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Vulnerabilidad y resiliencia en la cooperación al desarrollo: migración climática, discriminación contra las mujeres y custodia indígena de la biodiversidad

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RESUMEN

Este artículo reúne tres ensayos breves sobre retos globales de la cooperación al desarrollo. Cada ensayo identifica una fuente de vulnerabilidad y los elementos que permiten mirar el futuro con una perspectiva positiva. El primero analiza la migración climática y sostiene que los Estados deben adaptar sus normas de asilo para tener en cuenta las condiciones ambientales y climáticas de la región de origen de la persona solicitante; además, revisa los mecanismos de protección existentes para las personas desplazadas por desastres repentinos, con especial atención a los terremotos y las erupciones volcánicas que afectaron a América Latina en 2026. El segundo analiza la discriminación contra las mujeres: describe las desigualdades jurídicas que persisten, los avances de las últimas décadas y la tensión entre la universalidad de los derechos humanos y el relativismo cultural. El tercero examina el papel de los pueblos indígenas en la protección de la biodiversidad y los límites planetarios del crecimiento económico. El artículo concluye que la vulnerabilidad tiene en gran parte un origen social y que el derecho y las políticas de cooperación pueden reducirla. Asimismo, la resiliencia adopta formas distintas en cada caso y requiere una cooperación que apoye las capacidades de las personas más afectadas.

Palabras clave: cooperación al desarrollo, migración climática y desastres, derechos de las mujeres, pueblos indígenas, biodiversidad

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Vulnerability and Resilience in Development Cooperation: Climate Migration, Discrimination against Women and Indigenous Stewardship of Biodiversity

ABSTRACT

This article brings together three short essays on global challenges for development cooperation. Each essay identifies a source of vulnerability and the elements that allow us to look to the future with a positive perspective. The first essay examines climate migration. It argues that States should adapt their asylum rules to take account of environmental and climate conditions in the applicant's region of origin, and it reviews existing protection mechanisms for people displaced by sudden-onset disasters, with special attention to the earthquakes and volcanic eruptions that struck Latin America in 2026. The second essay analyses discrimination against women: it describes persistent legal inequalities, the progress achieved in recent decades and the tension between the universality of human rights and cultural relativism. The third essay discusses the role of Indigenous peoples in protecting biodiversity and the planetary limits to economic growth. The article concludes that vulnerability is largely socially produced and that law and cooperation policies can reduce it. It also shows that resilience takes a different form in each case and depends on cooperation that supports the capacities of the people most affected.

Keywords: development cooperation, climate migration and disasters, women's rights, Indigenous peoples, biodiversity

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INTRODUCTION

Development cooperation increasingly deals with problems that cross borders and fall hardest on groups in situations of vulnerability. Climate change and disasters force people to leave their homes, as the earthquakes and volcanic eruptions of 2026 in Latin America have shown again, legal discrimination still limits the lives of millions of women, and the loss of biodiversity threatens the territories and ways of life of Indigenous peoples. These three problems differ in nature, but they share a common feature: in each case, vulnerability results not only from natural or cultural factors but also from legal and economic decisions.

This paper brings together three reflections, first written in April 2025 and updated in October 2026, on these challenges. Each section follows the same structure. It first describes the source of vulnerability and uncertainty, and then identifies the legal, social or cultural elements that allow us to look to the future with a positive perspective. The final section draws common conclusions for development cooperation.

Three concepts frame the comparison. Vulnerability is the propensity or predisposition to be adversely affected, which depends on exposure to a hazard, on sensitivity to harm and on the capacity to cope and adapt (IPCC, 2022). Resilience is the capacity of social, economic and ecological systems to cope with a hazardous event or disturbance and to respond or reorganise while maintaining their essential functions (IPCC, 2022). Development cooperation is the set of policies, financial flows, technical assistance and normative instruments through which States and international organisations support the development of other countries and the protection of the rights of the people who live in them. These concepts make the three cases comparable: in each one, a group is exposed to a different harm (displacement, legal inequality or loss of territory), its capacity to cope depends on legal and economic decisions, and cooperation can act on that capacity through concrete instruments, which each section identifies.

Climate migration and disasters: vulnerability and uncertainty

The ecological crisis and globalisation have turned environmental factors into a growing cause of human mobility. Natural disasters and the slow effects of climate change, such as droughts and sea-level rise, already force people to leave their homes (Cabrera Rivera, 2018; Intergovernmental Panel on Climate Change [IPCC], 2022). The World Bank estimates that up to 216 million people could have to move within their own countries by 2050 because of climate change (Clement et al., 2021). Environmental change rarely acts alone: it interacts with economic, political, social and demographic drivers, which explains why the most vulnerable people are often unable to move at all (Black et al., 2011). However, international refugee law does not cover these people as such: the Convention relating to the Status of Refugees (1951) protects people who flee persecution on specific grounds, and environmental degradation is not one of them (McAdam, 2012).

