



The Security-Stability-Sustainability Nexus

Environmental Considerations

NDIA Environment, Energy and
Sustainability Symposium

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AEPI Mission / VAIA Operating Concept



The mission of the Army Environmental Policy Institute is to assist the Army Secretariat in the development of proactive policies and strategies to address environmental issues that may have significant future impacts on the Army

- Visualize** • Scanning the horizon for environmental issues and forecasting probable impact on the Army in the future
- Aalyze** • Gathering the best environmental intelligence from government, industry and academia or develop internally
- Incorm** • Providing sound recommendations that Army leaders can incorporate into planning and policy making decisions
- Act** • Building a bridge between policy and implementation through pilot programs, strategic plans, policy recommendations



Topics

- **Strategic Frameworks** – Ends-Ways-Means
- **Environment Considerations** – State Fragility
- **Stability Operations** – Fostering Sustainability
- **Peacetime Engagement** – Conflict Prevention

“America is now threatened less by conquering states than we are by failing ones” (National Security Strategy, 2002)

Terms

Security – *freedom from fear, want, and deprivation* (1)

Stability – *capacity to manage effectively and peacefully and adapt to change, while addressing structural underlying factors associated with instability and external stabilizers* (2)

Sustainability – *capacity to meet the needs of the present without compromising the needs of future generations* (3)

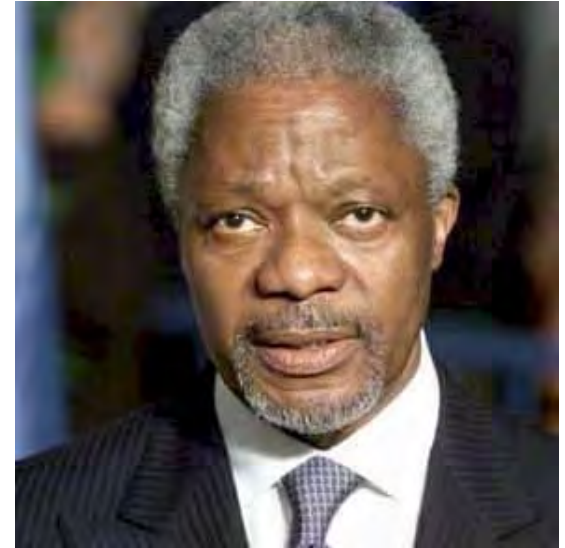
Environment – *complex of physical, chemical, biotic factors that act upon an organism or ecological community at any point in the life cycle and ultimately determine its form and survival* (4)

Sources: (1) Renner, *Inventory of Environment and Security Policies and Practices*, p. 11, 2006; (2) Adapted from UK , *An International Strategy to Manage Risks of Instability and Improve Crisis Response*, 2005; (3) Former Sec. of Army Francis Harvey; (4) Botkin and Keller, *Environmental Science – Earth as a Living Planet*, 1995.

The Nexus Articulated

“Humanity will not enjoy security without development, it will not enjoy development without security, and it will not enjoy either without respect for human rights” ... “all of our efforts to defeat poverty and pursue sustainable development will be in vain if environmental degradation and natural resource depletion continue unabated.”

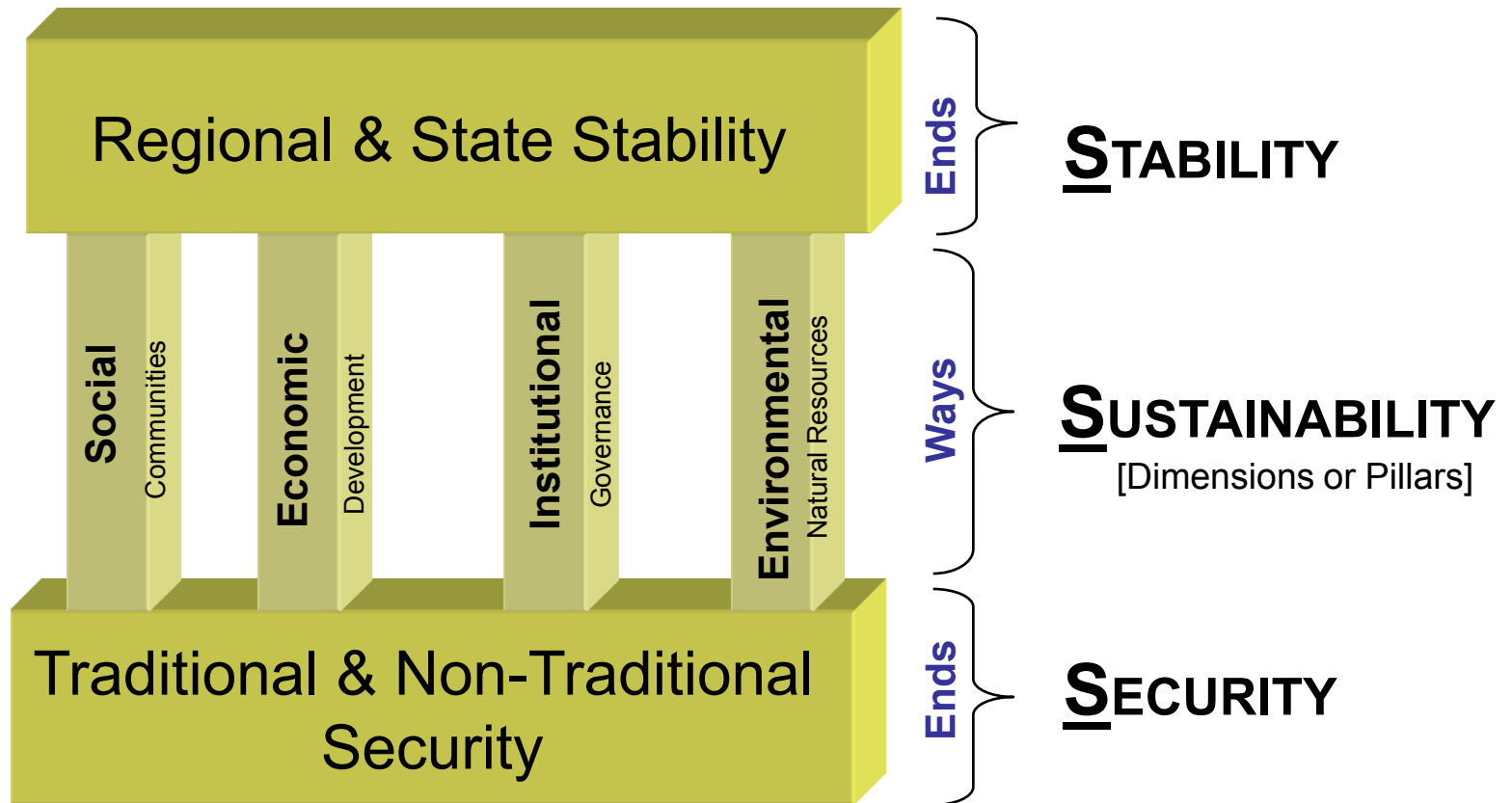
United Nations Secretary-General's Report
2005 World Summit



