GICHD

# MINE ACTION IN BORDER AREAS

Mine Action in Border Areas, GICHD, November 2024



Cover: Deminer in minefield at Bagh-i-Tal village, 23 August 2023. ©FSD

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# CONTENTS

# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| **AICMA** | Comprehensive Action against Antipersonnel Mines |
| **APMBC** | Anti-Personnel Mine Ban Convention |
| **ARMAC** | Asean Regional Mine Action Center |
| **ASEAN** | Association of Southeast Asian Nations |
| **BHMAC** | Bosnia and Herzegovina Mine Action Centre |
| **BiH** | Bosnia and Herzegovina |
| **CCM** | Convention on Cluster Munitions |
| **CCW** | Convention on Certain Conventional Weapons |
| **CENDESMI** | National Center for Demining in Ecuador (Centro Nacional de Desminado del Ecuador) |
| **CMAC** | Cambodian Mine Action Centre |
| **CONTRAMINAS** | Executive Council of the Peruvian Centre for Mine Action (Centro Peruano de Acción Contra las Minas Antipersonal) |
| **DTM** | Displacement Tracking Matrix |
| **EO** | Explosive ordnance |
| **EORE** | Explosive ordnance risk education |
| **EU** | European Union |
| **FSD** | Fondation Suisse de Déminage |
| **GBC** | General Border Committee |
| **HALO** | The HALO Trust |
| **ICRC** | International Committee of the Red Cross |
| **IDP** | Internally displaced person |
| **IMAS** | International Mine Action Standards |
| **IOM** | International Organization for Migration |
| **JBC** | Joint Boundary Commission |
| **MoU** | Memorandum of understanding |
| **NPA** | Norwegian People's Aid |
| **NSAG** | Non-State armed group |
| **OAS** | Organization of American States |
| **TMAC** | Thailand Mine Action Centre |
| **UBDH** | Binational Humanitarian Demining Unit of Peru and Ecuador (Unidad Binacional de Desminado Humanitario) |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **UNHCR** | Office of the United Nations High Commissioner for Refugees |

# GLOSSARY

**Borders (international):** Politically defined boundaries separating territory or maritime zones between political entities and the areas where political entities exercise border governance measures on their territory or extraterritorially.[1]

**Border delimitation**: The description of a territorial or maritime boundary in a treaty or other written source, or by means of a line marked on a map or chart.[2]

**Boundary**: A line and the vertical plane going along the line, determining the limits of a state's territory (its land, waters, subsoil and airspace).[3]

**Clearance:** In the context of mine action, tasks or actions to ensure the removal and/or the destruction of all explosive ordnance from a specified area to a specified depth or other agreed parameters as stipulated by the NMAA/Tasking Authority**.**[4]

**Demarcation**: Marking out the course of the state boundary between adjoining States on the ground by means of state boundary markers, including compilation of demarcation documents.[5]

**Displacement**: A state in which people or communities are 'forced or obliged to flee or to leave their homes or places of habitual residence',[6] particularly as a result of armed conflict or violence, violations of human rights or ecological disaster.

**Environment**: Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.[7]

**Environmental protection:** Efforts to conserve natural environments, including air, water, land, natural resources, flora, fauna, humans and their interrelationships.[8]

**Explosive ordnance (EO):** Includes mines, cluster munitions, unexploded and abandoned ordnance, booby traps, and improvised and other explosive devices.[9]

**Explosive ordnance risk education (EORE):** Activities that seek to reduce the risk of injury from EO by raising awareness of women, girls, boys and men in accordance with their different vulnerabilities, roles and needs, and promoting behavioural change. Core activities include public information dissemination, education and training.[10]

**Extension request:** A process by which States Parties to the Anti-Personnel Mine Ban Convention (APMBC) and the Convention on Cluster Munitions (CCM) may request an extension of their deadline for fulfilling clearance obligations stipulated in the treaties if the State Party believes it will be unable to meet the original deadline. Article 5 of the APMBC and Article 4 of the CCM require respective States Parties to destroy all anti-personnel mines and/or cluster munition remnants in areas under their jurisdiction or control as soon as possible, but not later than ten years after the entry into force of the Convention for that State Party.

