Chapeau

Our world's freshwater resources are rapidly deteriorating due to complex drivers, including urbanization, deforestation, ecosystem degradation, and climate change. Lack of access to clean water intensifies transboundary conflicts that may trigger famines, migrations, and water wars. To secure clean water for all, particularly in regions where water issues are leading to violent conflict, the UN can disrupt the cycle of violence by implementing environmental diplomacy, watershed monitoring, and governance interventions in thousands of vulnerable communities. To advance peace and build trust among communities through water-oriented environmental diplomacy, some recommendations are:

1. *Convene scientists and community groups that can identify shared courses of action within and between transboundary watersheds.*
2. *Deploy water quality monitoring sensors in vulnerable communities.*
3. *Empower vulnerable communities through community-science training, environmental education, open-source apps, and engagement and thus co-develop global minimum water quality standards.*

Chapter I. Sustainable development and financing for development

UN agencies can incentivize community-based financial instruments that build community wealth and strengthen local economies alongside the creation of cleanA water security, as opposed to eccelocal communities that are managing water resources and innovating and sharing tools across and within transboundary watersheds.

Chapter II. International peace and security

Water shared across political boundaries can be a powerful avenue for peace-building. Empowering local communities to design their own water pollution mitigation solutions through technical capacity building and norm setting processes, can enable sustainable long-term

changes in water security. The UN can empower groups to hold workshops for Track-2 (scientist-scientist) and Track-3 (citizen-citizen) environmental diplomacy in transboundary watersheds to help participants identify courses of action for securing clean water in thousands of communities, building off projects being implemented under SDG#6.

Chapter III. Science, technology and innovation and digital cooperation

The UN can implement community-science based water quality monitoring networks, establish open-source databases to disseminate water quality information in real time with a clear focus on vulnerable populations, and develop mobile/web apps to catalyze community action for mitigating water pollution, including environmental education. Transparent and credible collection of watershed sensor monitoring data, enabled through community ownership and citizen science practices, promotes ecological cooperation and facilitates political compromise, especially in conflict zones. Cooperative governance networks lead to sustainable water governance systems that can be shared widely on the open source website, and lead to recommendations on global water quality standards for the UN.

Chapter IV. Youth and future generations

Youth can be engaged in training to act as future community scientists, help train local communities with latest technology involved in water related issues such as sustainable agricultural practices in river basins, improved communication with the communities on vulnerable hotspots especially for flooding around the river basins, sustainable fishing practices and climate induced migration management. Youth can act as a resource for mitigation and adaptation in different river basins. The UN can:

1. *Enhance and accelerate the inclusion of young professionals in various aspects of decision-making processes for Disaster Risk Reduction (DRR) processes and Early Warning Early Action (EWEA) efforts. Give youth-led inclusive initiatives the opportunity to share their thoughts on how to prepare for and cope with hazards and disasters.*

2. *Fund an independent space that can be operated by, for, and of young professionals. Ensure that all scales of operation, management, funding, and design in Early Warning and Early Action systems include young professionals.*

Progress can be ascertained by evaluating the increase in ecological cooperation in river basins. Changes in water accessibility and quality can be used as quantitative performance indicators to evaluate the success of community-based pollution mitigation strategies and technologies. Ultimately, improvements in water accessibility and quality can benefit millions of people in river basins and reduce their vulnerability induced by climate change.

The UN can empower communities to manage their resources by incorporating indigenous knowledge in the development of governance solutions, establishing a community ownership model for water quality sensors, and compensating community members who participate in water management as community scientists and teachers. Vulnerable members of communities can be encouraged to participate.