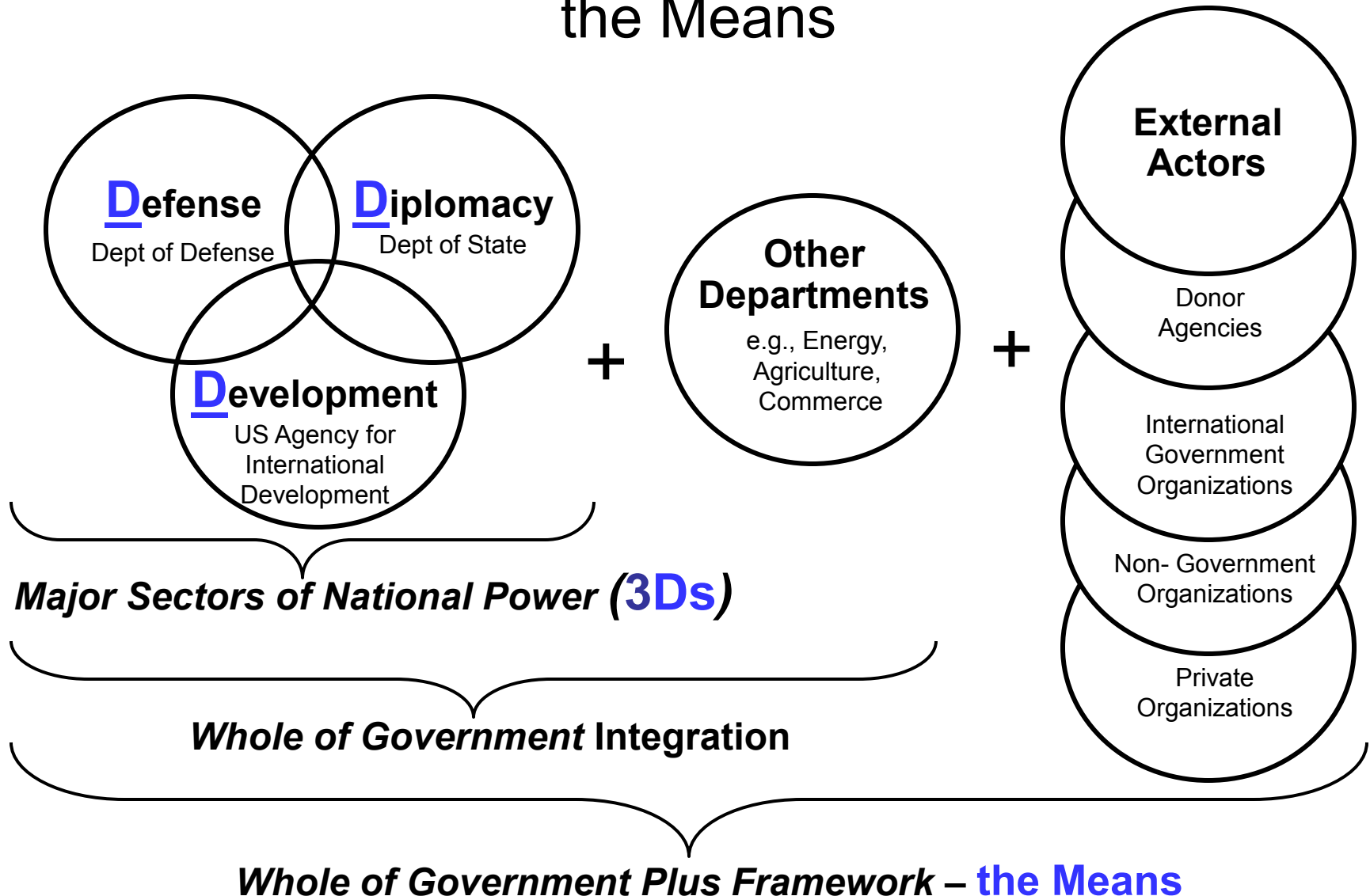
Kofi Annan

The Nexus Depicted

Pillar Framework



Whole of Government “Plus” Framework the Means



Improved Integrated Planning/Execution

Addressing Non-Traditional Threats

➤ **On Future Threats:** [next 20+ years]
“certain pressures – population, resource, energy, climate, economic, and environmental – could combine with rapid cultural, social, and technological change to produce new sources of deprivation, rage and instability”



➤ **On Engagement:** *“the military is in a supporting role to civilian agencies “*

➤ **On Resourcing:** *“American civilian institutions of diplomacy & development have been chronically undermanned and underfunded for far too long”*

➤ **On Integration:** *“the challenge we face is how best to integrate these tools of statecraft with the military, international partners, and the private sector”.*

Speech: Speech delivered by SECDEF Gates U.S. Global Leadership Campaign, Washington D.C., 15 July 2008.

Environment and Security

“Climate change, energy, global health and environmental security are often intertwined, and while not traditionally viewed as „threats“ to U.S. national security, they will affect Americans in major ways.”



Adm. Dennis Blair
Director of
National Intelligence

“ ... the greatest danger may arise from the convergence and interaction of many stresses simultaneously ... such a complex and unprecedented syndrome of problems could cause outright state failure, or weaken pivotal states counted on to act as anchors of regional stability.”

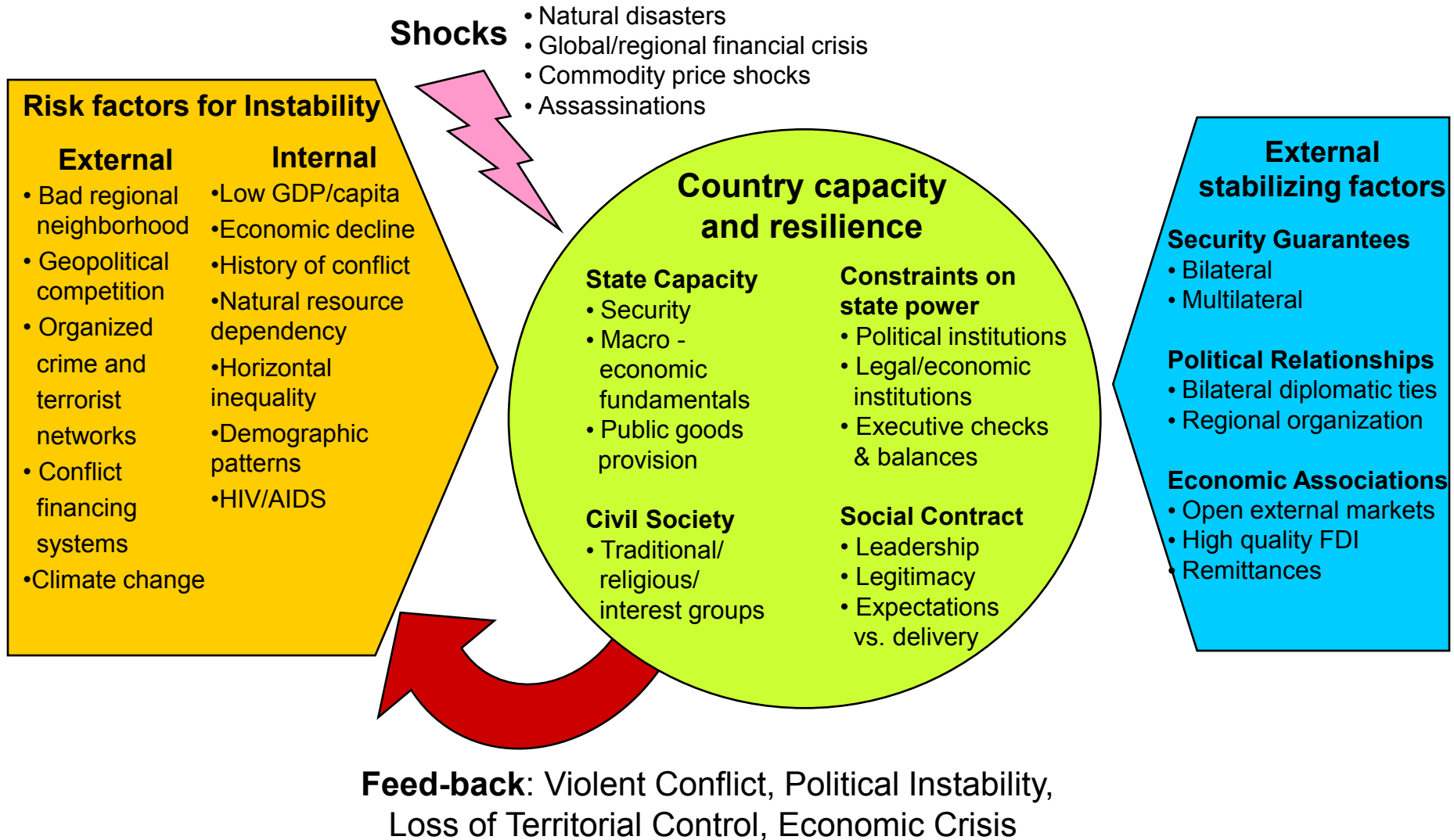
Instability and Fragile States (FM 3-0)