**Frontier**: In international law, that portion of the territory of any country which lies close along the border line of another country, and so 'fronts' or faces it.[11]

**International humanitarian law**: A set of rules that seeks, for humanitarian reasons, to limit the effects of armed conflict. It protects persons who are not, or are no longer, participating in hostilities, and imposes limits on the means and methods of warfare.[12]

**Land release**: Describes the process of applying 'all reasonable effort' to identify, define, and remove all presence and suspicion of EO through non-technical survey, technical survey and/or clearance. The criteria for 'all reasonable effort' shall be defined by the national mine action authority.[13]

**Non-state armed groups (NSAGs)**: Certain groups within a broader category of armed groups with 'varying goals, structure, doctrines, funding sources, military capacity and degree of territorial control' that are outside the state structure and have the capacity to cause violence or enter into conflict with state, or other, forces.[14]

**Sustainable development**: Development that meets 'the needs of the present without compromising the ability of future generations to meet their own needs'.[15] The term refers to the need to consider the wider and long-term environmental, societal and economic impacts of development.

**Victim assistance:** Broader and victim assistance-specific efforts to address the needs and rights of victims.[16]

# PURPOSE AND METHODOLOGY

This research seeks to advance the understanding of explosive ordnance (EO) contamination in border areas. It examines current efforts to address the issue, its impact, challenges, lessons learned and opportunities for collaboration. Given the unique nature of mine action efforts in border areas, there is a need to consolidate and systematize knowledge, insights and experiences on the topic.

The study presents an initial global mapping of the extent of EO contamination in border areas. It goes on to explore various experiences in addressing the issue, with a particular focus on existing challenges, good practices and lessons learned. Finally, the research presents broader outcomes of mine action interventions in border areas, underscoring the importance of accelerating land release to fulfil the obligations under relevant conventions and to further advance humanitarian, development and peace efforts.

The objectives of this study are as follows:

- mapping the scope of EO contamination in border areas and its implications;
- highlighting examples of cross-border collaboration to identify challenges, good practices and lessons learned;
- presenting broader results regarding sustainable development and peace linked to mine action interventions in border areas; and
- stimulating relevant policy and operational discussions to mobilize resources, strengthen cooperation and establish partnerships to advance mine action efforts in border areas.

The mapping of EO contamination in border areas includes all States and territories recognized to be affected by EO contamination. It does not include those States and territories that have declared completion under the Anti-Personnel Mine Ban Convention (APMBC) or the Convention on Cluster Munitions (CCM), unless new evidence has since surfaced regarding the presence of EO contamination at their borders.[17]

A full list of the relevant States and territories included in this mapping can be found in Table 1. on pages 12-17, including information relating to the source of information, the criteria for which recognition of border contamination was decided, and basic information relating to the contamination identified.

Given the sensitivities associated with the definition of borders between States and/or territories and the implications of the presence of EO along these areas, this study has used evidence from the following three main sources to identify border contamination:

1. **For States Parties to the APMBC**: Extension requests under Article 5 (Destruction of anti-personnel mines in mined areas) were reviewed for any mention of border contamination, complemented with other documents submitted to the Convention such as Article 7 transparency reports, observations by the Committee on Article 5 implementation, official interventions, and reports from the Landmine and Cluster Munition Monitor, as needed.

2. **For States Parties to the CCM**: Extension requests under Article 4 (Clearance and destruction of cluster munition remnants and risk reduction education) were reviewed for any mention of border contamination, complemented with other documents submitted to the Convention such as Article 7 transparency reports, and reports from the Landmine and Cluster Munition Monitor, as needed.

3. **For States not Party to the APMBC or CCM**: Country profiles and the 2023 annual report from the Landmine and Cluster Munition Monitor were reviewed for any mention of border contamination.

These resources were selected to ensure that the identification of border contamination is primarily based on official reports, in the case of States Parties, and secondary sources in the case of non-State Parties or when available information was deemed insufficient through official reports. The identification and mapping of border contamination was conducted using information contained in the listed sources up to September 2024.

The desk review was complemented by information from 43 semi-structured interviews with representatives from national and regional mine action authorities, international organizations, mine action operators and non-governmental organizations.

### Field research in Peru and Ecuador

Field visits were conducted in the Peru and Ecuador border area, specifically in the provinces of Loja and El Oro in Ecuador. These visits included stakeholder interviews and field observations, and aimed to document the history, challenges and progress of Peru-Ecuador binational cooperation, as well as the humanitarian, peace and development dividends of such collaboration.

Twelve semi-structured interviews with key stakeholders in Peru and Ecuador were undertaken to obtain specific information, which was then complemented with desk research. Findings from this analysis are integrated in different sections of the study to present specific examples of cross-border collaboration to address the challenges of EO contamination.

