



Working Group 5:

## THE WORLD IN 2050: A FAR FUTURE SCENARIO WORKSHOP

Extract from:

### Planetary Security:

Peace and Cooperation in  
Times of Climate Change and  
Global Environmental Challenges

### Conference Report

2 and 3 November 2015  
Peace Palace, The Hague



## WORKING GROUP 5

### THE WORLD IN 2050: A FAR FUTURE SCENARIO

*The rate of climatic change is unprecedented in human history. It is therefore not sufficient to look to history for lessons on how we should prepare for, and prevent, future security risks in a climate-changed world. In this Working Group, participants directly engaged in a mini “future scenario workshop”, where they plotted a plausible picture of a climate-changed future out to 2050, and identified policies and practices that can be put in place now to lessen the risks.*

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**Bessma Mourad**, Skoll Global Threats Fund

**Speakers:** **Chad Briggs**, Global Interconnections  
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**Simon Sharpe**, Government of the United Kingdom

**Discussion Leaders:**

**Brigadier General (retired) Bob Barnes**, Center for Climate and Security  
**Mathew Burrows**, Atlantic Council  
**Roger-Mark De Souza**, Woodrow Wilson International Center for Scholars  
**Marcus King**, George Washington University  
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**Rod Schoonover**, U.S. Department of State  
**Janani Vivekananda**, International Alert  
**Rear Admiral Jonathan White**, U.S. Navy (retired) / Consortium for Ocean Leadership

**Rapporteur:** **Swathi Veeravalli**, U.S. Army Corps of Engineers, U.S. Department of Defense

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## 1. DESCRIPTION

In this “Far Future Scenario Workshop”, participants engaged in a mini workshop where they brainstormed on a plausible picture of a climate-changed future out into 2050, and identified policies and practices that can be put in place now to lessen the risks. Scenario planning<sup>13</sup> is a helpful tool when reconciling large amounts of uncertainty, in order to identify potential vulnerabilities. As a planning tool, scenario planning is an essential and critical part of risk assessment to creatively develop best, middle, and worst-case scenarios. Finally, scenario planning allows to account for systemic risks between humans and the environment that are simultaneously complex and complicated.

Participants were divided into 8 sub-groups, covering 4 issue areas, exploring the following four security issues:

**Groups 1 & 5:** State failure, intra-state conflict, terrorism

**Groups 2 & 6:** Migration, human displacement, humanitarian crises

**Groups 3 & 7:** Global and regional governance realignment, nationalism

**Groups 4 & 8:** Resource competition, interstate conflict

<sup>13</sup> Scenario-planning formats include brain-storming, decision-modelling, war-games, and black-swan events

Sub-groups were asked to hypothesise future scenarios that could arise due to a potential climate scenario and then develop corresponding policies and practices that need to be implemented within the next 5 to 10 years to prepare for climatic impacts in 2050.

