The Environment and Security. Ending the Vicious Circle

ALIYEV, Mahir, et al.
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ENDING THE VICIOUS CIRCLE

Climate change, environmental degradation and loss of biodiversity threaten world peace and security. Here, the UN Environment Science-Policy Platform on Environment and Security sets out ways to tackle these problems.

Threats from chronic changes in the environment are difficult to predict. Difficulty mitigating these threats then creates uncertainty and instability across global society. Governments focus on more acute threats such as terrorism and cyber-attacks. This creates a blind spot around global security challenges that include environmental degradation to food security, agriculture, water accessibility and housing.

Military, social, economic and environmental threats are growing. Security implies an effective response to the risks, dangers and challenges of the modern age.

These risks are increasingly complex, due to technological, financial and political interconnectedness in modern society that creates unpredictable risk and threat combinations for all of us.

They are also creating a vicious circle, due to the uncertain cause-effect relationships in many old – often frozen – conflicts and to inefficient management. In broad terms, security exists in the absence of threat. With drought, environmental uncertainty has security implications because it threatens people’s ability to secure their livelihoods.

Environmental uncertainty makes people more vulnerable, decreasing their ability to cope with new threats of environmental uncertainty. Vulnerable people, unable to cope with new or changing environmental situations, seek ways to support themselves and their families – becoming desperate in dire situations.

With environmentally driven food insecurity, for instance, that desperation can create civil unrest and erode civil security.

REGIONAL EXAMPLES
In Central Asia, glaciers supply fresh water during hot periods, and provide water during drought years. But these glaciers have shrunk by 20-30 per cent.

Central Asia, with its arid climate and historic lack of environmental management, is already among the most vulnerable regions to climate change. Rising temperatures, melting glaciers, and more frequent extreme weather will aggravate its existing problems with water, energy and food security, exacerbating regional tensions – and beyond.

Environment and security incorporates vast issues, particularly if we consider security in its broad definition as human, economic, and social security.

One issue that narrows the scope of the relationship is the link between environment and armed conflict. However, there is considerable scope to apply this narrower concept.

Environmental change can exacerbate inter-state tensions and disputes or terrorism. However, most studies focus on acute transboundary conflicts, with a high probability of violence.

CAUSE AND EFFECT
Climatic and environmental changes are unlikely to directly cause conflict. However, environmental changes exacerbate existing poverty, overpopulation, demographic inequality, unmanaged migration, ethnic fractionalisation, political marginalisation, poor governance, historical conflicts and neighbouring conflicts.

It goes beyond academic discussion to distinguish between a general causal effect, in which climate change and water scarcity lead to conflict, and an indirect and conditional effect, in which climate change and water scarcity lead to conflict where exist low economic growth or ineffective political institutions.

Instead, it points to the factors to address to avoid or end conflict. Rather than discuss the risk of climate wars and water wars, scholars and policymakers must investigate the conditions in which climatic changes and water scarcity exacerbate the threat to societal stability and peace, and the mechanisms – the intervening variables – that can have a destabilising effect.

For more than half a century, Sudan has endured armed conflict and civil unrest. In Darfur, drought, demographic pressure, and political marginalisation helped to push the region into lawlessness and violence. Since 2003, 300,000 people have died and more than two million have been displaced.

Although the causes of conflict in Darfur are complex, a 2009 UN Environment report named regional climate variability, water scarcity and the steady loss of fertile land as important underlying factors.

Long-term drought and desertification do not inevitably lead to conflict. Yet, by causing poverty, by marginalising population subgroups, and driving migration, drought and desertification create conditions that lead to violence.

And so marginalised pastoralist groups in Sudan have joined militia proxy wars, to raid cattle to supplement their own herds. Nomads, whose camel-herding livelihoods have been hard-hit by drought...
...and desertification, have also been easy prey for armed groups in the region. Because climate change may compound water and land stresses, Darfur and the entire Sahel region – recently dubbed “ground zero” for climate change – must foreground adaptation in their development and conflict-prevention plans.

Europe is not immune to compromised security due to environmental degradation, either. The European heatwave of 2003 killed some 70,000 people.

