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Climate Change Impact on National Security

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Objective

To provide results from a National Intelligence Assessment (NIA) on the national security ramifications of global climate change. (U)

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National Intelligence Priorities Framework

Environment and Natural Resources

Definition: Production, development, transport, and consumption of strategic natural resources—excluding energy resources—critical to the economy and/or associated with production of militarily significant items. Access to water supplies to sustain national economies. Production, release, illicit sale and disposal of pollutants and hazardous materials including their potential human health effects. Compliance with international environmental or resource sharing agreements. ***Activity impacting international oceanic and atmospheric environments, including activities in space. Policies and positions of state and non-state actors relative to environmental and resource issues.*** Indications and warning of environmental warfare, crime or “ecoterrorism” or attacks against critical infrastructure—excluding energy—and water production, transport and distribution facilities. ***Physical environment conditions including weather, climate, geography, terrain, and urbanization.*** (U)

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Terms of Reference

The National Intelligence Council will develop a National Intelligence Assessment (NIA) – targeted at the UNCLASSIFIED level – on the national security challenges and opportunities through 2030 resulting from global climate change (GCC). This effort is being undertaken as a result of draft bipartisan legislation and in support of the NIPF Topic: Environment and Natural Resources. (U)



Terms of Reference

An impact is significant when it causes a noticeable – even if temporary – degradation in one of the elements on national power (geopolitical, military, economic, or social cohesion) because it directly influences the US Homeland, indirectly influences the United States through a major military ally or a major economic partner, or because the global impact is so large the United States cannot be unaffected (e.g. it indirectly consumes US resources). (U)



Outreach Efforts

- **Joint Global Change Research Institute**
 - Intergovernmental Panel on Climate Change
 - Current Peer Reviewed Literature
- **US Climate Change Research Program**
- **Center for Naval Analysis**
- **Center for International Earth Science Information Network at Columbia University**
- **RAND Corporation**
- **Global Business Network**
- **Arizona State University**
- **Naval Post Graduate School**
- **Center for Strategic and International Studies**
- **Center for New American Security (U)**



Our Process

- **To determine potential impacts on states and regions we consulted with IC and outside regional social scientists.**
 - **We provided the regional experts with the general scientific scene-setter, extracts from the CIESIN studies, the IPCC Working Group II (Impacts, Adaptation, and Vulnerability) Technical Summary, and open source research on potential agricultural impacts.**
 - **We focused on mid-range IPCC scenarios and targeted their effort on approximately 50 states we judged had the potential to impact US security interests. (U)**
- **We elected to report on a representative set of states where climate change effects were significant. (U)**



Summary Observations

- **Overall we judge that global climate change will have wide-ranging implications for US national security interests over the next 20 years because it will aggravate existing problems—*such as poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions*—that threaten state stability.**
 - **However, climate change alone is highly unlikely to trigger failure in any state out to 2030 but it will potentially contribute to *intra-* or, less likely, *interstate* conflict, possibly over access to scarce water resources.**
 - **We judge that economic migrants will perceive additional reasons to migrate because of harsh climates, both within nations and from disadvantaged into richer countries. (U)**



Summary Observations

- **The United States will be less affected and better equipped than the vast majority of nations to deal with climate change, and may even enjoy a slight net benefit from climate change over the next few decades largely due to increased agricultural yield; *however, infrastructure repair and replacement, emissions mitigation, and emergency response will be costly.* Impacts on other states will vary:**
 - **Sub-Saharan Africa, because of its limited coping capacity is the most vulnerable region to the impact of climate change, with resulting challenges to its economic development and political stability. For Africa in general, higher rainfall anomalies and more intense and widespread droughts are projected. Climate change probably will cause agricultural losses of up to 50 percent for some rain fed grain crops in some North African countries. (U)**



Summary Observations

- **More generally, many pivotal states counted on to act as anchors of regional stability will be negatively affected to varying degrees by climate change.**
- **The effects of climate change on weakened nations could spill over borders -- unlikely to trigger interstate war.**
 - **With water becoming more scarce in several regions cooperation over changing water resources is likely to be increasingly difficult within and between states, potentially straining regional relations.**
 - **Such dire scenarios are not inevitable even with worse-than-anticipated climate change impacts. Economic development, the spread of new technologies, and robust new mechanisms for multilateral cooperation to deal with climate change may foster greater global collaboration. (U)**



Summary Observations

- **By 2030, the US Homeland probably will experience more intense droughts in the southwest, exacerbating water shortages; floods in the northeast, threatening urban areas and coastlines; and storm damage along the Gulf Coast.**
 - **Climate change might open up new navigational passages in the Arctic Ocean by 2030, improving the economic prospects of “polar” neighbors. (U)**



Summary Observations

- **Multilateral policymaking on climate change is likely to be of a high visibility and growing priority over the coming decades—even approaching the salience of traditional security affairs.**
 - *We observe the United States is seen by the world as occupying a potentially pivotal leadership role.*
 - **As impacts begin to mount, the US will come under increasing pressure to help the international community set meaningful long-term goals for emissions reductions, to reduce its own emissions, and to help others mitigate and adapt to climate change through technological progress and financial assistance. (U)**



Summary Observations

- **Governments will take steps in the coming decades to adapt to and mitigate impending climate change. Low-emission civilian nuclear power will likely be pursued on a widespread basis.**
 - **More nuclear power stations mean more nuclear material and expertise for terrorists to attempt to obtain and utilize. Recognizing the increasing premium on civilian nuclear power while seeking to guard against dangerous diversions will place tremendous stress on the nonproliferation and counterterrorism regimes. (U)**



Summary Observations

- **Given the salience of water issues over the next 20 years and US expertise on modern water-management practices and technologies, US efforts in this area could have huge benefits.**
 - **Measures such as water provision projects could alleviate some of the projected water stresses that otherwise would prompt increasing migration. (U)**



Summary Observations

- **As climate changes spur more humanitarian emergencies, the international community's capacity to act will be increasingly strained. Among other consequences, the demand of potential humanitarian responses may significantly tax US military transportation and support force structures, resulting in a strained readiness posture and decreased strategic depth for combat operations. (U)**



Summary Observations

- **To summarize, we observed three principle paths through which climate change would adversely impact national security**
 - ***Changes in water availability*** which in turn would force migration of people first within states then potentially between states
 - ***Changes in agriculture productivity*** caused by a combination of climate factors (temperature, precipitation) that would likewise motivate people to move
 - **In both of these cases the movements themselves may or may not be significant to state stability and hence US security interests, it will depend upon local circumstances.**
 - ***Damages to economically significant infrastructure*** from extreme weather events. (U)

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Questions?

http://www.dni.gov/nic/special_climate2030.html

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