## 2. PARAMETERS

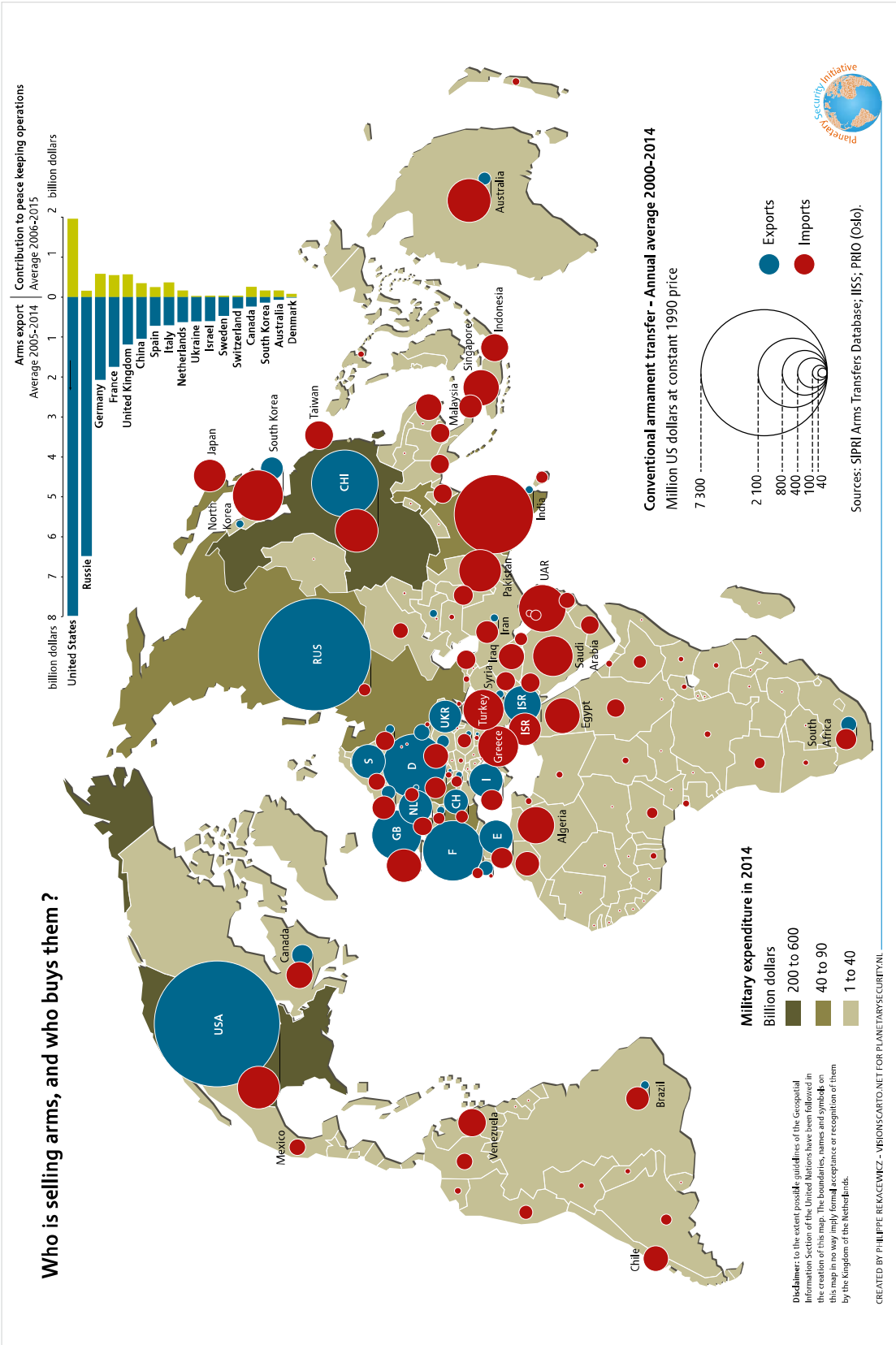
This is the year 2050. Below is a possible climate future. Participants will assess how this possible climate future will influence the security issues their respective groups are responsible for.