## Limitations and scope of the study

There is no global definition of what constitutes a 'border area'. Hence, there is no shared understanding of the proximity of contamination to the official demarcation of a border required in order for it to be considered 'border contamination'.

This study relies on the selected sources of information to distinguish border contamination from internal contamination. This reliance constitutes a potential limitation of the study, since it does not reflect other potential references for the identification of border contamination. Due to the risks and political sensitivities of relying on sources of information that may not be recognized by the States and territories involved, however, these were not included in the mapping of border contamination.

While the study acknowledges the existence of, and considers, other reliable sources, such as the Mine Action Review, a narrower scope of secondary sources for the mapping exercise was chosen due to limited resources. Namely, the study uses the Landmine and Cluster Munition Monitor as the main source of information for States not party to any convention or those that had not submitted relevant information in their reports under the conventions. Due to the differing level of detail provided in those documents on the issue of border contamination, this study may lack specific information depending on what has been reported and made publicly available. It should be noted that less information is available for States not party to either convention as these States do not report regularly on their EO contamination.

This research does not intend to independently verify the existence of contamination in border areas but rather to identify States where contamination is reported as known or suspected. The study recognizes border EO contamination if at least one of the following criteria has been fulfilled:

1. sources have specifically indicated or referred to the existence of known border contamination in a particular state or territory;

2. sources have included maps that clearly show confirmed or suspected hazardous areas or recent accidents at the border of the state or territory; or

3. sources have provided specific coordinates or details on the location of confirmed or suspected EO contamination at the border of the state or territory.[18]

Certain factors such as the type and source of evidence used and the reporting date are also considered. Especially in the case of secondary information, considering the context is essential—including factors such as whether communication is verbal or written; whether the affiliation, title or name of the key informant is provided; whether relevant details are provided to track the source; and when the last report was submitted, among other considerations.

In cases where these criteria are only partially fulfilled, border contamination is categorized as 'potential'. This includes, for instance, cases where EO contamination is suspected but not yet reported by an official source, or instances where maps show border contamination without providing sufficient information on the names or locations of contamination. If available information is insufficient for all three criteria, border contamination is not recognized.

This study focuses solely on land borders, excluding maritime contamination. Due to political sensitivities, intra-State borders, administrative lines, and lines of contact in contested territories or regions within or between States are treated separately.[19]

The study does not consider States that have reported completion, with the exception of those that have reported or are likely to have residual contamination. States with new contamination, including by improvised mines,[20] identified after completion are also included—such as those with documented use of victim-activated improvised mines by non-state armed groups (NSAGs).[21]

It should be noted that while interviews with key stakeholders were used to identify challenges and good practices related to mine action in border areas, information from these interviews was not used for the mapping of border contamination.

In line with the selected sources, the analysis focuses on anti-personnel mine and cluster munition remnant contamination in border areas. It is worth noting, however, that some States submitting extension requests also provide information on contamination from explosive remnants of war and this information is also included in the mapping of EO contamination. The study therefore refers to both 'border contamination' and 'border EO contamination', but the term contamination always refers to EO contamination.

Field visits were limited to Peru and Ecuador. Conducting further field visits, as well as in-person interviews and focus groups, could help to strengthen the findings and develop a more granular understanding of different contexts.

# BACKGROUND

Borders are often considered key elements in deterrence or defence and, as such, the use of EO is significant in border areas around the world, posing ongoing risks to individuals and communities on both sides.

To date, there is limited research on EO along borders and the challenges of, and good practices on, addressing contamination in these areas. This study aims to fill this gap and identify areas for further research in order to enhance understanding on the prevailing challenges and strengthen practical guidance for mine action efforts in border areas.