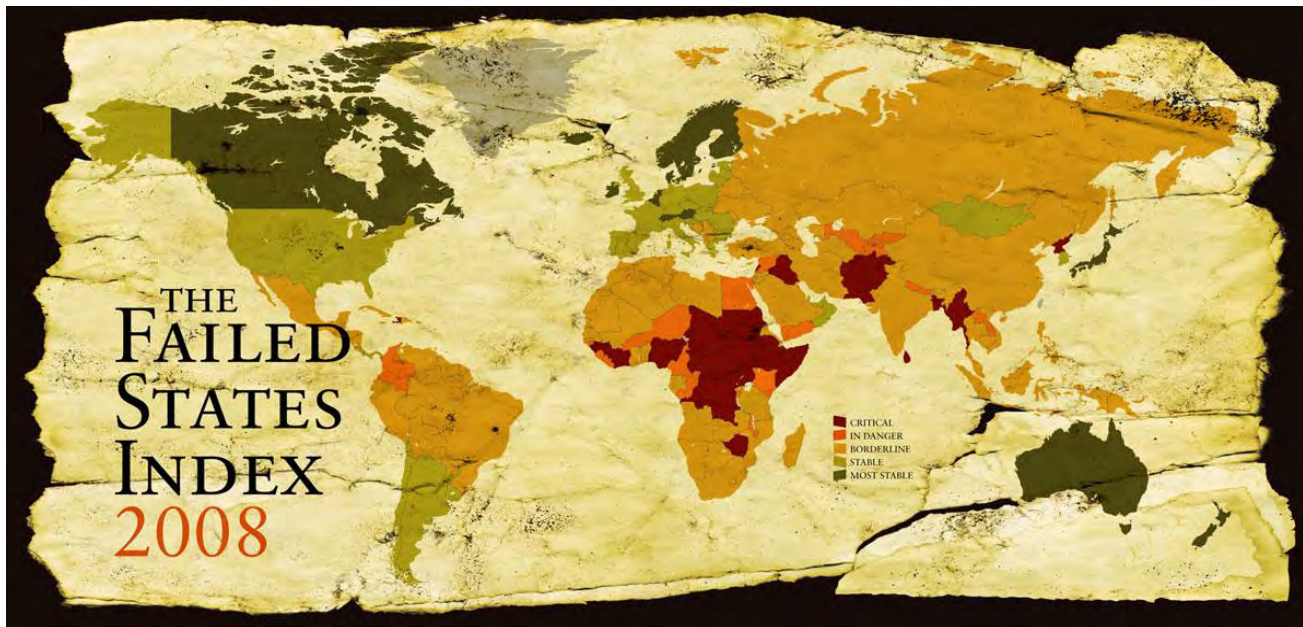
Trends Affecting Ground Force Operations

- **Globalization** – underscores disparities that can spawn instability
- **Technology** – advanced technology available to unstable states
- **Demographic Changes** – population growth in Africa
- **Urbanization** – overcrowded megacities near geological fault lines
- **Resource Demand** – competition for water, gas, and oil – are finite
- **Climate Change/Natural Disasters** – destabilizing, migration, disease
- **Proliferation Weapons of Mass Destruction** - catastrophic attacks
- **Failed or Failing States** – safe havens for adversaries

“A fragile state is a country that suffers from institutional weakness serious enough to threaten the stability of the central government”

Systems Framework for Instability

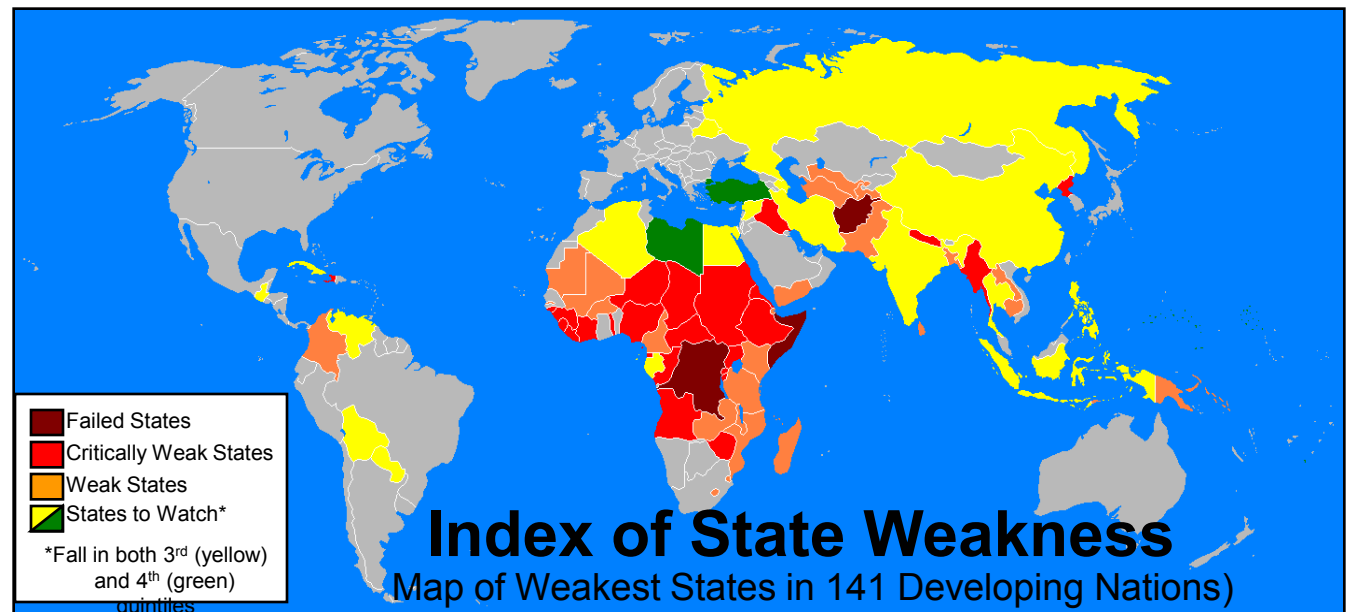




Indices of State Fragility

Source: Foreign Policy and Fund for Peace Conflict Assessment System Tool (CAST), 2008

Rankings	FSI	ISW
Somalia	1	1
Sudan	2	6
DRC	6	3
Zimbabwe	1	8
Afghanistan	7	2
Iraq	5	4

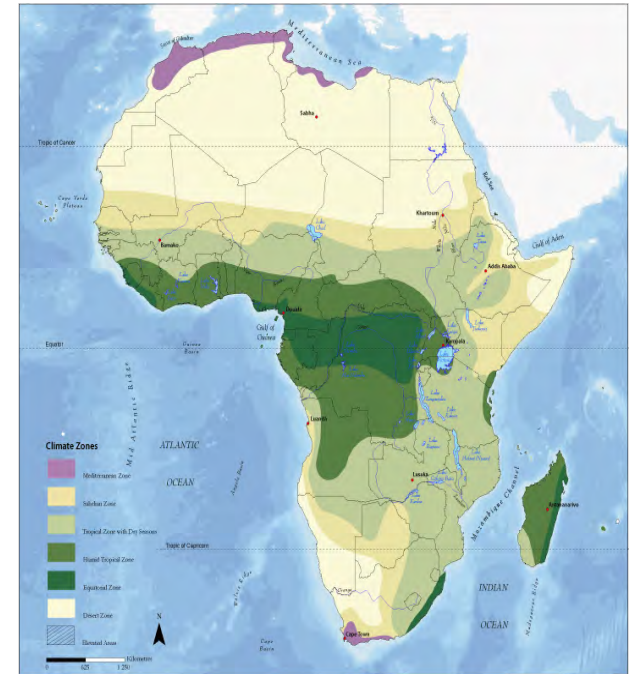


Source: Rice and Patrick, 2008 – Reproduced with Brookings Institution Permission

Africa - Most Vulnerable

- World's hottest continent and the 2nd driest
- 20 of 30 countries - fastest growing populations
- By 2050 Africa will have the fastest growth rate in the world – twice rate of any other region
- Rapid urbanization – highest rate for decades
- World's highest rate of deforestation
- Land degradation leading to desertification
- Estimated 65% of agricultural land is degraded
- Emits only 4% of global CO₂ emissions
- African biodiversity – opportunity for proactive intervention to address decline and hotspots