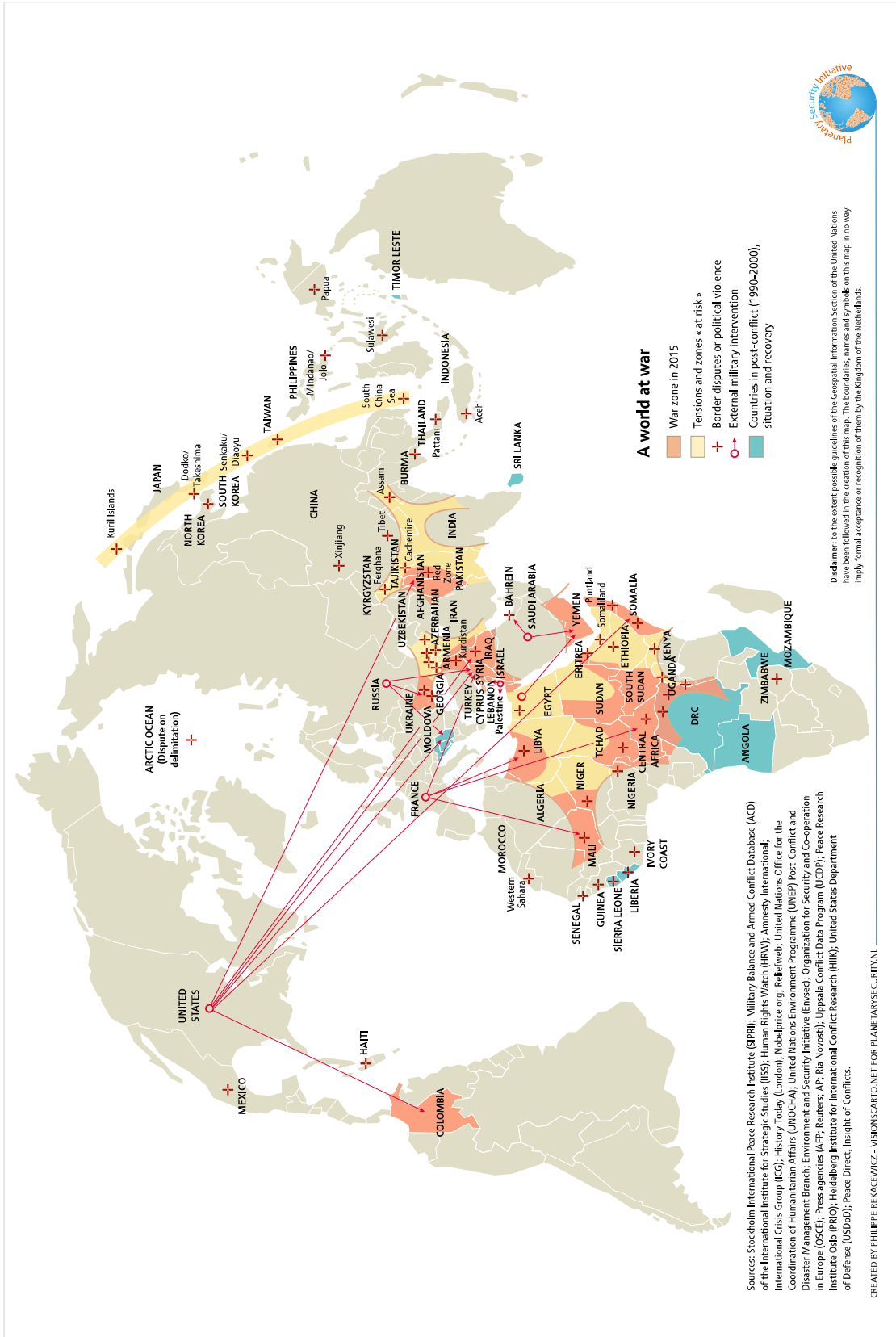
- The rise in temperatures is accompanied by increases in extreme weather events. Populations around the world are experiencing much more frequent extreme heat waves, droughts, unseasonal floods, and wildfires.
- The Arctic sea ice is thawing rapidly, with the Arctic Ocean nearly ice-free in the summers.
- Half of the world's population is now faced with water stress. Areas that are particularly hard hit include the Middle East and North Africa, and parts of South and Southeast Asia.
- Although global population is now closer to 9 billion people, global agricultural yield has decreased by approximately 10 percent. All over the world, farmers are struggling to keep up with shifting weather patterns and increasingly unpredictable water availability. Farmers also must contend with unexpected attacks from weeds, diseases and pests, which affect agricultural yield.
- Coastal cities and small island states continue to be inundated by storm surges caused by increasing hurricane and typhoon activities and sea level rise.
- Increases in heat, precipitation, and humidity have allowed tropical and subtropical insects, animals, and microbes to new locations, causing more infectious disease outbreaks.
- Dramatic increase in heat-related mortality in tropical and sub-tropical areas.
- The oceans have become more acidic causing significant collapse of aquatic ecosystems.

