

BEYOND PARIS: USING CLIMATE CHANGE SCENARIOS TO MANAGE RISK

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INTRODUCTION

The potentially devastating consequences of climate change are well established. However, the implications for security and development—and the transformative actions that need to be undertaken to limit global temperature increases to 2 degrees Celsius (°C) or less, as agreed at the 2015 Paris Climate Conference (COP21)—are less clear. A group of 30 researchers, policymakers and practitioners gathered for two consecutive workshops during the 2016 SIPRI Forum on Security and Development to deepen the understanding of these implications.

They session examined two contrasting scenarios to consider distinctly different futures. The radical emissions reduction (RER) scenario depicted a future on track to meet the Paris Agreement, but where the requisite transformational changes could have significant repercussions on security and development. The high-end climate change (HCC) scenario described a future where the impacts of climate change themselves cause major security and development challenges.

Using the RER and HCC scenarios as a point of departure, workshop participants discussed the challenges associated with implementing four pre-selected Sustainable Development Goals (SDGs): SDG 2 on food security, nutrition and sustainable agriculture; SDG 5 on gender equality and the empowerment of women and girls; SDG 7 on access to affordable and clean energy; and SDG 10 on inequality. The regional implications of each scenario for oil-producing countries were also considered. Saudi Arabia was selected to highlight potential impacts of each scenario in the Middle East and North Africa (MENA) and Nigeria was selected to examine the possible effects in West Africa.

FINDINGS AND IMPLICATIONS

SDG implementation challenges under the RER scenario:

- Threats related to competition over land use for food and bioenergy would likely increase, impacting the success of SDG 2 implementation. Under the RER scenario, the fate of agricultural development in poor regions is heavily dependent upon continued access to conventional fossil fuel sources.
- An increase in the incidence of gender-based violence would likely result from the population displacements cause by large-scale biofuel production. Of equal importance to SDG 5 implementation, the amount of time required to provide for basic needs would increase if agricultural systems in poor areas were deprived of easily accessible fossil energy. In fragile contexts, where gender inequality tends to be low, women often serve as caregivers.
- Food-versus-fuel conflicts would increase under the RER scenario. In countries that are economically dependent on fossil fuel extraction, new competitive tensions related to ownership of renewable technologies could forestall progress towards SDG 7. Similarly, the risk of nuclear proliferation resulting from rapid build-out of nuclear power would increase.
- SDG 10 performance would be impacted by unequal access to technologies, increased energy prices and the fact that the cost of mitigation efforts could considerably reduce Official Development Assistance levels.

**Regional implications of the RER scenario:**

- In Saudi Arabia, rapidly declining oil revenues could cause a collapse of the regime, which would have unpredictable effects on geopolitics. There would, however, be a short window of opportunity in which Saudi oil revenues could be used to finance a switch to a solar-based energy economy.
- In Nigeria the RER scenario presents a range of positive opportunities relating to the potential of renewables and empowering the private sector. In this sense, the loss of oil revenues could be seen as a driver of inequality and conflict but also as a chance to expand the country's economic portfolio and reduce the corruption associated with its oil market.

SDG implementation challenges under the HCC scenario:

- Achievement of SDG 2 would be negatively impacted by agricultural adaptation difficulties that could lead to declining production, food shortages and increasing conflict.
- An increase in the number of armed conflicts and the negative effect of poor economic growth on women's opportunities would likely have adverse effects on SDG 5 implementation.
- SDG 7 performance would be hindered by the consequences of increasing geopolitical disorder and more frequent production disruptions. For example, under the HCC scenario, hydropower production could be drained by lower precipitation levels and higher instances of extreme weather would increase the risk that key
- Global inequalities would increase as a result of changes in agricultural and industrial productivity, thus hampering the implementation of SDG 10. The disruptive effects of high and volatile food prices would likely have a disproportionate impact on poor communities.

Regional implications of the HCC scenario:

- Continued oil revenues in Saudi Arabia would help to preserve the regime and could cause further regional destabilization by enabling the House of Saud to spread Wahhabism through support to extremist groups. However, higher temperatures and the resulting droughts could cause migration and incite protests, which would have a destabilizing effect in Saudi Arabia and on other MENA regimes.
- In Nigeria the HCC scenario resulted in a gradual deterioration of water access, dramatically impacting agriculture. Resource conflicts would increase and likely contribute to the growing influence of Boko Haram and other extremist groups. Forced adaptation arose as an opportunity in the HCC scenario, providing produce suppliers that could modify their behaviour a competitive edge in the market.

CONCLUSIONS

While the threats posed by HCC are evident, the development and security consequences of the RER needed to comply with the 2015 Paris Agreement are not well understood. The scenarios in these workshops illustrate how the short-term geopolitical costs of taking action to meet global climate targets may surpass long-term benefits in different contexts. Without undermining the urgent need for climate action these costs should be given extensive consideration in the formulation of national climate policies. Additional research analysing the extent to which implementation of different SDGs may strengthen or weaken the performance of others is needed in order to identify optimal policy pathways with regard to the 2030 Agenda's overall achievement and its relation to related policy frameworks, like the Paris Agreement. In reality, national strategies will likely include elements of both scenarios. In order to build preparedness and manage risks associated with different pathways, policy portfolios should be robust across and capture a range of plausible developments.