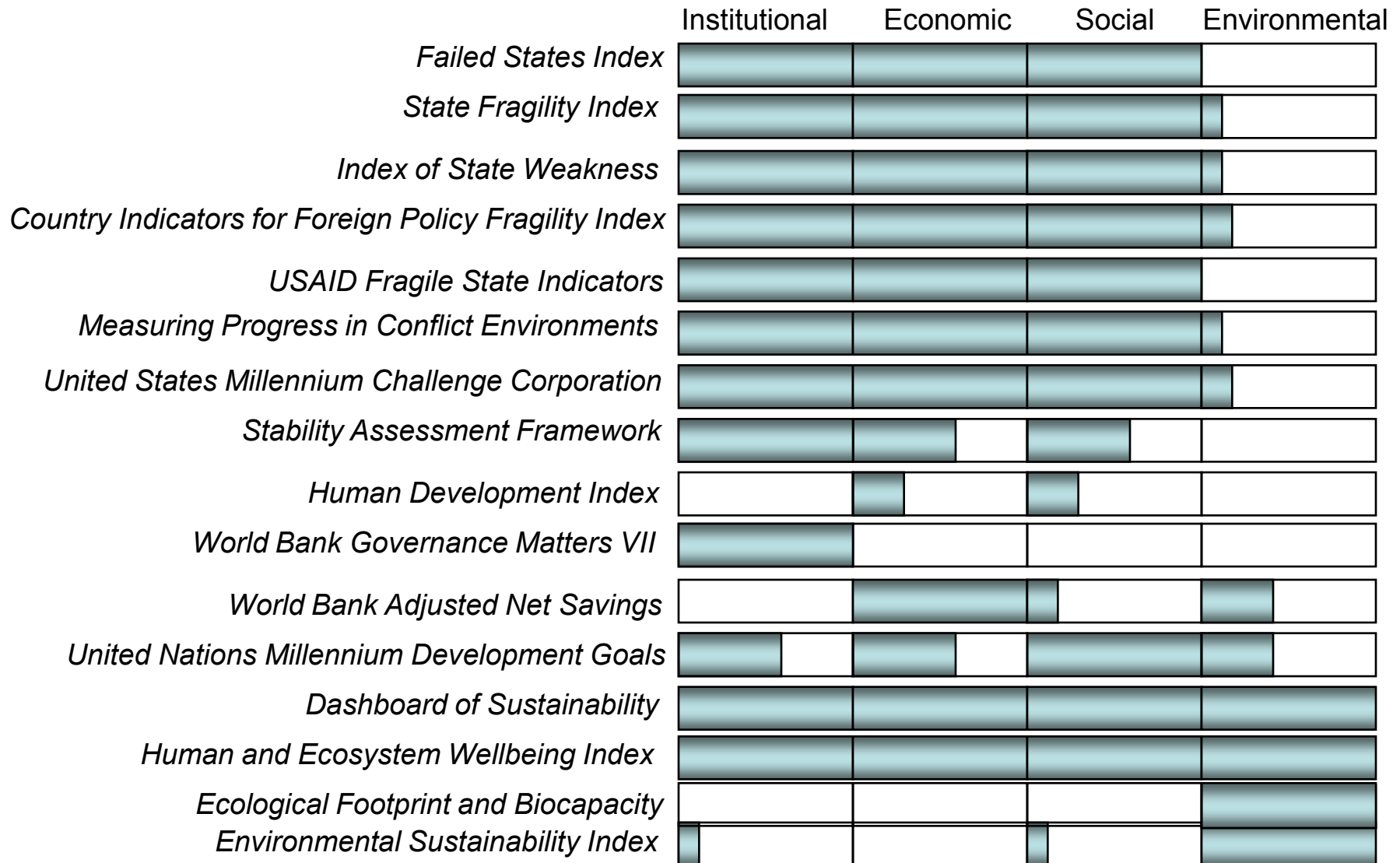
Africa Climate Zones



Source: Africa: Atlas of Our Changing Environment , UNEP, 2008

Comparison of Indicator Sets and Indices

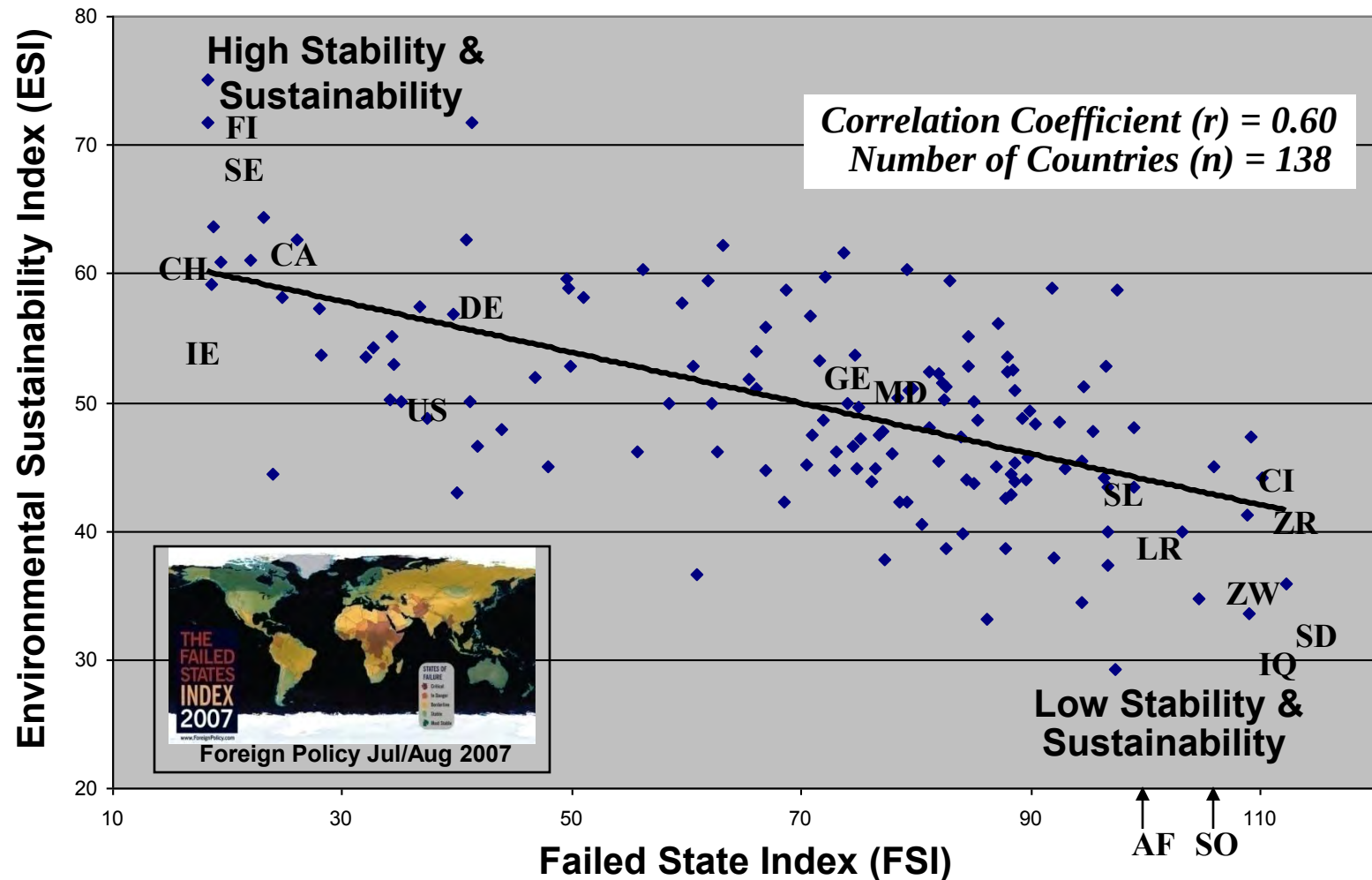
Notionally Represented by Sustainability Pillar



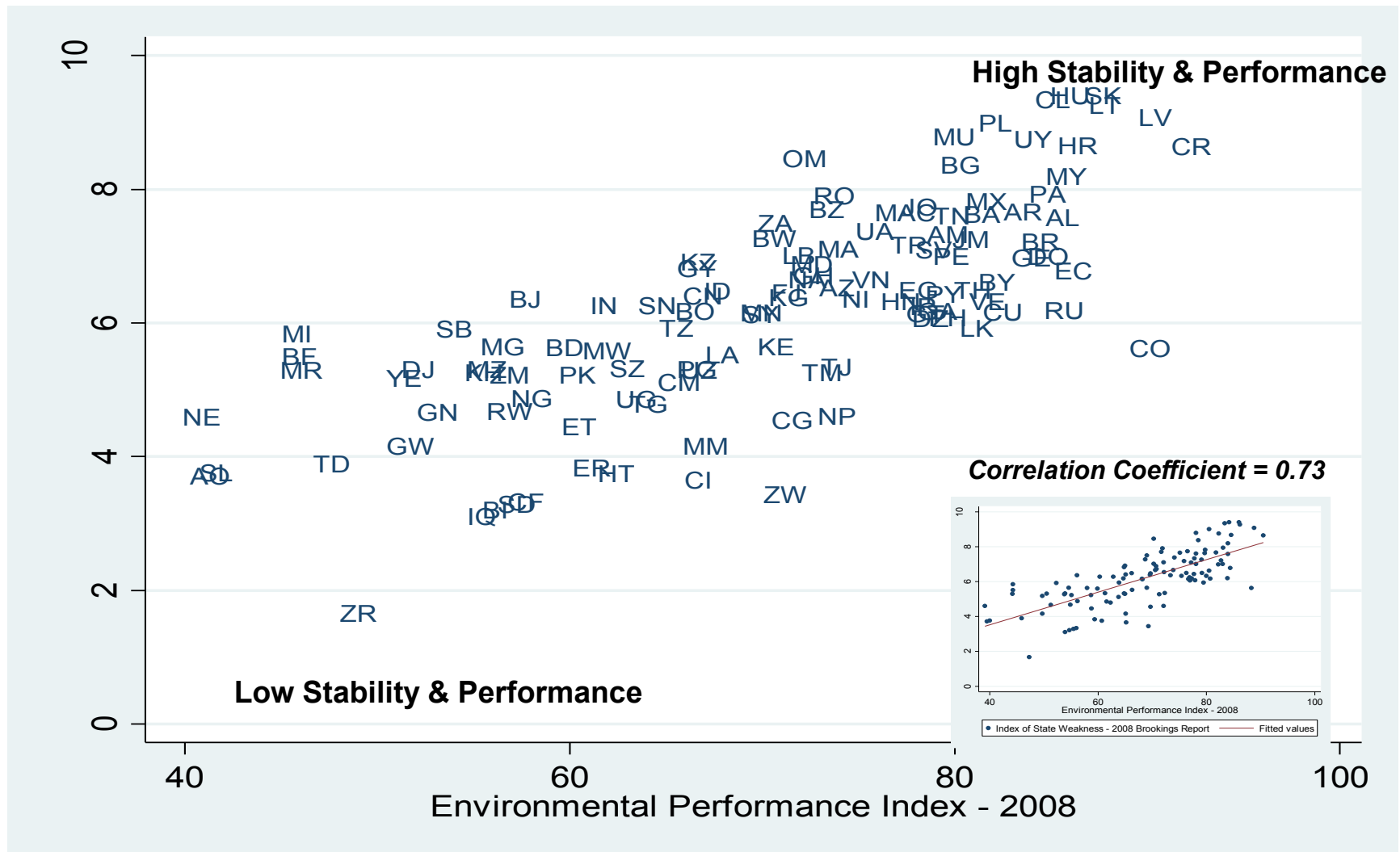
Source: Hearne, Pre-publishable Paper Submitted to George C. Marshall Center, 2008