The regions surrounding borders, also known as borderlands, are particularly complex in conflict-affected States and territories, with these areas being more likely to be neglected and marginalized – only drawing attention when violence flares up.[22] In post-conflict contexts, while the internal areas of a country may experience relative stability and settlement, border regions often continue to face tensions and instability. These regions are more likely to remain securitized while other areas return to a state of relative normality. The persistent unrest in borderlands highlights the need for targeted interventions and policies to address the unique challenges and opportunities these areas face.[23]

The official lines delineating States and citizenship do not always coincide with the boundaries that define social, ethnic, linguistic and political groups.[24] Moreover, borderlands involve not only territorial borders but also social, cultural, symbolic and political boundaries.[25] A multitude of factors, including complex cross-border political, economic and social interdependencies, make borderlands unique areas that require special approaches for humanitarian, peace, or development interventions.[26]

Border conditions can vary greatly, from open and unregulated, or not demarcated borders to heavily securitized and monitored borders – all of which present different challenges.[27] Working in securitized border areas presents several practical obstacles, including access restrictions, additional regulations, difficulties in bringing different groups together, travel and customs restrictions, or travel documentation-related issues.[28] Conversely, the absence of regulation and control in border areas can greatly undermine the capacity to anticipate and respond effectively to security and safety incidents.

In both post-conflict and emergency contexts, mine action interventions in border areas often require navigating these complex dynamics. In some cases, border regions are the last areas to be cleared[29] due to the geopolitical complexities and the need for negotiations and coordination between bordering States. This seems to be particularly true where borders are not fully demarcated or where contamination results from prior inter-state conflicts or conflicts with a regional dimension.

A range of different factors – including ongoing disputes, the presence of NSAGs, complex regional dynamics, the existence of conflict between local bordering groups, and difficult access or remoteness of the site – can add to the complications of mine action interventions in border areas.

EO can also be laid at border regions for other reasons other than conflict. It has been used, for instance, to prevent illegal activities such as smuggling or irregular migration.[30] This can generate additional dimensions to the contamination, compounding an existing reluctance to deal with border contamination if it appears to be an aspect of state security. At the same time, the presence of EO contamination in border regions can hinder States' border management activities to secure their border areas.

## Mine action in border areas and international humanitarian law

The use of landmines and other EO is regulated, and in some cases prohibited, under international law, and their clearance is mandated under robust international legal frameworks. The clearance of EO, including in border areas, is provided for by the following international legal instruments: the APMBC;[31] the CCM;[32] and the Convention on Certain Conventional Weapons (CCW),[33] namely Amended Protocol II[34] and V.[35] Under the APMBC and the CCM State Parties undertake never under any circumstances to use anti-personnel mines and cluster munitions, respectively.[36]

The APMBC and the CCM impose obligations on States to clear mines and cluster munition remnants, respectively, from the areas within their jurisdiction or control. The Amended Protocol II and Protocol V of the CCW impose clearance obligations on mines, booby traps and other devices (Amended Protocol II) as well as ERW (Protocol V)[37] for countries who control the areas where EO is located. While border contamination may pose unique challenges, State Parties must fulfill their obligations to clear and destroy, or ensure the clearance and destruction of, mines and cluster munition remnants, irrespective of the contamination's location. Thus, delimitation and demarcation of boundaries, access to areas under jurisdiction, and clarity on which state has jurisdiction and control over EO-contaminated areas are key considerations in the implementation of these conventions along borders.

Cooperation and assistance are cornerstones of the APMBC, the CCM, and the CCW, and an essential element to support States Parties in their efforts to fully implement the conventions' provisions. For various reasons, border areas are often either excluded from the work plans that States Parties undertake to fulfil their respective convention obligations[38] or left to be cleared last.[39] This may be due to security concerns, lack of (jurisdiction) control over the territory or unresolved border disputes, which often prevail long after active hostilities cease.

Specific actions supporting clearance commitments in border areas are included in both the Oslo Action Plan[40] and the Lausanne Action Plan, adopted by the States Parties of the APMBC and CCM, respectively.[41] The Oslo Action Plan (Action 47) notes the importance of exploring opportunities for cooperation, noting that these may include 'making mutually supporting clearance commitments in border areas'.[42] Similarly, the Lausanne Action Plan (Action 39) mentions 'mutually supporting clearance commitments in border areas' in the context of 'cooperation, including international, regional, North-South, South-South, bilateral and trilateral cooperation in order to develop capacity building and national expertise'.[43] However, neither has yet to include actions related to victim assistance (VA) or explosive ordnance risk education (EORE) in border areas or across borders.

Previously, the Cartagena Action Plan, adopted by APMBC States Parties for the 2010-2014 period, included the provision of access to all mined border areas where access may be difficult or contested, without prejudice to potential border delineation, to ensure that clearance could proceed as soon as possible, making use of the good offices of Presidents of Meetings of the States Parties or Review Conferences or other third parties as appropriate (Action 18).

