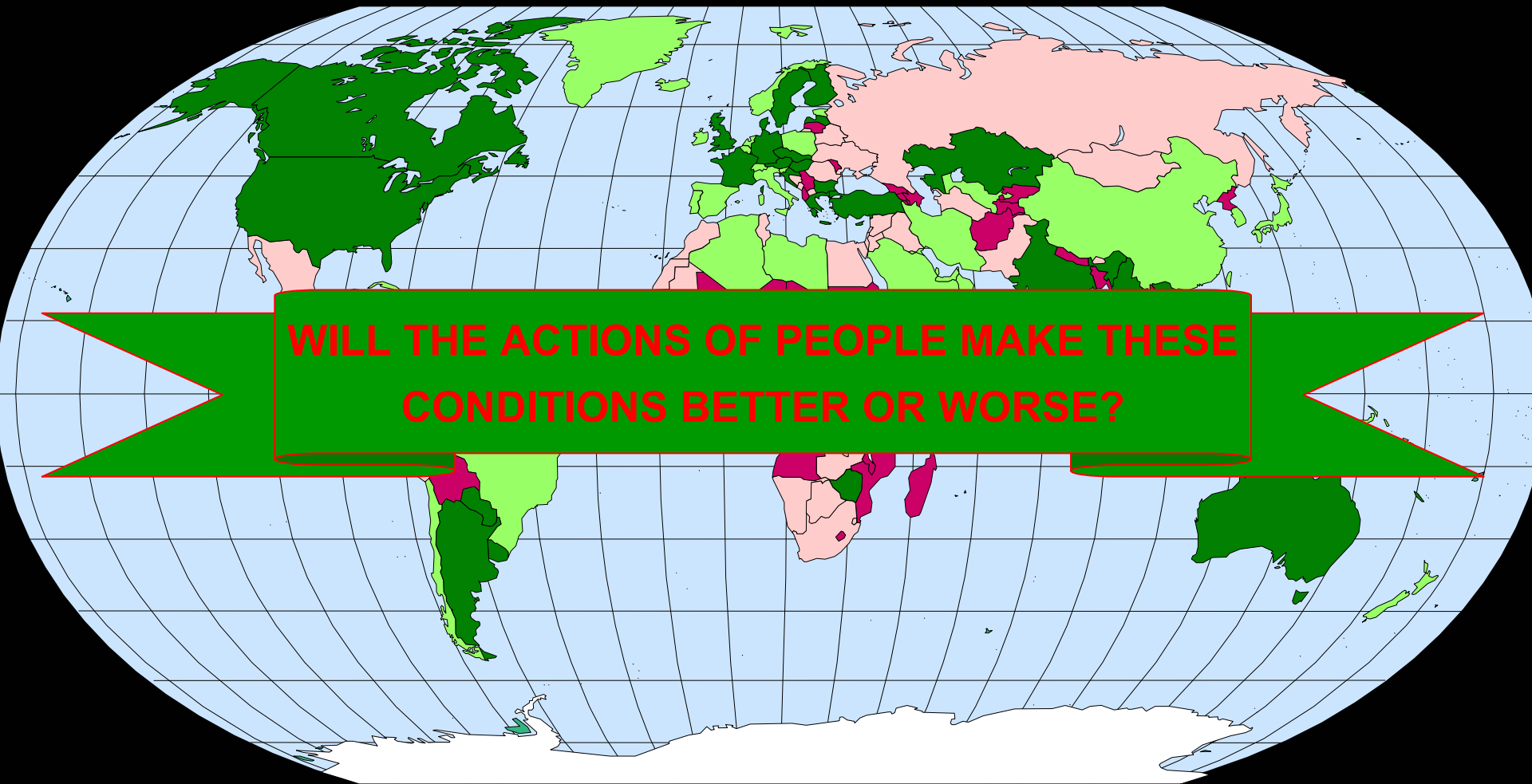


Migrant Population (percent of population)



