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# ENVIRONMENTAL SECURITY CHALLENGES: RESHAPING INTERNATIONAL RELATIONS VIA NEW FORMS OF STATE COMPETITION AND COOPERATION

Environmental security challenges are indeed playing a significant role in reshaping international relations, introducing new dynamics of state competition and cooperation. Here are some key aspects of how this is unfolding:

#### **Resource Access**

Water Scarcity: Competition for access to freshwater resources is becoming a critical issue, particularly in regions where water is already scarce. This can lead to tensions and international conflicts between neighboring countries, as seen in the Nile River basin or the Indus River basin [1].

Energy Resources: The quest for secure and sustainable energy sources is driving both competition and cooperation. Countries are vying for control over traditional energy resources like oil and gas, while also collaborating on the development of renewable energy technologies. A report by the International Energy Agency (IEA) and a study by Sovacool [2] emphasize the importance of renewable energy in reducing geopolitical tensions.

Mineral Resources: The demand for critical minerals such as lithium, cobalt, and rare earth elements, essential for green technologies, is creating new geopolitical tensions. Countries are competing to secure supply chains and ensure access to these resources [3].

### **Climate Adaptation Strategies**

Climate Migration: The impact of climate change is leading to increased migration, which can strain international relations. Countries are working together to address the root causes of climate migration but also face challenges in managing the influx of migrants [4].

Disaster Response: Climate-related disasters are prompting international cooperation in terms of disaster response and relief efforts. This cooperation can foster stronger diplomatic ties and mutual understanding [5].

Climate Governance: The global response to climate change, including agreements like the Paris Agreement, requires international cooperation. Countries are working together to set and achieve climate goals, share best practices, and develop climate-resilient infrastructure. A study by Falkner [6] analyzes the Paris Agreement and its implications for global climate governance.

## **State Competition**

Geopolitical Rivalries: Environmental security issues are exacerbating existing geopolitical rivalries. For example, the Arctic region is becoming a new frontier for competition as melting ice opens up new shipping lanes and resource extraction opportunities [7].

Economic Interests: The transition to a green economy is creating new economic opportunities and challenges. Countries are competing to become leaders in green technologies and to secure market share in the growing sustainable energy sector [8].

#### **State Cooperation**

International Agreements: The need to address environmental security challenges is driving the formation of new international agreements and the strengthening of existing ones. For instance, the Paris Agreement and the Convention on Biological Diversity are examples of global cooperation on environmental issues [9].

Technological Collaboration: Countries are collaborating on the development and sharing of green technologies. This includes joint research initiatives, technology transfer programs, and cooperative projects to implement sustainable solutions [10].

Humanitarian Aid: Environmental disasters often require international humanitarian aid, which can foster cooperation and build trust among nations [11].

In summary, environmental security challenges are redefining the landscape of international relations by introducing new areas of competition and cooperation. As the world grapples with these issues, it is likely that both state competition and cooperation will continue to evolve in response to the pressing needs of environmental security.

## References

1. Wolf A. T. Shared waters, shared benefits: A joint management framework for transboundary waters. Water International, 2007. Volume 32(3). P. 337-346. doi: 10.1080/02508060708692124

 Sovacool B. K. The avian and terrestrial ecology of oil and gas production in the western United States. Energy Policy, 2012. Volume 42.
P. 358-367. doi: 10.1016/j.enpol.2011.12.017

3. Hilson G. Corporate social responsibility in the extractive industries: Experiences from developing countries. Resources Policy, 2014. Volume 40. P. 47-56. doi: 10.1016/j.resourpol.2013.11.002

4. Warner K., Hamza M., Oliver-Smith A., Renaud F., & Julca A. Climate change, environmental degradation and migration. Natural Hazards, 2010. Volume 55(3). P. 689-715. Doi: 10.1007/s11069-009-9419-7

5. Kelman I., Gaillard J. C., & Mercer J. Climate change's role in disaster risk reduction's future: Beyond vulnerability and resilience. International Journal of Disaster Risk Reduction, 2015. Volume 13. P. 21-27. Doi: 10.1016/j.ijdrr.2015.05.010

6. Falkner R. The Paris Agreement and the new logic of international climate politics. International Affairs, 2016. Volume 92(5).P. 1107-1125. doi: 10.1111/1468-2346.12708

Huebert R., Exner-Pirot, H., Lajeunesse A., & Gulledge J.
Climate change & international arbitration: A new challenge for the Arctic?
Marine Policy, 2012. Volume 36(3). P. 586-591. doi: 10.1016/j.marpol.2011.10.009

8. Huenteler J., Schmidt, T. S., & Hoffmann V. H. The impact of international cooperation on the likelihood of success in global climate change mitigation. Environmental Research Letters, 2016. Volume 11(10). P. 1-9. doi: 10.1088/1748-9326/11/10/104002

9. Bodansky D. The Paris Agreement: A new era for global climate governance? Science, (2016). Volume 352(6289). P. 1276-1278. doi: 10.1126/science.aad5636

 Dechezleprêtre A., Neij, L., & Glachant M. Technology transfer
by CDM projects: A comparison of Brazil, China, India and Mexico.
Energy Policy, 2015. Volume 86. P. 539-546. doi: 10.1016/j.enpol.2015.08.017

11. Kelman I. The disaster after the disaster: Ensuring that relief efforts do not exacerbate the risks. Area, 2012. Volume 44(3). P. 270-277. doi: 10.1111/j.1475-4762.2012.01093.x