Environmental Sustainability & State Fragility

NATO Advanced Research Workshop Presentation – June 2007



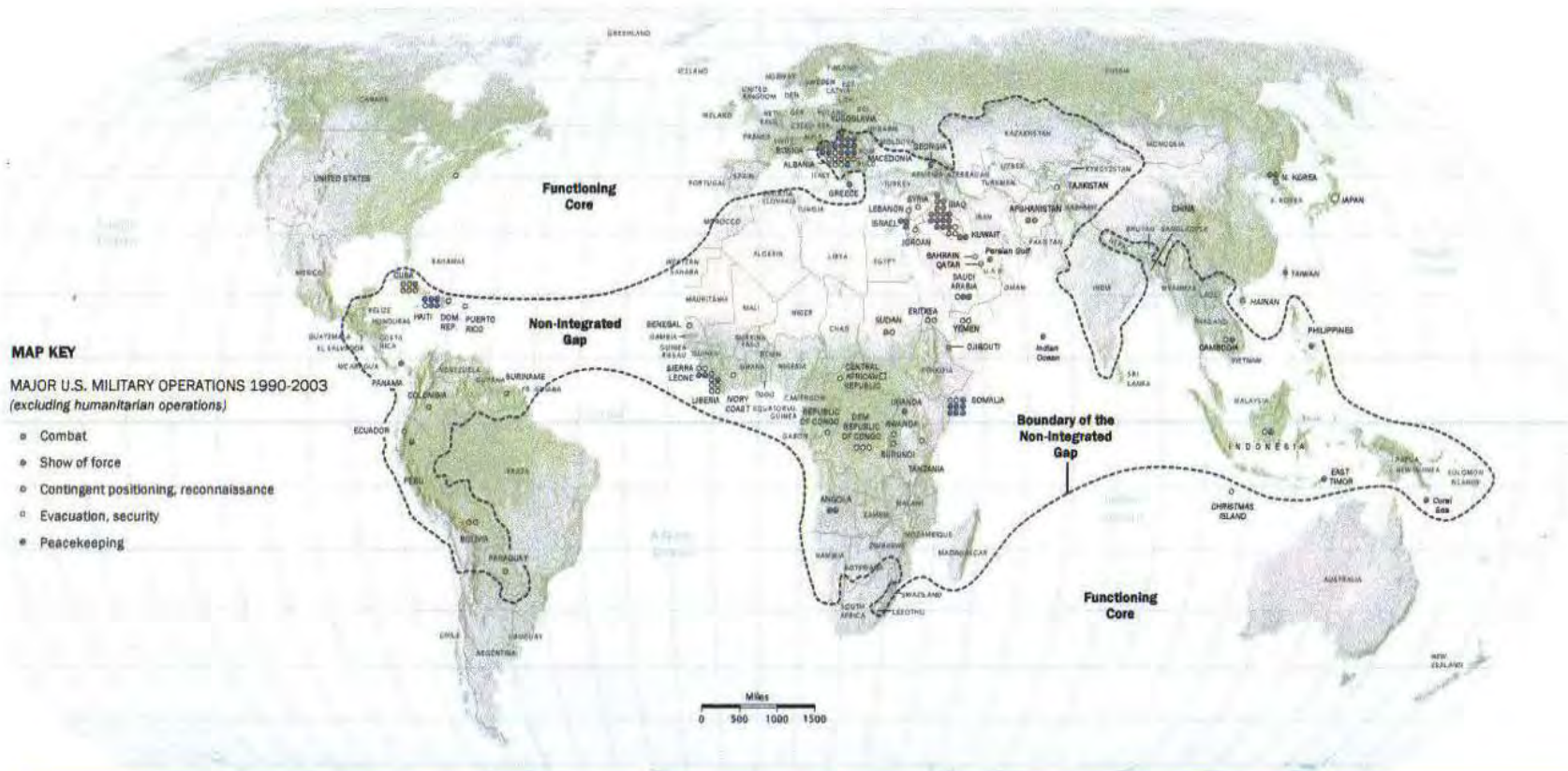
State Weakness & Environmental Performance



Major US Military Operations: 1990-2002

Non-Integrated Gap – Disconnected from *Globalization*

The Pentagon's New Map:
War and Peace in the Twenty-First Century

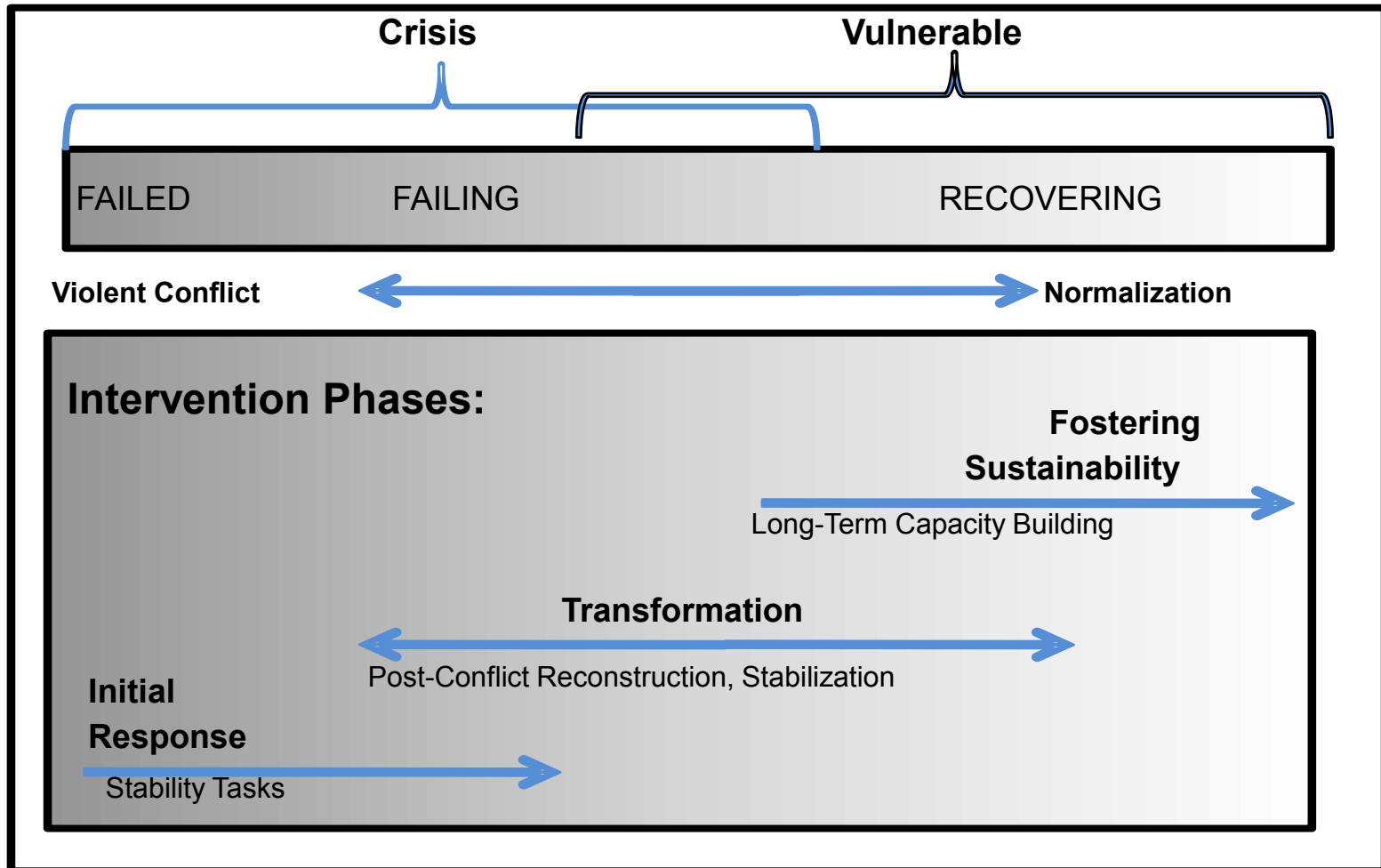


Non-Integrating Gap: Area envisioned to be removed from the politically stable, economically integrated countries of globalization's functioning "core"; characterized by repression, poverty, disease, and chronic conflict.