Atapattu et al. (2020) argue that States must adapt their domestic asylum rules to this new reality. Asylum procedures should include a thorough analysis of the environmental and climate conditions in the applicant's region of origin. States should also develop policies and legal practices that protect people who have to leave their homes because of the climate emergency, before the damage becomes so severe that it amounts to a violation of the right to life. The United Nations High Commissioner for Refugees (UNHCR, 2020) adopts a similar approach: claims linked to climate change and disasters can fall within refugee law when the effects of climate change interact with conflict, violence or discriminatory responses by the authorities.

International case law has started to move in this direction. In *Teitiota v. New Zealand*, the United Nations Human Rights Committee (2020) rejected the applicant's claim on the facts, but it recognised that environmental degradation and climate change can expose people to a violation of their right to life, protected by article 6 of the International Covenant on Civil and Political Rights (1966), and can therefore trigger the obligation of non-refoulement. McAdam (2020) considers this decision a landmark, because it opens the door to protection under human rights law even when refugee law does not apply.

There are also reasons for optimism. Several States and regions already protect people displaced across borders by sudden or temporary natural events, such as floods or earthquakes, through good practices like humanitarian visas, temporary protection and emergency plans (Atapattu et al., 2020). These practices appear in soft-law instruments that shape the global governance of migration. The Protection Agenda of the Nansen Initiative compiled them as a toolbox for protecting people displaced across borders in the context of disasters (Nansen Initiative, 2015). The Global Compact for Safe, Orderly and Regular Migration includes them: Objective 2 commits States to address natural disasters and climate change as drivers of migration, and Objective 5 encourages admission on humanitarian grounds for people forced to leave their countries because of sudden-onset disasters (United Nations General Assembly, 2018).

Recent disasters in Latin America: the Pacific Ring of Fire

The events of 2026 show the urgency of this debate in Latin America. Earthquakes and volcanic eruptions are geophysical hazards, not effects of climate change, but they raise the same protection problem: people who must leave their homes suddenly, often with nothing. Worldwide, disasters triggered 29.9 million internal displacements in 2025, and 13.6 million people were still living in displacement because of disasters at the end of that year (Internal Displacement Monitoring Centre, 2026).

Colombia, on the Pacific Ring of Fire, was struck on 10 August 2026 by a magnitude 7.4 earthquake with its epicentre in San José del Palmar (Chocó). According to the National Disaster Risk Management Unit (UNGRD), by 21 August it had caused 321 deaths and 4,595 injuries, affected 284,185 people, and thousands of people remained in temporary shelters (Vanguardia, 2026). The U.S. Geological Survey [USGS] reviewed the earthquake as magnitude 7.4 and located it at an intermediate depth of roughly 100 km, within the subducting Nazca plate (USGS, 2026a). In Guatemala, the eruption of the Volcán de Fuego in early August 2026 affected nearly 29,000 people, and the authorities carried out preventive evacuations to municipal shelters (Hernández, 2026). Outside the Ring of Fire, on the boundary between the Caribbean and South American plates, two earthquakes of magnitudes 7.2 and

7.5 struck northern Venezuela on 24 June 2026, killing more than 6,000 people and leaving about 24,000 in makeshift shelters (ABC News, 2026). According to the USGS, the larger of the two events ruptured a shallow strike-slip fault about 175 km long (USGS, 2026b).

The most recent event struck Panama. On 9 October 2026, a shallow strike-slip earthquake hit the Azuero Peninsula. It was reviewed as magnitude 7.7 by the USGS (2026c), while Panama's civil protection system reports a magnitude of 7.5 (Sistema Nacional de Protección Civil [SINAPROC], 2026a). Earlier scientific work had already characterised southern Panama as seismically active: hazard assessments estimated a return period of about 160 years for magnitude 7.0 earthquakes in the Azuero region (Muñoz, 1989), and the Institute of Geosciences of the University of Panama has studied the seismotectonics of the Azuero-Soná system, a regional strike-slip fault system that crosses the peninsula (Sanjur et al., 2025). SINAPROC's preliminary balance of 30 October recorded two deaths and 27 injuries (SINAPROC, 2026a). On 22 October, 5,779 people were lodged in 160 shelters (SINAPROC, 2026b), and by 9 November 19,666 families, equivalent to 62,665 people, were registered as affected (SINAPROC, 2026c). These figures show that a low death toll can coexist with a large recovery task in housing, health care and schooling, which is where national protection systems and cooperation have to act.

