Effect of land reform and natural resource management (NRM) on diplomatic relations and peaceful dispute resolution

Water-related cooperation initiatives have **no effect** on diplomatic relations.

Geographic region: Global, Latin America and Caribbean, Sub Saharan Africa

Effect: No effect (g=0.003)

Confidence in study findings: Medium (1 study with 1 effect size)

Short Summary

Environmental cooperation initiatives, such as water-related interactions, are designed to address shared environmental challenges while fostering trust and interdependence between states. Evidence suggests that positive water-related interactions can increase the likelihood of peaceful transitions, particularly in state dyads without acute conflict. However, overall, these interventions have no measurable effect on diplomatic relations. While such initiatives provide platforms for dialogue, reduce tensions, and encourage broader cooperation beyond environmental issues, their effectiveness is limited in high-conflict scenarios.

Long summary

The intervention

These interventions focus on fostering cooperation through water-related initiatives, including treaties, technical support, joint resource management, and cultural or scientific exchanges. Examples include cooperative frameworks such as the Orange-Senqu River Commission (ORASECOM) and transboundary water agreements in regions like Central America, Southern Africa, and the Middle East. The programs aim to build interdependence, trust, and peaceful relations by promoting collaboration over shared environmental challenges.

How the intervention is expected to work

Water-related cooperation is hypothesized to promote peace by addressing common environmental challenges and fostering interdependence. By creating platforms for dialogue, joint problem-solving, and treaty-making, these initiatives can reduce tensions and build trust between states. Positive interactions facilitate broader cooperation, support peaceful dispute resolution, and strengthen mutual reliance. However, their impact is diminished in contexts of acute conflict, where mistrust and security concerns limit the potential for cooperation.

The evidence base

This cell includes 3 studies: 1 systematic review, 1 impact evaluation, and 3 qualitative studies. The impact evaluation utilized data on events captured by the Basins at Risk Water Event Intensity Scale (BAR scale) and the Peace Scale, covering hundreds of interstate dyads across diverse regions. The qualitative studies are set in The Amazon Basin (2 studies) and

On the other hand, the systematic review analyzed data from 69 case studies worldwide. The qualitative study is set in the Southwestern Amazon, Amazon Basin, and Sudan (Darfur region).

Evidence findings

Findings indicate that positive water-related interactions over a ten-year period slightly increased the likelihood of transitions toward peaceful relations, particularly among state dyads not experiencing acute conflict. Cooperative events, such as joint water management or treaties, provided platforms for broader cooperation, reducing rivalry and supporting peaceful dispute resolution. Nonetheless, in high-conflict scenarios, the impact was negligible due to persistent mistrust and security concerns.

The review evidence

The systematic review highlighted that successful natural resource cooperation depends on congruence between biophysical and socioeconomic boundaries and the presence of effective sanctioning mechanisms.

The impact evaluation evidence

This cell includes only 1 impact evaluation study. Only one study summary is thus provided below:

Ide (2018) This study investigates the role of international water cooperation as a mechanism for environmental peacemaking, which promotes transitions toward more peaceful interstate relations. The study examines the relationship between water cooperation and peace from 1956 to 2006, emphasizing its impact in settings without acute conflict, such as the Israel-Jordan "picnic table talks" and the Mahakali Treaty between India and Nepal. The analysis combines data on positive water-related interactions between states with the peace scale developed by Goertz et al. (2016), which measures degrees of positive and negative peace. The results demonstrate that a higher number of positive water-related interactions in the preceding decade significantly increases the likelihood of a shift toward more peaceful relations between states, particularly in dyads that are not in acute conflict. The effect is more pronounced when observing longer time periods and low- and high-intensity cooperative events.

Confidence Assessment

Overall low: The cell could be rated as low confidence due to limited number of studies.

Link to review summaries

Pagdee (2006)

All studies may be accessed via the EGM.

Other outcomes in the study:

None