Source: Barnett, *The Pentagon's New Map*, 2003

Response to Instability and Fragile States

The Fragile States & Stability Operations Frameworks (FM 3-07)



Source: US Army Field Manual (FM) 3-07, Stability Operations, 2008

Stability Operations - Basic Human Needs

“Stability Operations encompass various military missions, tasks and activities conducted outside the United States in coordination with other instruments of national power to maintain or re-establish a safe and secure environment, and to provide essential government services, emergency infrastructure reconstruction, and humanitarian relief.” [Source: Joint Pub 3-0]



Core US military mission comparable to combat operations

- Conducted to help establish/maintain order **across the full spectrum of operations** - peace through conflict
- Best performed by indigenous, foreign, or civilian professionals but **military must be prepared to perform tasks** when civil authorities cannot
- SOs are typically **lengthy endeavors**



Importance of Environment in Stability Ops

Addressing Basic Human Needs

Physiological/Survival

- Clean air and fresh water
- Sanitation and waste disposal
- Identifying disease vectors and vaccines
- Uncontaminated food supply

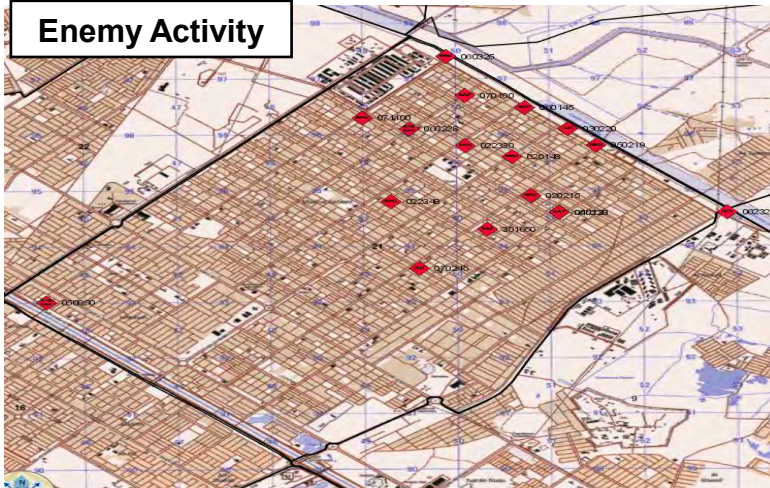


**AEPI Foresight Bulletin
Stability Operations (Aug 06)**

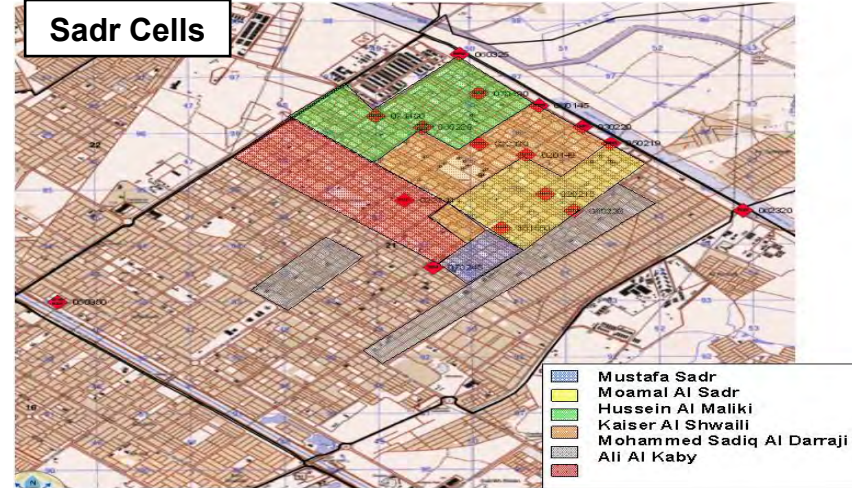
Basic Services & Insurgency - Baghdad

$$\text{Visible Progress} \propto \text{Local} \left(\frac{\text{Sewer+Water+Electricity+Garbage}}{\text{Employment+Governance}} \right) = \text{Deny Insurgent Influence}$$