These events confirm that vulnerability depends less on the hazard than on social conditions: the quality of housing, urban planning and the capacity of institutions to warn and protect the population. Most of the people displaced remain within their own countries, so the Guiding Principles on Internal Displacement (Deng, 1998) are the main reference for their protection. There is also room for optimism. The comparison of eruption and evacuation timescales at the Volcán de Fuego shows that early warning and timely evacuation save lives (Naismith et al., 2024): the 2018 eruption killed hundreds of people, whereas no deaths had been reported in the 2026 eruption when the evacuations took place (Hernández, 2026). Cooperation can turn these findings into practice through concrete instruments. The Sendai Framework for Disaster Risk Reduction 2015–2030 sets, among its global targets, a substantial increase in the availability of and access to multi-hazard early warning systems

and disaster risk information (United Nations General Assembly, 2015a). Technical assistance and financing for the most exposed countries can support these systems, together with the humanitarian visas, temporary protection schemes and emergency plans described above.

Discrimination against women: vulnerability and an optimistic future

Women still face legal inequalities in many parts of the world. According to Amnesty International, these inequalities range from bans on driving without a male companion and the denial of the right to vote to laws that prevent women from making their own personal decisions (Garrido Carrasco, 2019). The World Bank (2024) estimates that, on average, women enjoy only about two-thirds of the legal rights that men have. Many countries did not recognise the rights that now protect equality until a few decades ago, even though the Convention on the Elimination of All Forms of Discrimination against Women dates from 1979 (United Nations General Assembly, 1979).

On the other side of the coin, what a society once accepted as a cultural fact can change over time. Generational change brings new perspectives and paradigms: laws are reformed, multiculturalism advances gradually and new forms of awareness emerge. These reforms often meet scepticism, and sometimes rejection, from the sectors most attached to tradition, so their acceptance is never easy (Merry, 2003). Saudi Arabia, for example, lifted its ban on women driving in 2018 as part of a wider package of reforms whose scope is still debated (Eum, 2019). These changes matter beyond the legal sphere: women's empowerment and economic development reinforce each other (Duflo, 2012).

The debate between universality and cultural relativism explains part of this resistance. Despite the progress achieved in international forums, the defenders of relativism do not recognise the universality of human rights. They argue that international human rights treaties reflect specific, mainly Western, values, and that each human group must define, interpret and apply its beliefs, values and practices according to its own cultural context (Garrido Carrasco, 2019). Okin (1999) warned that protecting the practices of cultural groups without limits can reinforce the subordination of women within those groups, while Donnelly (2007) defends a "relative universality": human rights are universal as a concept, but States can vary in how they interpret and implement them. The international community answered

this argument in the Vienna Declaration and Programme of Action (World Conference on Human Rights, 1993): national and regional particularities must be borne in mind, but all human rights are universal, and States have the duty to protect them regardless of their political, economic and cultural systems.

The primary sources show that the Convention already answers the cultural argument. Article 5(a) requires States Parties to modify the social and cultural patterns of conduct of men and women in order to eliminate prejudices and customary practices based on the idea of the inferiority or superiority of either sex, and article 2(f) requires them to modify or abolish laws, regulations, customs and practices that constitute discrimination against women (United Nations General Assembly, 1979). The Optional Protocol to the Convention adds a communications procedure and an inquiry procedure, which allow individuals and groups to bring complaints before the Committee on the Elimination of Discrimination against Women (United Nations General Assembly, 1999).

In public international law, several norms reduce the vulnerability of women, and they can be grouped by the protection they provide. Regarding equality before the law, the International Covenant on Civil and Political Rights guarantees the equal right of men and women to enjoy the rights it recognises (art. 3) and prohibits discrimination (art. 26) (International Covenant on Civil and Political Rights, 1966), in addition to the Convention and its Optional Protocol described above. Regarding violence, the Committee on the Elimination of Discrimination against Women [CEDAW Committee] updated its general recommendation on the matter in 2017: it recognises that the prohibition of gender-based violence has become a norm of customary international law, calls for repealing the laws that excuse or condone such violence and stresses the need to change the social norms that support it, including when they are defended in the name of culture, tradition or religion (CEDAW Committee, 2017). This last point answers the relativist argument directly. The Convention of Belém do Pará, in force since 1995, binds the American States that have ratified it and requires them to apply due diligence to prevent, investigate and punish violence against women (art. 7(b)) (Organization of American States [OAS], 1994). The Inter-American Court of Human Rights applied it in Cotton Field v. Mexico, where

it found violations of the American Convention on Human Rights and of the Belém do Pará Convention, mainly because of severe deficiencies in the investigation of the murders of three women (Inter-American Court of Human Rights, 2009). Regarding crises, the CEDAW Committee (2018) adopted a general recommendation on the gender-related dimensions of disaster risk reduction in the context of climate change, which links this section with the disasters discussed above. These norms differ in legal force: treaties and judgments bind the States concerned, whereas the Committee's general recommendations are authoritative interpretations without binding force of their own.

