

Effect of land reform and natural resource management (NRM) on nature and scale of violence or atrocities

Land Land reform and natural resource management (NRM) programs have a harmful effect in mitigating resource-related conflicts, as their effectiveness depends on addressing deeper structural issues and pre-existing hostilities.

Geographical region: East Asia and Pacific, Latin America and Caribbean, Sub Saharan Africa

Effect: Harmful effect ($g=-0.001$)

Confidence in study findings: Medium (3 studies with 8 effect sizes)

Short Summary

Land reform and NRM initiatives—such as participatory mapping in the Bolivian Amazon and regional economic institutions (REIs) in Africa—showed harmful effects on mitigating violence and resource-related conflicts. While these interventions aim to reduce tensions through cooperation, transparent governance, and equitable resource sharing, evidence reveals that they often fail to prevent conflicts when underlying political and structural inequalities persist. Participatory mapping had limited or no effect on reducing disputes, and REIs sometimes intensified tensions due to power imbalances and difficulties in enforcing equitable agreements. Overall, the cell is rated as medium confidence due to mixed findings across studies.

Long summary

The intervention

Land reform and NRM programs include participatory mapping and REIs that integrate natural resource governance into regional and economic frameworks. Participatory mapping initiatives in Latin America were designed to clarify land boundaries and reduce disputes by engaging indigenous communities in defining and documenting land ownership. Similarly, REIs—such as regional trade and water management organizations—promote cooperation through treaties and multilateral agreements. These interventions aim to enhance transparency, ensure equitable access to shared resources, and provide platforms for peaceful dispute resolution.

How the intervention is expected to work

Participatory mapping is intended to reduce violence by clarifying land ownership, strengthening local governance, and fostering collaboration between communities and state institutions. It builds trust and empowers marginalized groups by granting them recognized control over resources. REIs seek to prevent conflicts through structured dialogue, institutional cooperation, and shared management of cross-border resources. However, when power asymmetries or political exclusion persist, these mechanisms may fail or even heighten tensions, as agreements often favor stronger states or groups, leaving others marginalized.

The evidence base

This cell includes 3 impact evaluation studies set in: Africa (1 study), Bolivia (1 study), and Uganda (1 study). This cell also has one qualitative study set in Indonesia.

Evidence findings

Findings indicate that REIs often struggle to mitigate resource-related conflicts effectively and, in some cases, may worsen them due to unequal implementation or existing hostilities. States involved in REI water treaties with territorial provisions were more likely to experience disputes, reflecting challenges in achieving fair cooperation. Similarly, participatory mapping among Tsimane' communities in Bolivia showed no significant reduction in internal or external conflicts. These results suggest that without addressing underlying socio-political inequalities and ensuring inclusive participation, land reform and NRM interventions may fail to reduce violence and can, in some contexts, exacerbate tensions.

Included studies

Baker et al. (2011) examines the impact of park gazettement and Integrated Conservation and Development (ICD) initiatives on community conflict at Bwindi Impenetrable Forest, Uganda. The park was established to protect mountain gorillas and other natural resources, but its creation led to conflicts with local communities who relied on the forest for commercial and subsistence activities. The ICD was implemented to mitigate these conflicts by addressing local development priorities. The study involved a historical analysis of 48 incidents of violent conflict documented between 1986 and 2000, categorized by gazettement period, area, instigator, and type. Data were extracted from documents written by park staff and local people, including patrol reports and letters, to understand the triggers of conflict and the effectiveness of ICD. The analysis focused on the periods before, during, and after the park's gazettement. The analysis revealed that attacks on rangers to free commercial offenders were the most common type of conflict. The study suggests that targeting ICD benefits towards individuals who lost income from commercial activities could enhance conflict resolution and conservation efforts. The study is rated as medium confidence as it is a non-experimental study with limited description of the intervention and evaluation questions.

Powers (2005) examines the role of regional economic institutions (REIs) as formal mechanisms for managing resource-related conflicts, particularly focusing on water resources shared across borders. Using data from African REIs between 1950 and 1996, the study explores whether REI water treaties with provisions for territorial boundary management reduce the likelihood of militarized interstate disputes. The findings show that while REIs aim to promote cooperation through shared governance, trade liberalization, and resource management, they often fail to mitigate conflicts effectively. In some cases, states sharing REI water treaties with territorial provisions are more likely to engage in conflict, possibly reflecting pre-existing hostilities or the challenges of implementing equitable resource-sharing rules. The study is rated medium due to its non-experimental design and its partial description of the intervention.

Reyes-García et al. (2012) investigates the impact of participatory mapping on conflicts involving Tsimane' indigenous communities in the Bolivian Amazon. Using a randomized evaluation across 32 villages (17 treatment and 15 control), the researchers assessed whether participatory

mapping influenced conflicts with external actors (e.g., loggers, traders) and internal conflicts among Tsimane' villages. Pre- and post-intervention surveys measured reported conflicts and attitudes toward outsiders. The findings reveal no statistically significant effect of participatory mapping on conflicts with external actors or between Tsimane' villages. The study concludes that conflicts are not an inherent outcome of participatory mapping but are influenced by broader socio-political and economic contexts. The results highlight that participatory mapping alone may not be sufficient to alter conflict dynamics without addressing deeper structural issues and ensuring active community engagement. The study is rated as medium confidence due to the partial description of intervention, outcomes, and evaluation questions.

Confidence Assessment

Overall low: The cell is rated low due to a limited number of studies.

Other outcomes in the study:

Social cohesion / feelings of trust and acceptance of diversity