

Lecture Notes: Disaster Vulnerability and Resilience

Session 4

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Environment and War

Introduction

- I. Relationship between the environment and war
- II. Two types of war: modern, classic wars, complex humanitarian emergencies
 - a. Issues around the environment can:
 - i. Be a Cause
 - ii. Have a Direct Impact on the war
 - iii. Have a Longer-term impact on the countries (post-conflict context)
- III. Policy Implications
- IV. Research Questions

Complex Humanitarian Emergencies:

- I. Majority of current conflicts fall into this category. They are not formal conflicts between nation-states.
- II. Key Features:
 - a. Failed states/non-state actors
 - i. Very little predictability, accountability
 - b. Mass migration and regional destabilization
 - c. Direct targeting of civilians, human rights abuses
 - d. Increasingly criminalized
- III. Underlying conditions;
 - a. Poverty
 - i. Environment has a strong link
 - ii. Not necessary and sufficient
 - iii. Is it necessary? It is certainly more prevalent among these types of conflicts than amongst traditional nation-states
 1. Major outlier: Yugoslavia (now poverty-stricken as a result of war)
 - b. Arms availability
 - i. Environment can have a strong link
 - c. Communal tensions
 - d. Chronic state failure
- IV. Precipitating Factors: What makes vulnerable societies go to war?
 - a. Shifts in dynamics of group relations
 - i. Example: Iraq (current state)
 1. sudden shift of power to Shiite majority and Sunni minority

2. Kurds are emboldened, seem to which to secede from Iraq
3. May create instability that will lead to war.
- ii. Example: India
 1. Very poor, very unequal distribution of wealth
 2. Generally stable group relations and peaceful when not under malignant leadership.
- b. Rise of malignant leadership
 - i. Important aspect of understanding early warning systems
 - ii. Can escalate to high-levels of violence between peoples with long-standing relationships and peaceful co-existence.
- c. Acute state failure
 - i. A coup that brings down a regime and lets loose a set of interactions
 - ii. Example: Afghanistan
 1. 2001 war was essentially a coalition of nation-states attacking a theocracy that was not a legitimate government
 - a. Narrow and contorted government states in the country while the rest of the country languished without real leadership.
 - iii. Example: Yugoslavia
 1. Tito, a resistance leader in WWII,
 - a. a Croatian and a Communist
 - b. not Fascist, loved by the Allies
 2. Yugoslavia set up after WWI by European victors dividing Austro-Hungarian and Ottoman Empires
 - a. Wide range of cultural, linguistic histories
 - b. Only a portion is Slavic, only a portion is Christian, only a portion fight against Germans (alliances determined by latent anti-colonial sentiments)
 3. Allies anointed Tito the leader of Yugoslavia after 1944-1946 war in Yugoslavia.
 - a. Tito kept all competing forces in line
 - b. Died in 1980.
 - c. Everything up for grabs, creates a vacuum
 - i. Milosovic takes over during this time playing the Serbian nationalist card.
- d. Possibly severe disaster
 - i. Chernobyl/Soviet Armenia
 - ii. Bangladesh in 1970s (cyclone)
 1. led into Bangladesh nationalist army
 2. Civil war in Pakistan.

Underlying Conditions

- I. Poverty
 - a. Leads to development failure and environmental degradation
 - b. Population growth

- i. Dense population growth in Northern California on precipitous cliffs causes environmental degradation and increased vulnerability to disaster.
 - c. Intensifying pressure on scarce resources
 - i. Many instances world-wide
 - d. Systematic investigation to date (Homer-Dixon) suggests linkage between poverty and war is not tight.
 - i. Poverty is dealt with by state capacity
 - 1. In most cases the state can accommodate these vulnerabilities
 - 2. Example: United States
 - a. Social safety-nets
 - b. Infrastructure, subsidized utilities
 - ii. Only becomes a problem when states fail.
- II. Arms Availability
 - a. Small-arms weapons:
 - i. Sub-machine guns, land mines (for humans), cluster-bombs, rocket-propelled grenades, shoulder-launched missiles, aka stinger-missiles, from Afghanistan (can take down planes), machetes
 - ii. Main weapons in 46 of 49 conflicts assessed in 1990s
 - iii. Casualties: 300,000 deaths/yr from wounds caused in wartime, 200,000 deaths/yr during peacetime.
 - b. Human security implications:
 - i. Vicious cycles of brutality
 - 1. Without small-weapons, cycle tends to be contained through traditional systems on the scale of a family
 - 2. With weapons, the cycles escalate and the violence hits a wider swath.
 - ii. Secondary impacts from fear and violence
 - 1. Bypass dangerous areas
 - 2. Trade, commerce and transport shuts down
 - 3. Greater impoverishment, violence expands
 - iii. Threats and opportunity costs
 - iv. Example: Gang-warfare in the United States

Case Study: Darfur region of Sudan

As a result of the current war, 300,000 are dead, 200,000 are refugees in a country that is about the size of France.

