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*Climate Change & National Security*

**Note:** Below are informal notes taken by a JHU/APL staff member at the Seminar.

Dr. Dabelko began by explaining that climate change was not the first, second, or third order issue on the list of national security threats, however, it can be expected to play a role. We can expect that there will be more climate change and situations resulting from climate change which will have an impact on military roles, missions, and opportunities. He also noted that he came from the Woodrow Wilson Center, which is a memorial to the only president who held a PhD. The mission of the center is to bring together scholars and those who work in the area national security.

We must start by abandoning climate change stereotypes to understand what they might mean for national security – will involve issues related to:

- Water
- Soil
- Agriculture
- Food
- Health
- Economy
- Geo-politics
- Infrastructure

All of these elements play a role in causing or exacerbating instability which is a matter of interest in traditional national security concerns.

Currently, there is a spike in momentum about doing something about climate change for several reasons including:

- Greater scientific understanding of the conditions involved;
- Changes are coming faster now and faster than expected;
- Fluctuations in energy prices;
- People now in government are interested in doing something about it;
- Natural disasters have increased public interest;
  - Although no one storm can be directly related to climate change;
  - Can expect to see more dramatic events (Katrina hurricanes/floods/heat waves)
- Public events upcoming – Copenhagen meeting in December is biggest since 1997
Climate change will have an impact on resources and may create a new climate superpower
  • Superpower status will no longer be only related to GDP, military power, etc.
  • China could in effect veto anything agreed to by all other countries about climate change
  • Brazil forests are increasingly important as carbon sinks
  • Need to reassess what makes countries important

Several studies have come out about climate change in recent years
  • CNA put out a major document
  • UK and Germany have published their own reports
  • For the first time the UN Security Council is looking at climate change
  • Recent classified NIE addressed climate change, but some info is available from Congressional testimony
  • Director of National Intelligence included climate change in his annual look at threats to US security
    o Recognized that climate change is not a traditional threat
    o It is a “complex and unprecedented syndrome of problems [that] could cause outright state failure, or weaken pivotal states”

What has been done about climate change so far:
  • Is not sufficient to cover the topic
  • Must be done because it interacts with other elements of national security

Climate change appeared for the first time in 2008’s National Defense Authorization Act
  • Includes related guidance to planners
  • New QDR will also take climate change into account
  • 2006 National Security Strategy brings it up as a reaction to what happened with Katrina
    o Notes that the military needs to be prepared for more such events

There is a danger of overselling climate change
  • New York City will not sink beneath the sea anytime soon despite movies about it
  • Much of what is claimed is overblown
  • As in any military planning effort, we need to plan for the worst and hope for the best

Climate change impacts:
  • 1st order—physical impacts
    o Changes to sea level, precipitation
    o Extreme weather, temperature changes, disease vectors, etc.
  • 2nd order—likely economic & social impacts
    o Problems with changes to water access and agricultural productivity
    o May cause refugee migration which could lead to complex humanitarian disasters
  • 3rd order—threat multipliers
    o Interactions between 1st and 2nd order situations and non-related security threats, challenges, and concerns
    o Issues that are already hard to deal with will be made that much more difficult
  • Most conversations so far only cover 1st and 2nd order issues
Some situations caused climate change will have a significant impact even on populations not in the immediate area affected

- Snow is melting earlier on the Tibetan plateau
  - Will eventually mean a 20% drop in water for the Mekong Delta in summer months
  - That could have impacts on the Vietnamese fishermen and Thai irrigation systems
  - Vietnam’s need for water may conflict with Thailand’s
    - Animosity already exists
    - Could flare up under pressures originally stemming from climate change
- Other areas could have similar complicated interconnections that could flare up
  - Central Asia – where they are already not good at cooperating with each other
  - Southern Africa – looks like very bad situations are coming to an area with several bad problems
  - Pakistan and the Middle East – coastal issues are not 1st order but will add to the complexity of existing geo-political issues

Wild card issues

- Anything could happen with the climate including getting significantly colder
- History shows that temperature rise or fall is not linear
- Possibly could suddenly have a mini-ice age like what happened in the Middle Ages
- May be a low probability but we cannot just forget about this possibility
  - Needs to be considered in risk analysis
  - Plan for the worse, but hope for the best