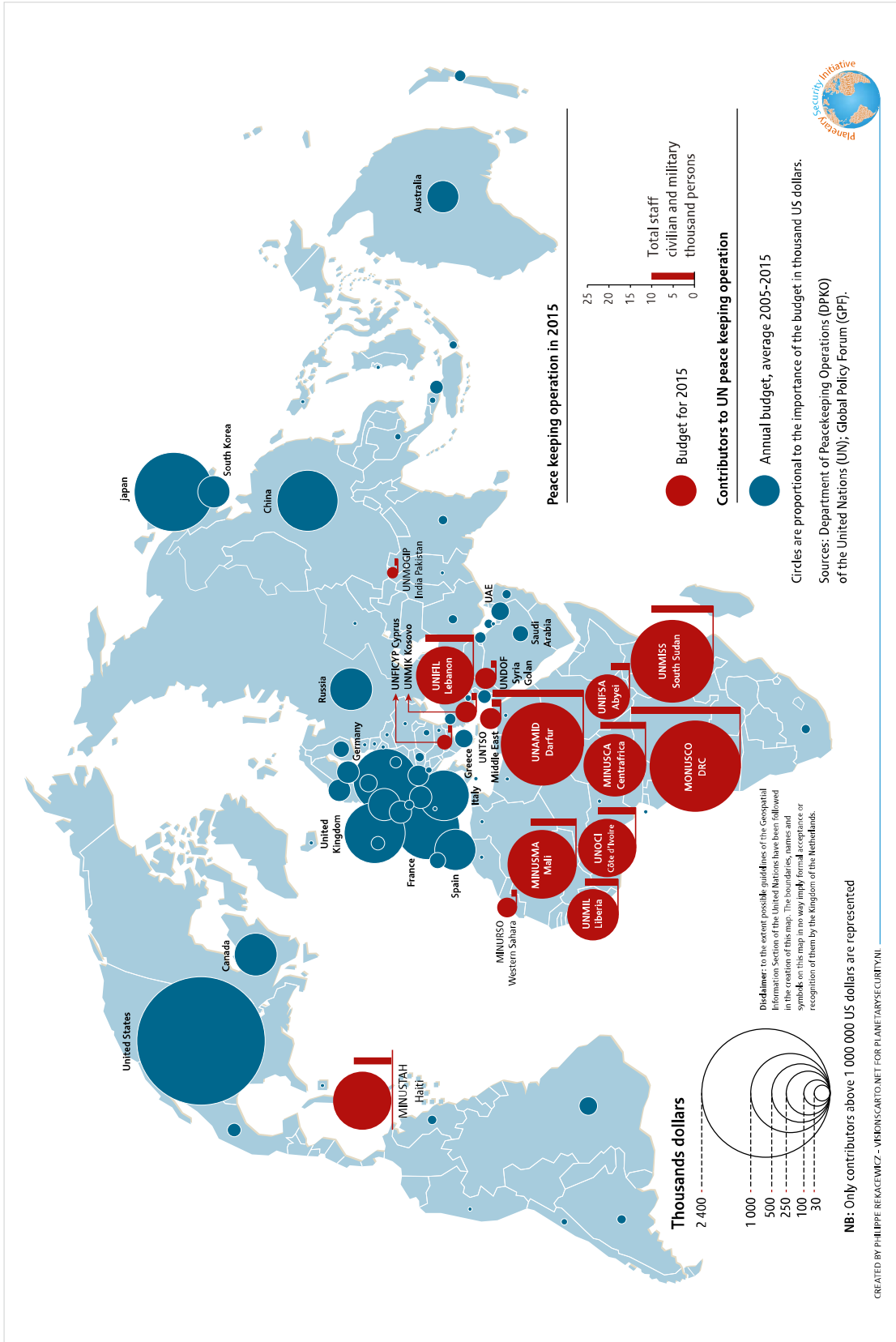
## 3. DISCUSSION POINTS

- How do you think climate change is impacting your issue? What will the world look like in 2050?
- What are the policies and practices that need to be in place in the next 5 – 10 years to ensure that the future will look different?