Derived from National Geographic, October 1998

GLOBAL HARVEST FROM THE GOOD EARTH



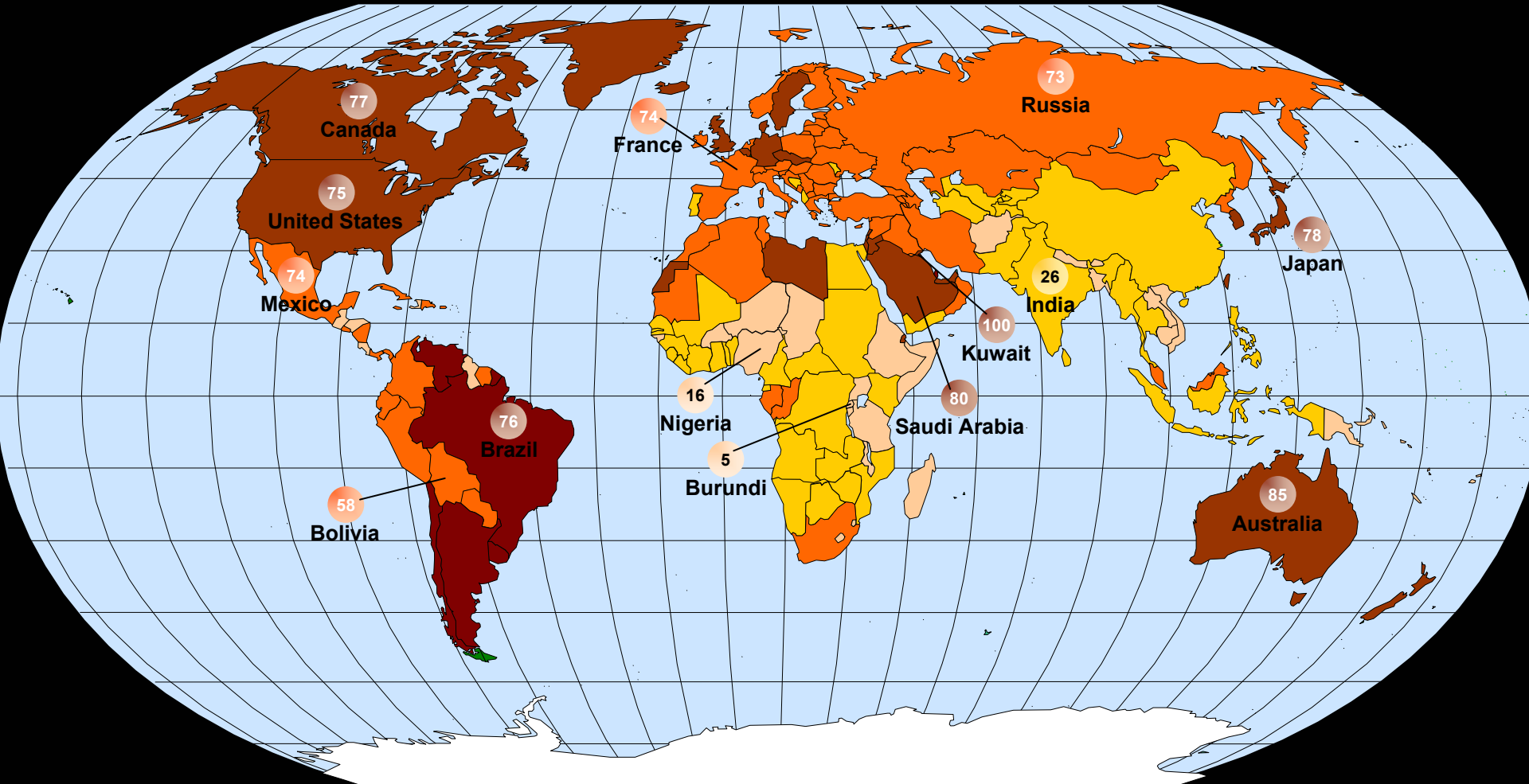
■ *Net exporter*

■ *Net importer (1-20 percent imports as aid)*

■ *Net importer (all imports purchased)*

■ *Net importer (21 percent or more imports as aid)*

URBANIZATIONS: CLOSER QUARTERS



Population in Urban Areas (percent of total population)