Development cooperation has concrete instruments to support this change. Sustainable Development Goal 5 commits States to achieve gender equality and to empower all women and girls, starting with target 5.1, which calls for an end to all forms of discrimination against them (United Nations General Assembly, 2015b). Cooperation programmes can finance legal reform and the institutions that apply it, and the Women, Business and the Law index offers a measurable baseline against which such reforms can be tracked (World Bank, 2024).

Empirical studies give this argument some support, with caveats. In an analysis of 180 countries between 1975 and 2000, ratification of the Convention was associated with better outcomes for women in life expectancy, literacy and participation in the economy and in parliament (Gray et al., 2006), and Simmons (2009) argues that human rights treaties work by altering the domestic political environment in which rights claims are made. The effect of legal change depends on who mobilises for it: in a study of policies against violence against women in 70 countries between 1975 and 2005, the autonomous mobilisation of feminist movements, rather than left-wing parties, women in government or national wealth, was the critical factor behind policy change (Htun & Weldon, 2012). Legal design can also shift norms in practice. In West Bengal, a 1993 law that reserved village-council leadership positions for women in randomly selected villages narrowed the gender gap in aspirations by 25% among parents and 32% among adolescents after two election cycles, and erased the gap in adolescent educational attainment (Beaman et al., 2012). Taken together, these studies show that legal reform and

international standards can improve women's situation, but also that their effect depends on the organisations that claim and apply them.

The trend is therefore positive. Legal reforms, international standards and the work of women's organisations show that discrimination is not a fixed cultural fact and that the law can change it.

Biodiversity: vulnerability, trust and the challenge of sustainability

Indigenous peoples play a decisive role in the conservation of global biodiversity. A widely cited figure, popularised by the World Bank, states that, although Indigenous peoples own, occupy or use a quarter of the world's surface, they safeguard 80% of the remaining biodiversity. The exact percentage is debated, but peer-reviewed research confirms the core of the claim. Indigenous peoples manage or hold tenure rights over at least a quarter of the world's land surface, and these lands overlap with about 40% of all terrestrial protected areas (Garnett et al., 2018). In the tropics, deforestation and forest degradation are lower in Indigenous lands than in comparable unprotected areas (Sze et al., 2022). They also contain at least 36% of the world's remaining intact forest landscapes (Fa et al., 2020), and nature is generally declining less rapidly in lands managed by Indigenous peoples and local communities than in other lands (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [IPBES], 2019). For this reason, Brondizio and Le Tourneau (2016) argue that environmental governance should include Indigenous peoples and local communities as full partners.

Throughout history, native peoples have been guardians of the land, its natural resources, its biodiversity and ancestral knowledge. However, many people have seen them as an obstacle to progress, for social, economic or cultural reasons. Most of us associate a good life with the possession of material goods, but much of the wealth of high-income societies depends on the exploitation of the resources and labour of others, often through concessions, laws or permits granted for a fixed period. The United Nations Declaration on the Rights of Indigenous Peoples (United Nations General Assembly, 2007) responds to this situation by recognising, in article 26, their right to the lands, territories and resources that they have traditionally owned, occupied or used.

The legal basis for this recognition goes beyond the Declaration. The Indigenous and Tribal Peoples Convention, 1989 (No. 169), of the International Labour Organization recognises the rights of ownership and possession of Indigenous peoples over the lands they traditionally occupy (art. 14) and requires States to consult them through their representative institutions (art. 6) (International Labour Organization, 1989). The Inter-American Court of Human Rights has applied this logic. In Mayagna (Sumo) Awas Tingni Community v. Nicaragua, it protected communal property based on customary use even without a formal title (Inter-American Court of Human Rights, 2001), and in Kichwa Indigenous People of Sarayaku v. Ecuador, it found that the State had violated the community's rights to prior consultation and to communal property (Inter-American Court of Human Rights, 2012).