# Who is selling arms, and who buys them ?

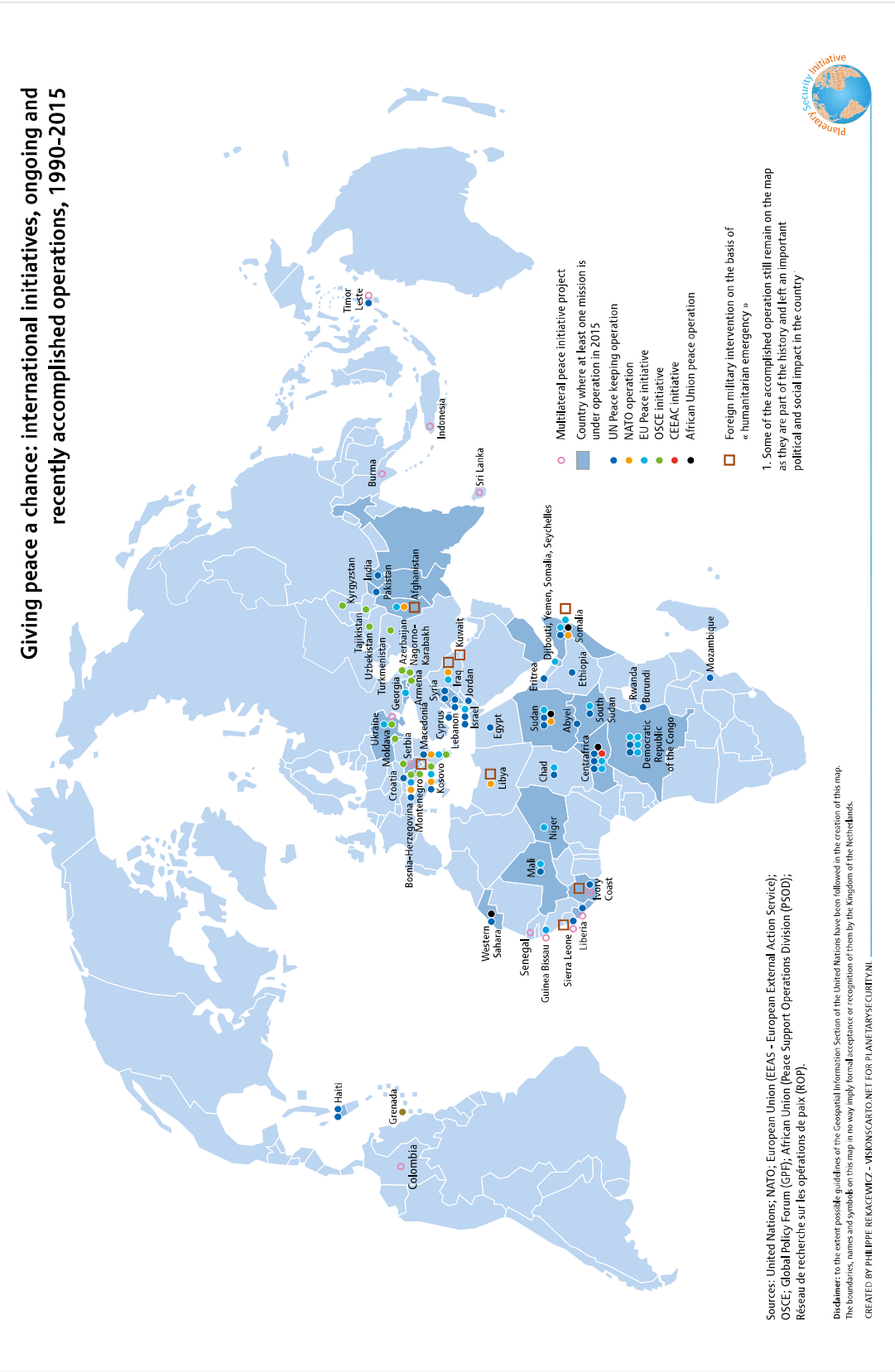






Circles are proportional to the importance of the budget in thousand US dollars.  
Sources: Department of Peacekeeping Operations (DPKO) of the United Nations (UN); Global Policy Forum (GPF).