Climate change as a threat multiplier

- Exacerbates scarcities that already exist
- Might have impact on a state’s legitimacy
  - Is it a government legitimate if it cannot support the basic needs of its people?
- May not directly cause a war but it may make people more unhappy and that unhappiness can lead to instability that does lead to war – example: Darfur crisis
  - There is a crisis in Darfur because the government in Khartoum wants one
  - Even if that government was to be swept away there would be a problem
    - Increasing numbers of cattle herds are adding to the strain on already fragile land resources
  - Khartoum has the primary responsibility for the crisis but problems go deeper
  - Climate change has not caused Darfur’s problems but it does have an impact on livelihoods of the people

Climate change and Terrorism

- We should be cautious with making this link directly
- Worsening conditions would make recruiting easier for terrorist organizations
- Must handle the underlying cause to handle terrorism
- US dependence on fossil fuels, the use of which is related to climate change conditions, also helps fund terror

Migration issues

- Xenophobic fears in Europe are exacerbated as immigration increases
• Paris already has riots
• What would happen with significantly more immigrants were forced to leave their homelands?
• Problems for social cohesion and social stability
  o Can Fortress Europe be sustained against immigrant flows?
  o What will happen to the goal of free flow of people throughout Europe?
• Expect more stresses in some areas of Mexico causing more migration to the US
  o Some migration will be more localized than in Europe
  o Problems of both push and pull in reasons for migration from Africa/MidEast/etc.
• Bangladesh and India could have a problem
  o They already have a number of reasons to fight each other
• US will need to pay more attention to this type of problem

Implications for military missions and force structure
• US will need greater rescue and lift capabilities to respond to natural disasters
• Strategic communications will need to be improved
  o Greater discussion of the mission of AFRICOM – less a war-fighting command
  o More hearts and minds efforts should take place in Phase Zero of a war

Arctic Faceoff as the ice melts
• Differing opinions on how serious this issue is
• Can already see big changes in the Arctic and can expect more complications
• Arctic is one example of what changes may mean for training and sovereignty issues
• Issues could be talked through with the right parties
  o US must get involved in the UN Convention on Law of the Sea (UNCLOS)
  o US must be at the table when these issues come up for discussion

Force structure and training
• Need to look out 30 years
  o Will we still have Diego Garcia to operate/train from?
  o Will it be harder to operate/train at all?
• Much of this is an issue for the Navy and the Air Force
  o Beginning to ripple up to procurement decisions
• Alternative fuels and fuel efficiency
  o A coincidence of interests is occurring – less dependence on foreign fuel would help, too
  o Military already has a major part of the research effort
  o Expect military to be directed to reduce its carbon footprint along with all others
  o Trucking fuels across hostile areas is never a good idea for many reasons
    ▪ Try to reduce the risk by needing to do it less
    ▪ Improved fuel efficiency can help some
  o Budget pressures make efficiency even more important
  o Military is actually ahead of the game in some aspects
    ▪ Does have the advantage of scale
    ▪ Easier to direct changes than it might be in less-regulated commercial world
• Expect to see less willingness to give exceptions for training and exercise in fragile areas
o Not a big issue but another one to consider

US needs a risk analysis effort for identifying likely hot spots
- Sometimes changes made for good environmental reasons cause problems in other areas
- Example: Bio-fuels
  o Calls for more use often come from areas where raw materials won’t grow (i.e., Europe)
  o Some areas (i.e., Indonesia) are losing the forests that the local population depends on as forests are turned into fields for bio-fuel growing

Reactions to climate change include a call for more nuclear power plants which do not add to the carbon footprint
- But then planners run into NIMBY issues as is happening in UK and Germany
- Also means that more fissile material is available possibly leading to more nuclear weapon proliferation

Reactions to climate change using off-grid/small-grid methods are getting more serious attention
- Systems still need to be protected and there would be many more of them so some vulnerability remains
- Should reduce some dependence on foreign fuel