75 and above

50 – 74

25 – 49

0 – 24

PRESERVING THE ESSENCE OF LIFE

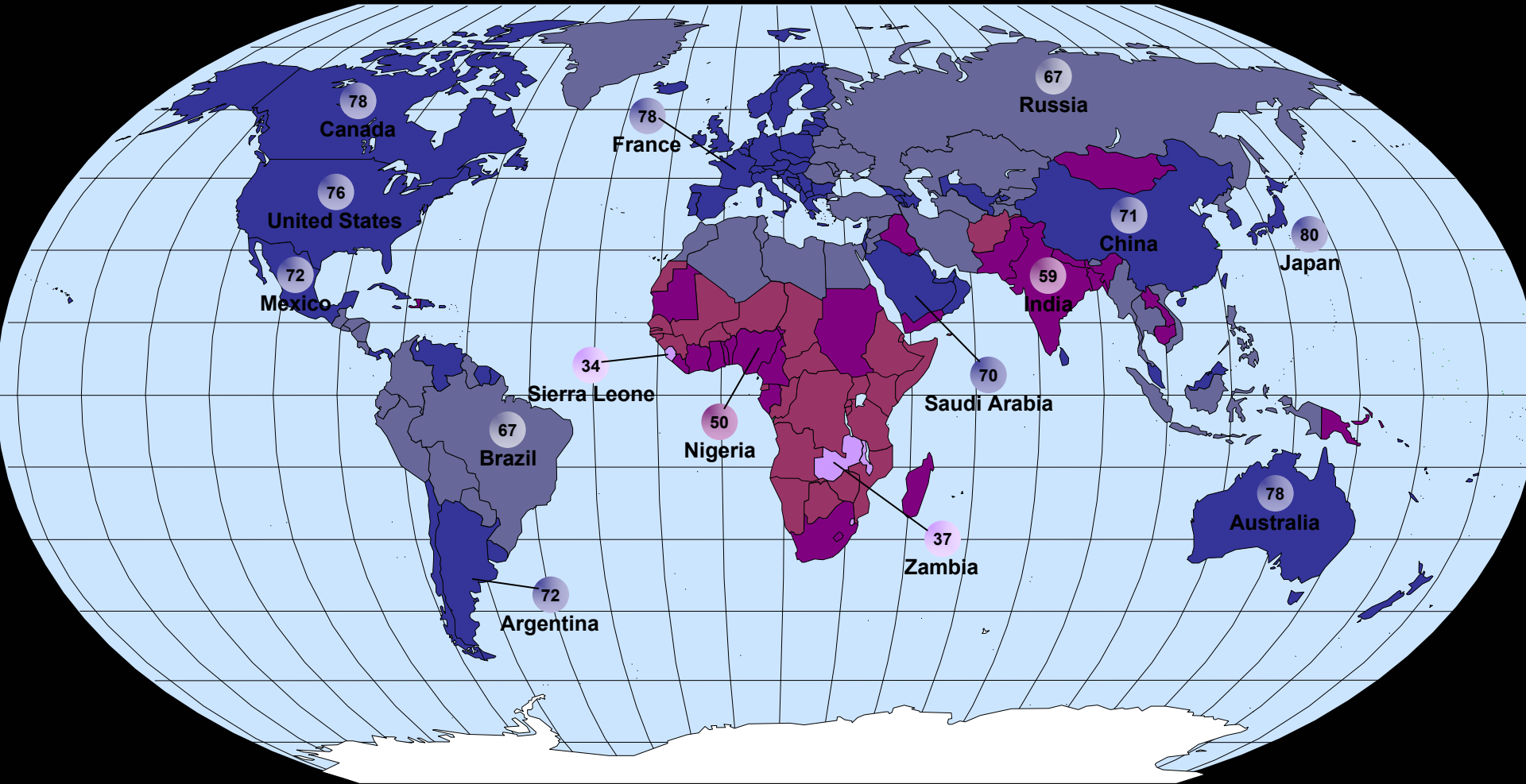
Annual withdrawal of fresh water in gallons per capita (not including rainwater usage)



- Adequate (more than 440,000)
- Stressed (264,000 to 440,000)
- Scarce (less than 264,000)

Annual availability of renewable fresh water in gallons per capita (including rain water)

LIFE EXPECTANCY: LONGER LIVES



Life Expectancy (years)

70 and above

60 - 69

50 - 59

40 - 49

Less than 40

Available Tools - Connected Paths

(Models, Granularity, Metrics, Bayes, and Outcomes)

- **Command and Control Research Program**
 - Bayesian Principles for Analysis of Operations and Contributions
 - Influence & Colored Petri Networks
 - Effects Based Planning and Operations
 - Other Tools not Tested or Tried
- **Utility Outcomes Model**
- **Applied to Multi-Dimensional Strategic through Tactical Framework**

**Scary Opportunities with Potential Benefits
(Fangorn Forest and Paths of the Dead)**

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Future Opportunities

2004

- **This is the Sun Rising**
- **Opportunities**
 - **Conferences Like this**
 - **Interactions and Influence**
 - **Developing Understanding and Knowledge**
 - **Many Calculations**
 - **Looking Strong Where Weak, Weak Where Strong, and maybe even Prepared All the Way Around**
 - **Synergistic Opportunities Between all the Sections of the Nation(s), with Allies and Coalitions**
- **Further Development of the Presented Framework**