## Giving peace a chance: international initiatives, ongoing and recently accomplished operations, 1990-2015

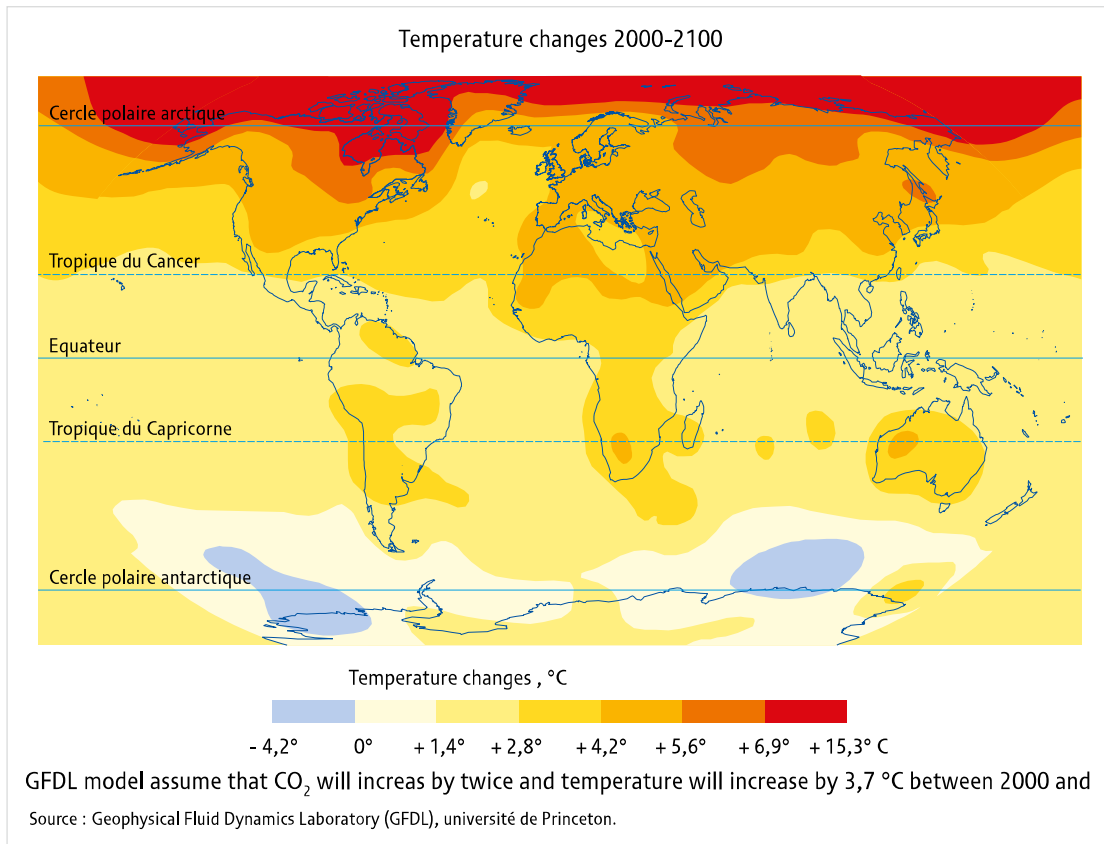


Sources: United Nations; NATO; European Union (EEAS - European External Action Service); OSCE; Global Policy Forum (GPF); African Union (Peace Support Operations Division (PSOD)); Réseau de recherche sur les opérations de paix (ROP).

Disclaimer: to the extent possible, guidelines of the Geographical Information System of the United Nations have been followed in the creation of this map. The boundaries, names and symbols on this map do not imply formal acceptance or recognition of them by the Kingdom of the Netherlands.

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## 4. ANALYSIS AND RECOMMENDATIONS

### Groups 1 & 5: State failure, intra-state conflict, terrorism

#### Analysis of climate change impacts

- Breakdown in the ability of governments to provide for populace
- Rise of religious groups to provide essential services
- Collapse of fisheries industry fuels piracy
- Increase in illicit activities/markets
- Uninhabitable regions force mixing of unfriendly to groups, potentially leading to conflict
- Increase in terrorism and terrorist activity
- Increase in migration
- Increase in multidimensional emergencies
- Collapse of state systems leads to vacuum of international order

#### Recommendations

- Create conflict preventive diplomacy
- Improve communication to public and increase collective responsibility
- Increase capacity building (from peace and infrastructure)
- Develop command and control practices for Arctic
- Increase outer-space and polar exploration expertise, and explore nuclear fusion as energy source
- Conduct better natural resource evaluation



- Develop multilateral funding platform for anti-desertification campaign
- More information sharing between states about imminent environmental disasters/risks; technology (e.g. mobile phones) to share information and coordinate responses
- Develop diffused communication, harnessing the power of mobile technology
- Create integrated information sharing platform containing geographic socio-political hazards
- Develop best practices for more effective country level management (e.g. developing nations need to take responsibilities to build technical capacity to conduct risk management assessments themselves)
- Move from paradigm of conflict management to conflict prevention by integrating defence, development and diplomacy entities
- Integrate development and climate adaptation communities with funding mechanisms

### Groups 2 & 6: Migration, human displacement, humanitarian crises

#### Analysis of climate change impacts

- Greatest stress in largely agrarian/fisheries (Caribbean, sub-Saharan Africa, South Asia)
- Changing patterns of migration (middle class/wealthy able to move but more poor become trapped in location so unable to move) coupled with uncontrolled migration
- Legal response becomes untenable: debate on environmental migrants as refugees
- Signals changing: (better safety net) Europe changing and diversion of people to China could be positive
- International system becomes untenable because of anarchy so will witness a rise of regional bodies and unilateralism
- Increased urbanisation, civil disorder and border conflict
- Both positive and negative effects could occur (e.g. positive: increased south-south collaboration; e.g. negative: health impacts for small island nations)
- Increased request for aid and international cooperation
- Changing views of citizenship – fluidity of identity and new tier within in society migrant/illegal worker underclass that could become normalised

