The linkages between environmental security (ES) and transnational environmental crime (TEC) have serious implications for civil society, governments, and international organizations in pursuit of strategic goals for 2020-2030 and the 2030 UN Sustainable Development Goals. As scientists and concerned citizens from diverse disciplines who recently gathered for a symposium sponsored by the Canadian Institute for Advanced Research in Toronto, we emphasize the health and economic rationale for planning frameworks for the upcoming decade that recognize and mitigate risks to environmental security from TEC.

**Environmental security** refers to healthy ecosystems with intact biodiversity and the ability of human communities to sustainably access natural resources. **TEC** refers to illegal activities that cross borders and compromise or harm the environment, including illegal wildlife trade and fishing, toxic waste dumping, the breaking of international environmental agreements, illegal forestry and mining, and other acts. The estimated value of TEC exceeds $200 billion per year. The source of such threats can range from the actions of individuals to highly organized transnational crime syndicates, but corporations and governments can play a role as well.

We emphasize the following points:

- TEC can be a cause of environmental insecurity for example when illegal logging serves as a vector for biological invasion, wildlife trafficking facilitates spread of pathogens, or e-waste is illegally dumped in marginalized communities.

- TEC can also be a consequence of environmental insecurity, for example when conservation efforts lead to economic dislocation and shape the opportunity structure for local people to engage in wildlife trafficking.

- Extreme poverty encourages participation in TEC by those who typically benefit the least from it. For example, extreme poverty can lead to participation in illegal e-waste disposal sites or illegal mining. Such participation can negatively impact both the environment and the impoverished workers, while benefiting those who are less vulnerable (e.g., those higher in the supply chain).

- Corporations relying on development and manufacturing from natural resources can have legal supply chains exploited by TEC offenders when risk assessments, allocations of responsibility, and traceability mechanisms are vague and underdeveloped. Corporations can also play a primary role in TEC.

- Climate change is also a major driver of environmental insecurity, which can provoke an intensification of TEC. Climate change mitigation and adaptation
planning can provide opportunities for criminal exploitation including carbon fraud and dishonest carbon offset provision.

• Militarized responses to TEC can lack legitimacy, both locally and globally, and yield suboptimal or unintended ecological and social outcomes compared to other risk response frameworks. These outcomes can provoke new forms of environmental insecurity.

• TEC is not simply a southern or developing world issue. Northern industrialized countries also face severe threats to ES because of TEC.

Suggested actions include:

• We encourage acknowledgment of the links between ES and TEC in policy documents and strategic plans, supporting interdisciplinary science in support of building evidence for new best practices.

• Co-operation with regional, bilateral and multilateral efforts to address TEC and ES can be beneficial, but all countries have an obligation to share timely data and law enforcement information leading to environmental crime prevention toward local and global security.

• Corporate, political, government, judicial, and other forms of corruption remain a pernicious threat to ES; corruption reform efforts are vital for anti-TEC progress. Similarly, it is fundamental that corporate social responsibility encompasses explicit anti-TEC efforts.

• Environmental impact assessments can include analyses of potential criminal activity and incorporate measures of anticipated or realized economic damages related to human security risks (e.g. via impacts to water, food, and health).

• Risks from and management of emerging infectious and zoonotic diseases are linked to TEC and its management, including the emergence and spread of pathogens and their vectors of health and agricultural concern. Thus the human and animal health communities should also be engaged in the discussion of mitigating TEC and promoting ES.

• Improved convergence between the environmental and health sectors (i.e., One Health) can support early detection of threats and inform identification of the drivers of disease to target upstream prevention, including through reduction of environmental crime activities.

• Knowledge gaps persist across vital areas including restorative and reparative justice; legislative reform and review; the need for ongoing adjustments to anti-TEC measures; capacity building; best practices comparative work; impact of “debt for nature swaps” on local biosecurity; and the effectiveness of new anti-
crime strategies and technologies. Innovative research is urgently required in all of these areas.

• The International Consortium on Combatting Wildlife Crime (CITES, INTERPOL, UNODC, World Bank, and WCO) should consider opening its procedures and efforts to include additional organizations such as UN Environment, the CBD, the WHO and the OIE, and could expand beyond wildlife to include other forms of environmental crime.

Environmental crimes--including illegal wildlife trade, illegal unreported and unregulated fishing, illegal logging, illegal mining, illegal hazardous waste disposal, and other acts--threaten ES in tangible ways, facilitating the spread of invasive species (including pathogens), degradation of ecosystems, pollution of waterways, social injustice, and many other harms. All of these threaten human health and can reinforce or worsen the conditions of vulnerability that enable opportunities for environmental crime and long-term consequences to ecosystems and populations that depend on them. As the nexus of TEC and ES can pose complex problems impacting diverse societal needs, we urge all governments, intergovernmental organizations, and environmental non-governmental organizations to consider these complexities when pursuing their 2020-2030 strategic planning.

Signed,

Participants of the Canadian Institute for Advanced Research Symposium on Transnational Environmental Crime and Biosecurity

The views expressed herein are the sole opinions of the signatories and not necessarily their professional or personal affiliations.

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