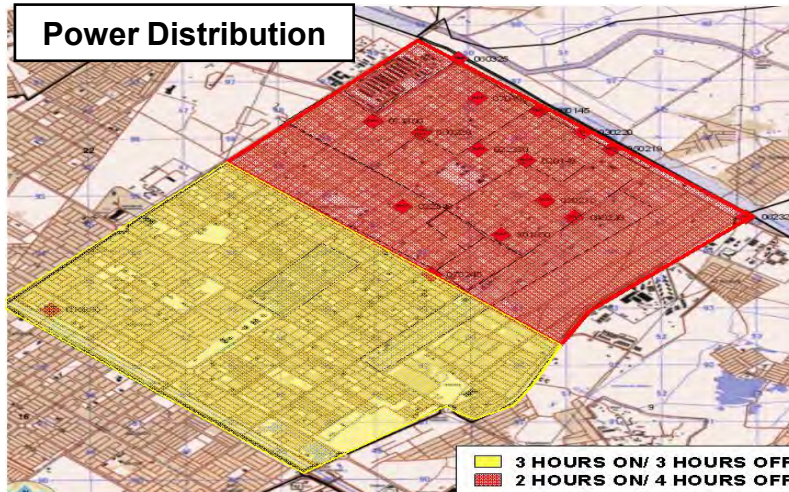
Enemy Activity



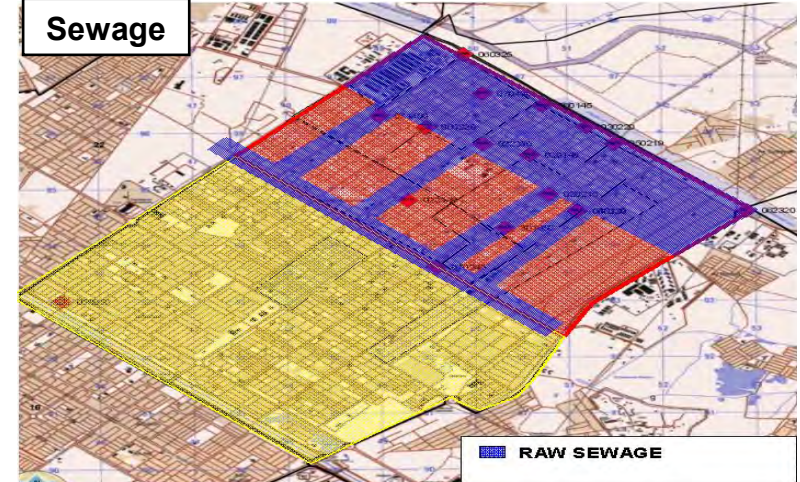
Sadr Cells



Power Distribution



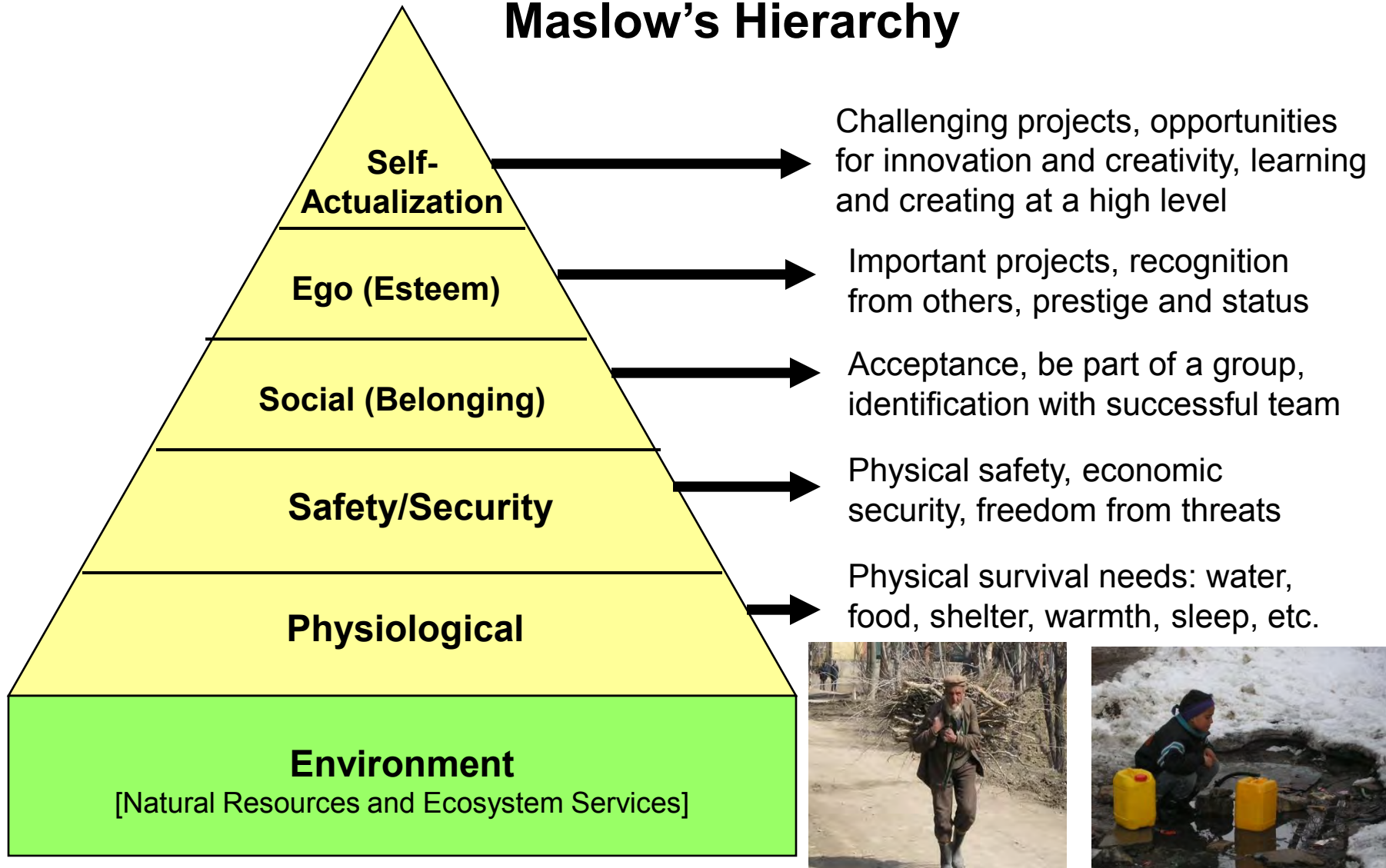
Sewage



Sources: (1) Briefing slides of LTG Peter Chiarelli, National Defense University Briefing, Oct 2007; (2) Chiarelli and Michaelis, Winning the Peace – The Requirement for Full-Spectrum Operations, Military Review, July-August 2005

Addressing Basic Human Needs

Maslow's Hierarchy



Stability Operations - The Bottom Line

Promote Stability and Foster Sustainability



**Combat [kinetic] operations
win the battle ...**

**... but addressing human
needs helps win the war**



Agribusiness Development Team – Afghanistan

Source: Leppert, Sustainability lecture on *RC-East
Agribusiness Development Teams*, Jun 08

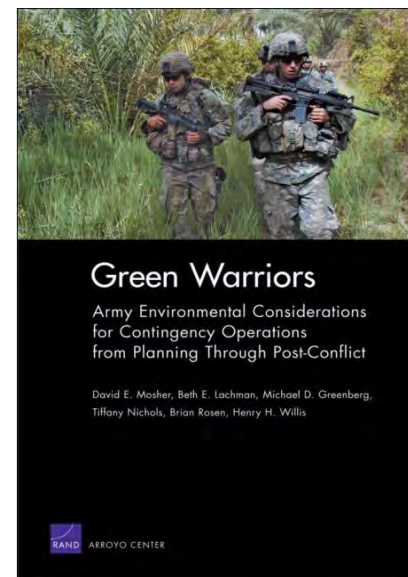
RAND Green Warriors Report – Sep 2008

Environmental Considerations in Contingency Operations

- **Consider environmental impacts early and often:**
 - Protect Soldier health and safety - minimize risk
 - Gain tactical and strategic benefit in meeting objectives
 - Improve community relations, e.g., sewage, water, trash

- **Recommendations include:**
 - Fill gaps in policy/guidance – DoD-wide policy
 - Improve pre-deployment/field environmental training
 - Invest in skilled personnel and innovative technologies
 - Integrate strategic environmental considerations in plans

- **Encourage Sustainable Environmental Practices:**
 - Reduced logistics tail - fewer convoys and Soldiers at risk
 - Safer and more efficient base camps - less waste
 - More stable and sustainable country upon re-deployment



Sustainability and Full Spectrum Ops

goinggreen = armystrong

“Sustainability is a national security imperative in a world of decreasing natural resources and increasing demand. The Army is building green, buying green, and going green in order to ensure that soldiers have the resources they need to accomplish their mission in the United States and globally”

(Pete Geren, Secretary of the Army)



“Triple bottom line” Plus
Mission, Environment, Communities + Economy

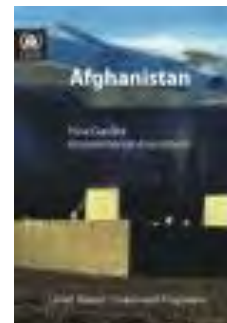
Sources: (1) *The Army Strategy for the Environment – Sustain the Mission – Secure the Future*, 2004;
(2) *Sustaining the Mission, Preserving the Environment, Securing the Future*, AUSA Torchbearer, 2007

Post-Conflict Environmental Assessments

United Nations Environmental Programme

UNEP in Afghanistan:

- Phase 1 (2000-2003) – Assessment
- Phase 2 (2003-2007) – Capacity Building
- Phase 3 (2008-2010) – Implementation



Afghanistan

Reported UNEP Achievements:

- Environmental Institutions and Coordination
- Environmental Law and Policy
- Environmental Impact Assessment and Pollution Control
- Environmental Information and Education
- Community-Based Natural Resources Management
- Network of Protected Areas
- Multilateral Environmental Agreements (MEAs)