#### Recommendations

- Develop moral response to human issues rooted within human security and not state security
- Create human rights based approach to clean environment
- Increase dialogue with faith groups, corporations etc.
- Understand remittances and develop better regulation of remittances
- Obtain better info to conduct/understand scenario planning and creative solutions
- Understand shifting state responsibilities and rights to protect population
- Conduct comprehensive assessment that recognises benefits and risks of interactions and allows for budget allocation
- Conduct more education programs focused on developing public awareness for general population to receive/understand climate change science and adaptation
- Cultivate comprehensive policies at various levels (e.g. at the national level develop whole of government policies that include education, health, economic and other dimensions)
- Comprehend importance of strengthened multilateral agreements
- Develop greater coherence between north and south regarding how to address climate change with regards to migration

### Groups 3 & 7: Global and regional governance realignment, nationalism

#### Analysis of climate change impacts

- Reshuffling of deck in national and global landscapes
- Nationalism rising in richer states that causes fragmentation along various divides (e.g. North-South divide)
- Inequalities worsening
- Megacities coming together to share solutions
- Increase in power of corporations
- Power will flow in two different directions: from national/state to regional group; and within state to local/city government
- Trends towards either increased collaboration or less collaboration between states occur
- New regional alignments will be stronger

#### Recommendations

- Develop consensus on stronger bottom up approaches (opposed to top down) to address climate risks
- Create global health initiative and develop technology transfer in terms of patent/global health provision
- Create green helmet equivalent driven by the UN to conduct disaster risk reduction/ climate country adaptation to have country's internal central pool of expertise
- Analyse funding policies of financial institutions as well as country's financial policies
- Evaluate linkages between natural resources and trade
- Assess evolving nature of multilateral institutions and other sub-national structures and their ability to conduct conflict prevention
- Increase information sharing

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### Groups 4 & 8: Resource competition, interstate conflict

#### Analysis of climate change impacts

- Energy sources and strain on energy innovation could lead to water security issues
- Trade policies could mitigate conflict
- Inequality and stratified socio-political identities leads to increase in winners and losers
- Trade policies could mitigate conflict
- Difficult to decouple energy-food-water with other metal/extractive industries
- Degradation of ecosystem services

#### Recommendations

- Understand potential for innovative economics (e.g. natural resources and trade)
- Changing/evolve multilateral institutions and how to focus on conflict catalyst
- Understand changing nature of sub-national structures and potential for increase in information sharing
- Develop national mitigation-adaptation strategies
- Understand linkages between closed/circular economies
- Understand climate science and natural variability

## 5. CONCLUSIONS

Climate security has presented significant local, regional and international threats and disruptions to world order throughout history. For example, the destructive 30 Years War, in many ways, drove the decision in Westphalia to establish a nation-state system in Europe. Then the incredible tragedy of WWII drove the development of an international and regional world order designed to lessen the probability of conflict between nation-states. And in looking out to 2050, a lot of the scenarios in this workshop revolved around the impact of natural resource stresses on the legitimacy of nation-states – due to their incapacity to provide their publics with basic services. This in turn could disrupt the current global order that is built on the legitimacy of states. In that context, a lot of policy suggestions revolved around either improving/augmenting, or creating new, national, regional, and international structures for addressing what's increasingly considered to be an existential risk.

There is a need to increase interagency/international scenario planning exercises. There is tangible value of scenario planning exercises. Given the unprecedented changes occurring in the 21<sup>st</sup> century, looking exclusively to the historical record to plan for the future will no longer be sufficient. Thus imagination is critical. Failure of imagination is a risk in and of itself. It is imperative to plan for improbable combinations of probable events and simultaneously to not be afraid of planning against low probability, high impact events. To paraphrase Carl Sagan, "low probability events happen all the time." And as discussed throughout the Planetary Security conference, we currently have plenty of information to work with. In many ways we have greater certainty on predicting climate risks than with other traditional security risks. Consequently, we need an informed imagination, and future scenario planning exercises will be key.

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