- I. Characteristics of Region:
 - a. Once a savannah, the region is turning into desert.
 - b. Area is overpopulated for its carrying capacity.
 - c. Sand storms come regularly
 - d. Markets are between 10 and 20 miles apart (people walk in between).
- II. Resource Tensions
 - a. Scarce tree resources
 - i. (trees are not cut-down but pruned)

- ii. Villages preserve the trees within the village because they provide coolness and shade for the population.
 - b. Scarce water resources
 - i. Rainy season does not increase the water-table (short, hard rains that flood and wash off)
 - c. Refugees would not understand the local processes of survival
 - i. Puts them into conflict with local populations
- III. Refugee Management
 - a. Refugees are taken out of their areas of familiarity and must cope in a hostile environment.
 - b. Refugees organized at 50,000 – 100,000 (under 50,000 is not efficient).
 - i. The refugee economy is organized around scales of efficiency
 - c. Refugee camps would regularly run out of water at 10-15,000 people.
 - i. Water is trucked in or taken from deep wells
 - d. Surrounding sand is littered with animal and human dung (smells bad) and during rain, dung-littered slurry floods the camp and tents.
 - e. Land-mines create potential danger for those who need to travel for their livelihoods.
 - f. People pushed off their land in this area are likely to die because intimate knowledge of their landscape is crucial to survival

Direct impacts of means and methods of war

- I. Major impact in classic nation-state wars
 - a. Nuclear weapons production and testing
 - i. Not for use; globalized weapons production and testing.
 - 1. Ground and air contamination
 - b. Aerial bombardment
 - i. Still finding unexploded ordinance all over Europe from World War II.
 - ii. North Africa: impact on changing the desert, unexploded ordinance. Desert grass doesn't grow on areas affected by unexploded ordinance.
 - c. Land mines and UXO
 - i. Legal: mines laid out by map grid, map kept and used during cease-fire.
 - ii. Illegal use: not keeping careful records because it makes it impossible for other side to safely reclaim their land.
 - iii. Still rampant in many parts of the world. Most land-mine infested areas of world:
 - 1. Vietnam
 - 2. Mozambique
 - 3. Cambodia
 - 4. Afghanistan
 - 5. ?
 - d. Despoliation, defoliation, and toxic pollution

- i. Use of defoliants like Agent Orange and Napalm is devastating to environments
- II. Major Impact in CHEs
 - a. Landmines and UXO
 - b. Scorched earth tactics:
 - i. deracinating the human environment
 - c. Refugee and IDP settlements
 - i. People are beginning to quantify the influx of plastic and non-degradables that comes from the refugee and humanitarian supply chain.
 - ii. Plastic bag, litter phenomenon is prevalent in Chad, Afghanistan, the Balkans
- III. Vulnerable ecological systems
 - a. Coral reefs
 - b. Islands
 - c. Deserts
 - d. Endangered habitats
- IV. Paradoxical protection
 - a. Areas under war: human development does not occur in war-zones, so an abundance of habitat develops.

Longer-Term Impact

- I. Immediate needs “post-conflict”
 - a. Establish cease-fire
 - b. Restore security
 - c. Short-time frame
 - d. If these needs aren’t met, there is a high chance that you will lose whatever chance for stability you had.
- II. Major environmental problems:
 - a. Infestation of landmines and UXO
 - b. Destruction of housing stock
 - c. Destruction of transport
 - d. Destruction of ???

General Preventative Measures

- I. Promote existing international law on war and environment
- II. Impose sanctions
- III. Engage in consciousness raising
- IV. Designate fragile areas in advance
- V. Ban weapons of mass destruction
- VI. ?
 - a. A number of weapon systems and treaties have been established that address the way the war and the environment interact

Research Questions

- I. Role of forced migration
- II. Relationship between demography and environment
- III. Role of urbanization
- IV. Empirical assessments in current post-conflict settings
- V. Baseline vulnerability assessments of fragile ecosystems.