Environmental confidence-building opportunities do exist
- Rather like SECDEF Perry’s Preventive Defense programs
- Military-to-military efforts related to environmental issues can lead to broader security discussions
  o Can expect more with the new Obama administration
- US military already working on this somewhat
  o US worked with Norway / Russia over leaking old Soviet submarines in the Baltic
- Climate change responses can be opportunities to engage friends / others as a starting point for broader discussions
  o Several efforts have already started related to water issues
  o Some efforts may only involve getting to know counterparts but that can be useful
  o Person-to-person efforts have often been the most effective

Taking on climate change issues is not asking the military to do anything more than what they already do very well – plan
- Military is used to working with uncertainties
- Never wait on the battlefield to get all the info – would be dead first
- Military does now need to take climate change challenges into account when doing all of its planning
  o As usual, the military must plan for many contingencies
QUESTIONS & ANSWERS

Intelligence agencies are basically not permitted to investigate situations in the US even cross border problems such as climate change, but it can be deduced that:

- There are likely to be water issues in the Southwest and even the Southeast
- Health issues such as increased incidences of malaria will likely come along with temperature changes
  - May not cause a high body count but will need to be considered
- Climate change will likely cause northward migrations in the long-term

Adaptations to changes need to consider long-term/second-order issues

- Corn-based ethanol increases will have an impact on water consumption in new corn-growing areas
  - Corn needs more water than previous crops
  - Ethanol corn-growing is already causing drops in water tables
- Some areas are now turning against corn crops for ethanol because of what is happening to the water tables

The 2007 Intergovernmental Panel report on climate change was actually written in 2006

- It used 2005 data to establish benchmarks which would now be too conservative
- Changes happening faster than expected so need to move on from there

Challenges to the science of climate change

- NASA budget problems have starved looking-down programs in favor of the more glamorous look-up programs
  - Why investigate Mars when we don’t know what we need to know about our ocean
  - Need to use / develop more civilian earth observation programs
  - Commercial world has a role in collecting environmental info
    - Most of this information does not have to be classified
    - Much of this information does not have to be a high resolution
- Need better matching of policies and environmental data
- Need better matching of natural resource info and conflict data
  - Need more data to correlate with conflict situations
  - Objective is to predict future hot spots
- Not much money for analysis
  - Could be done by those outside government if government data were made available
  - Minerva Program was one example
  - Need to step back and ask questions like: How do changes in water and agriculture relate to migration patterns?

When SECDEF Gates was Director of Central Intelligence under Bush I, he directed that an environmental committee look at likely issues as the Cold War ended

- The idea was to give civilian scientists clearances to help them study classified data that might be useful but the effort fell off after 9/11
Many of the needed skill sets can be found outside of government
Perhaps that the new QDR will provide some guidance on this

Government efforts will face resource constraints
- There will still be a great deal of civilian effort going on
- Government needs to take advantage of these efforts

Question: What if the climate models turn out to be wrong?
- Certainly a possibility – Greenspan found his Wall Street models were wrong after 40 years
  - Problem was that the objective of the Wall Street models was not to manage risk
  - The overlooked, but stated, objective was to make money
Answer: It appears that we have enough data from enough different locations to believe that something is happening with the climate
- We are working with more than just faith-based beliefs about climate change
- Can’t rely on anecdotes alone to force people to pay attention

Geo-engineering efforts are possible but must be cautious
- Many proposed scenarios
  - Seed ocean with iron
  - Send up rockets to make rain
  - Deploy huge orbiting mirrors to collect solar energy
- Few legal barriers to entering into the market
  - No controlling agencies involved
  - Open ocean is prime area
- Concerns about unintended consequences already happening
  - Things happening outside the norm are likely to happen more
- Need some form of peer-review of geo-engineering ideas being proposed by individuals/groups/etc.
- Someone needs to know what sort of engineering is being tried

We can’t expect to live in the world we are use to if stringent controls on emissions actually happen
- 50% of US emissions are from buildings
- Emission controls will change the cost of things and how we live
- There is a question about how much change we are willing to accept
  - Different groups of people will be willing to pay different amounts