Source: http://postconflict.unep.ch/publications/UNEP_in_Afghanistan.pdf



Kosovo



Iraq

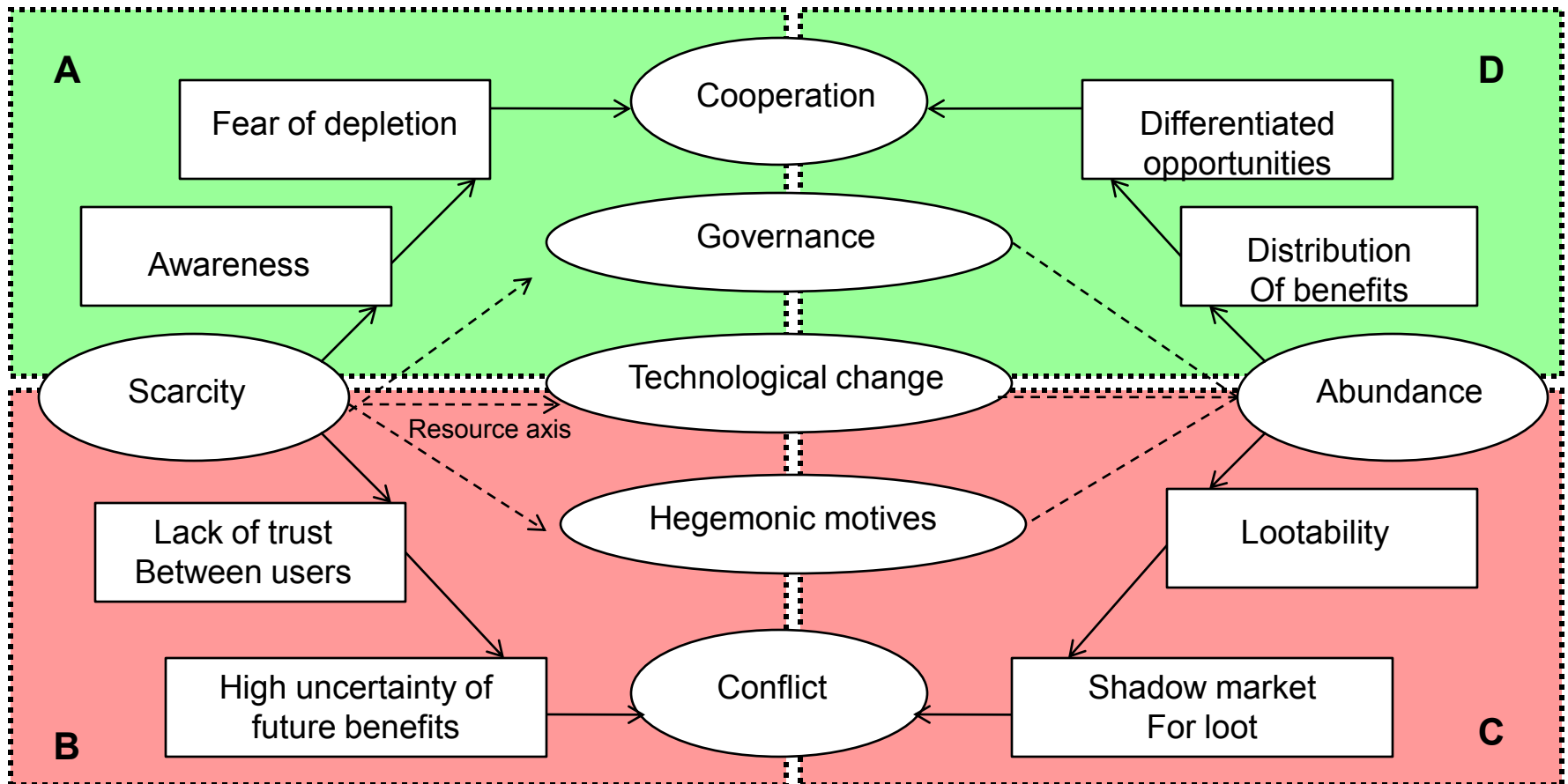


Sudan

Source: <http://postconflict.unep.ch/>;

Environmental Security Discourse

Contending Pathways – Cooperation vs Conflict



Source: Sakeen H. Ali, Introductory Chapter entitled *A Natural Connection between Ecology and Peace?* available at <http://mitpress.mit.edu/books/chapters/0262511983intro1.pdf>, 2007

Environment as a Peacebuilding Tool

Promoting Regional Cooperation/Engagement

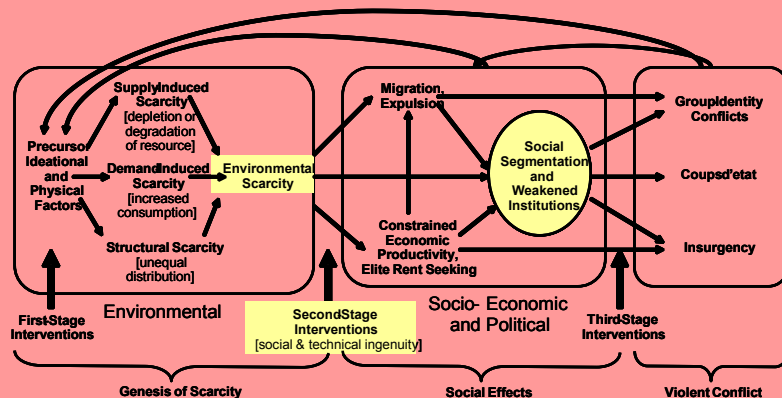


UNEP Report: *From Conflict to Peacebuilding*

Natural resources and the environment can be involved in all phase of the conflict cycle ... cooperation over management of natural resources is investment in conflict prevention ... provides new opportunities for peacebuilding

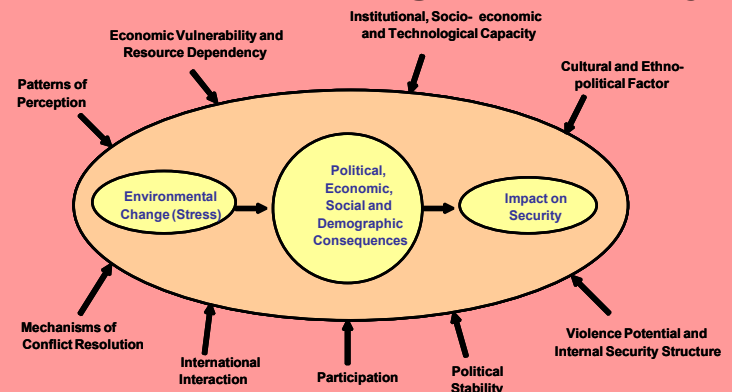
Source: http://www.unep.org/publications/search/pub_details_s.asp?ID=3998

Homer-Dixon Causal Model



Source: Adapted from Homer Dixon, Environment, Scarcity, and Violence, 1999

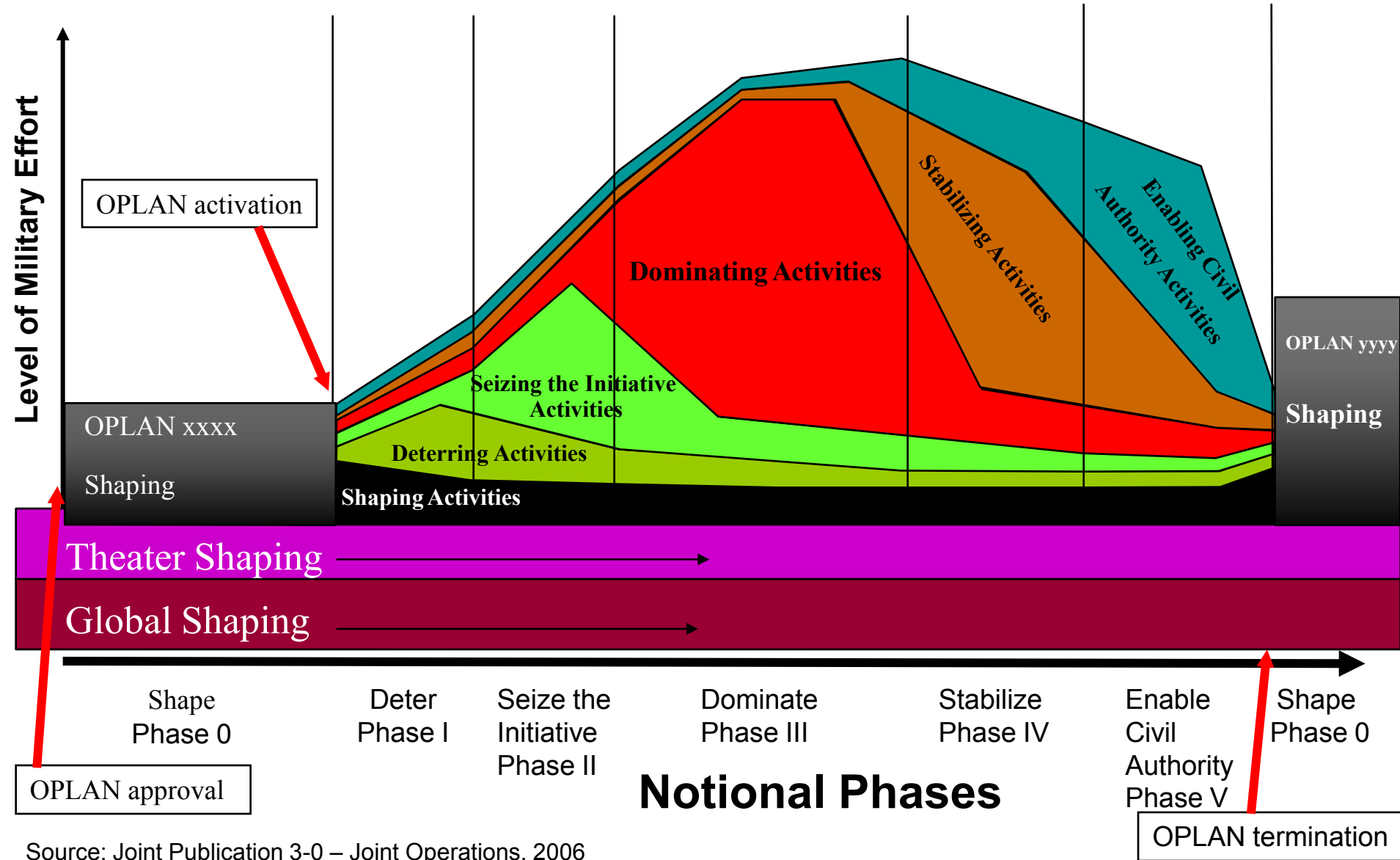
NATO: Env. Change & Security



Source: NATO CCMS Final Report No. 232, 1999

Six-Phase Planning Construct (Phase 0 to V)

Importance of “Phase 0” – Shaping/Engagement



Proactive “Phase 0” Engagement

Environmental/Sustainability Initiatives



- Provide a non-threatening and constructive avenue for mil-to-mil and other engagement activities
- Environmental and Sustainability activities help to build stable and secure societies
- Military sponsored environmental and sustainability-related activities build important relationships between the military and civil society – increasing military legitimacy and credibility

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