Ukraine, which has experienced a steady rise in temperatures and droughts, now faces a protracted conflict. A giant of heavy industry, one fifth of Ukraine’s production is concentrated in Donetsk region, with more than 1,000 mining, metallurgical, chemical, energy and heavy machinery enterprises. Around 78 per cent of industry in Donbas is environmentally hazardous.

Since 2014, the fighting in southeast Ukraine has created significant, partially irreversible negative environmental consequences, with a destructive impact on ecosystems, industrial and social infrastructure. These have significantly worsened people’s security in a region that was among Ukraine’s most disadvantaged before the conflict.

Shelling of metallurgical and chemical plants has polluted the main river, the Seversky Donets, threatening the population of the Russian Federation living along this tributary of Russia’s Don River. Security has deteriorated in the entire region.

**DISASTER-RISK REDUCTION**

Traditional political and diplomatic methods for mitigation are insufficient and ineffective to tackle the threats facing our world today. Decentralising the international security system fragments global security into relatively independent regional regimes.

Given the increasing risks from climate change such as drought, a functioning natural environment can ensure food security, protect household assets and livelihoods, and increase community resilience.

Conducting well-planned disaster-risk reduction (DRR) within a framework of sustainable development can also protect social and economic development gains.

Where vulnerable populations depend on functioning ecosystems, environmental problems foster social uncertainty and – where security is understood to include existential threats to individuals’ or communities’ well-being – can lead to environmentally induced security issues.

Addressing environmental problems and social vulnerability simultaneously, using ecosystem-based DRR, can help governments to more coherently and systematically address the nexus of environmental uncertainty-vulnerability-security.

"**Water is unevenly distributed, nine countries sharing 60 per cent of world resources, 28 facing regular shortages and 80 facing occasional shortages**"

Another factor in that nexus is competition versus co-operation over fresh water. Linkages between water, international peace and security are increasingly central to international policy and security.

Water is unevenly distributed, nine countries sharing 60 per cent of world resources, 28 facing regular shortages and 80 facing occasional shortages. Water scarcity, accelerated by climate change, affects availability and increases the risk of competition.

Although transboundary water agreements boost peace and stability, there are too few such agreements. Of 263 shared river basins, 84 have joint water-management bodies. Yet, co-ordinated management of shared water resources can increase co-operation between states.

It is not rare for watercourse states to apply international watercourse treaties despite periods of armed conflicts. Scarcity of water may encourage the parties to co-operate despite creating riparian tensions.

**CONCLUSION**

To reduce climate change and water-related security risks, we need an increased scientific understanding – but also better knowledge-exchange and knowledge-building processes, involving the scientific, political and socio-economic communities at national and international levels.

We must consider co-operation over natural resources such as water as a tool to start negotiations, build trust and peace between states. And at the national level, governments must ensure that populations have access to water, to safeguard peace and security at national and global levels.

UN organisations, national agencies, and scientific institutions can develop a stronger research and policy agenda.

National governments’ approaches to environmental problems must be holistic and acknowledge that environmental problems – and their influence on security – stem from interdependence between natural and social dynamics that cut across traditional policy fields, administrative responsibilities and epistemological communities. To address this, we must recognise these dynamics and how they interact.

Cross-departmental integration and coherent international co-operation can contribute to practical, lasting solutions. Disaster-risk reduction can protect development gains, and mediate the relationship between environmental uncertainty, environmental vulnerability, and environmental security issues.

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**UN ENVIRONMENT SCIENCE-POLICY PLATFORM ON ENVIRONMENT AND SECURITY**

**THE AUTHORS ARE:**

- Volodya Kousa, professor at the Center for Comparative and International Studies at the ETH Zurich, and the Department of Economics at the University of Bern, Switzerland.
- Tim Prior, head of the risk and resilience research team at ETH Zurich’s Center for Security Studies.
- Oliver Scamin, an academic focusing on climate change and environmental danger as drivers of global insecurity.
- Nora Tigrinyan, senior lecturer at the Faculty of Law of the University of Geneva and co-ordinator of the Platform for International Water Law of the Geneva Water Hub.