The evidence points in the same direction. A systematic review of 169 publications found that the most positive outcomes for both well-being and conservation come from cases in which Indigenous peoples and local communities play a central role, for example through substantial influence over decision-making or recognised local tenure institutions (Dawson et al., 2021). For development cooperation, this suggests supporting tenure security and community-led governance. The Kunming-Montreal Global Biodiversity Framework points the same way: Target 3 calls for the effective conservation of at least 30% of land and sea areas while recognising and respecting the rights of Indigenous peoples and local communities, including over their traditional territories, and Target 22 requires their full, equitable and effective participation in decision-making (Conference of the Parties to the Convention on Biological Diversity, 2022).

The communities that witness these situations, and that often cannot escape them, give us a reason to build collective awareness and to seek resilience. Climate change threatens some of these communities with forced displacement, which links this section with the climate migration discussed above. They also face the dilemma of whether to keep defending their ideals, their traditions and the territory that, until very recently, was considered their own. In my view, these peoples deserve full respect for their tireless defence of the land that has welcomed and sustained them for generations.

The Guna people of Panama illustrate how these problems meet. The Guna community of Gardi Sugdub, a small island off the Caribbean coast, began to seek support in 2010 to move to a mainland site that it already owned, because of sea-level rise and lack of space (Human Rights Watch, 2023). A projection of coastal inundation across 17 planned relocations estimates that this 3.5 km move from an island to the mainland reduces the community's exposure to inundation from 100% to 0% by the end of the century (Bower et al., 2024). The move is not free of risks, however. Craighead and Yacelga (2021) identify the main challenge of resettlement as an adaptation strategy: securing a place where Guna livelihoods, traditions and culture can continue while ecosystem services such as biodiversity and carbon storage remain protected. Human Rights Watch (2023) documented that government delays and incomplete support stalled the process and that most climate change laws in Panama do not mention relocation, and it recommended mechanisms to secure funding from domestic and international sources with human rights safeguards. For development cooperation, the case suggests that financing and technical support for community-led relocation need to come with legal frameworks and with the participation of the community that decides to move.

The defence of biodiversity is therefore not a distant conflict. It affects the lives of all living beings and the risk of their extinction. Pérez Rincón et al. (2024) recall that there are objective biophysical limits, both at the planetary level and in specific ecosystems, which determine the carrying capacity of the biosphere and set natural thresholds for economic growth, production, pollution and resource extraction. This idea connects with the concept of planetary boundaries, which defines a safe operating space for humanity (Rockström et al., 2009; Steffen et al., 2015). In this context, the experience of populations that have suffered instability and repression, and have managed to recover, offers valuable lessons in resilience.

CONCLUSIONS

The three essays show that vulnerability is largely socially produced: it depends on how legal systems define who deserves protection, on the cultural norms that limit women's rights and on the economic

models that exploit the territories of Indigenous peoples. For the same reason, law and development cooperation can reduce it. The analysis suggests three lines of action:

- Adapting asylum and complementary protection systems so that they take climate and environmental factors into account, and strengthening disaster risk reduction, early warning and the protection of people displaced within their own countries.
- Defending the universality of women's rights through legal reform and international standards, while respecting cultural diversity and supporting the women's organisations that give those reforms effect.
- Recognising the land rights and knowledge of Indigenous peoples as a central element of biodiversity conservation and sustainability.

Resilience, however, does not mean the same thing in the three cases. In climate migration and disasters, it is the capacity of people and States to anticipate displacement, absorb it and recover from it, through early warning, timely evacuation and legal pathways that guarantee protection. Regarding discrimination against women, it is the capacity of women and their organisations to claim their rights and to make legal reforms last in the face of cultural resistance. For Indigenous peoples, it is the capacity of communities to keep their territories, institutions and knowledge under external pressure, which in turn sustains the ecosystems on which everyone depends. In each case, resilience grows out of the capacities of the people most affected; it complements State responsibility and cannot replace it.

Read together, the essays also define a cross-cutting role for development cooperation. First, it can finance prevention and adaptation, such as the early warning systems promoted by the Sendai Framework. Next, it can support legal and institutional reform, from the implementation of the Convention on the Elimination of All Forms of Discrimination against Women and its Optional Protocol to national laws that recognise Indigenous land rights. It can also treat the affected groups as partners in decision-making, in line with Target 22 of the Kunming-Montreal Global Biodiversity Framework, instead of as mere beneficiaries. Finally, it must ensure that these instruments reach the

people who are least able to move, to claim their rights or to be heard, since the most vulnerable are often those left outside. Where cooperation does so, the lessons of resilience from the people most affected offer a positive perspective for the future.

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