The clearance of border areas and the cooperation of States in achieving such clearance can also help to ensure better compliance with wider international legal frameworks. EO contamination can have a significant impact on the enjoyment of fundamental human rights in border regions. These include the right to life, right to health, right to freedom of movement, right to an adequate standard of living, rights of persons with disabilities, rights of children, and rights of women, among others.

Coordination or cooperation on mine action in borderlands can positively impact and protect individuals living in border areas. For instance, the release of land in border areas can enable children and youth to cross a border to attend school, protecting the right to education, or allow agricultural workers to access grazing land, promoting the right to work and an adequate standard of living.

The release of land in border areas can serve to advance state security considerations, while helping to build confidence between border countries or territories, reducing the potential for future conflict and overall safety perceptions.

The broader implications of EO contamination and progress in mine action efforts along borders is explored further in the last section.

An EORE session is held for children in Badakhshan Province, 2022. ©FSD


A panel from Fostering Partnerships: Global Conference on Assistance to Victims of Anti-Personnel Mines and Other Explosive remnants of War, and Disability Rights, Amman, Jorden 10-12 September 2019. ©Convention ISU

# INITIAL MAPPING OF EXPLOSIVE ORDNANCE CONTAMINATION IN BORDER AREAS AND ITS ASSOCIATED CHALLENGES

Border EO contamination is widely recognized as a significant obstacle to fulfilling clearance obligations, as border areas tend to be less accessible, are often highly securitized, and can also be politically sensitive locations for States, especially in conflict-affected settings.[44] While border contamination is widely recognized as a significant issue, there remains a need to understand its full extent.

This initial mapping represents the first systematic attempt to analyse the available information and define the scope of border contamination more precisely. Although there is general agreement on the specific difficulties associated with mine action interventions in border areas, this issue is often overlooked in extension requests to relevant Conventions, work plans, national strategies, and official statements of affected States and territories. The omission of this issue, coupled with the lack of a targeted approach to address border contamination, may hinder effective strategic planning, resource mobilization and assessment of whether States and territories are on track to meet their deadlines.

Given the sensitivity of the issue, contamination was categorized as potential if the available information was deemed insufficient, based on the criteria outlined in the methodology section.

In some cases, official sources such as extension requests did not provide enough information to locate EO contamination in border areas. As detailed in the methodology section, this study sought specific references to border areas, detailed maps, or coordinates indicating hazardous areas along borders. Notably, out of the 27 States Parties considered to have border contamination based on their extension requests or transparency reports, only 15 provided specific references through Convention documentation, while the rest included maps or coordinates without explicitly addressing border contamination.

In other instances, due to the lack of direct sources—particularly for States and territories not party to the Conventions and not actively engaged in multilateral processes—the Monitor had to employ vague formulations, preventing the study from confirming the existence of border contamination despite general acceptance within public opinion. This applies to countries like North Korea, Iran, and Russia.

This study reviewed 86 extension requests of States Parties to the APMBC and ten extension requests of States Parties to the CCM and complemented this information with an analysis of the Landmine and Cluster Munition Monitor. The mapping therefore excludes media reports or other open sources, and the count of states affected by border contamination should be considered a preliminary effort that could be strengthened with further research and information exchange.

Overall, the findings from this initial mapping indicate that border contamination remains a significant issue, with 37 States and territories identified as having EO contamination in border areas and an additional 18 with potential border contamination. These figures are conservative, based on selected sources, and the numbers could be higher if the research scope were expanded.

A full table on these figures, including information regarding the States/territories included, the sources of information, the criteria for which recognition of border contamination was decided, and basic information relating to the contamination identified, can be found on page 12.

## Reported challenges in addressing border contamination

The analysis of extension requests showed that States with EO contamination in border areas indicated the following risk factors and circumstances impeding the fulfilment of clearance obligations:

- limited access and/or control over EO-contaminated areas;[45]
- unresolved disputes in border areas;[46]
- access limitations caused by insufficient or inadequate infrastructure;[47]
- challenging meteorological conditions or difficult terrain;[48]
- lack of boundary delimitation and/or demarcation, which may give rise to difficulties in accessing and determining the responsibility of the States for the areas to be cleared;[49] and
- instability along borders,[50] security concerns and access difficulties[51] including due to potential crossing by NSAGs[52], that impede demining operations.

These findings demonstrate that the complexities behind the release of land in border areas are strongly linked to insecurity, difficult access, instability and past or ongoing political and territorial disputes. Conflicts and disputed borders can reduce state control of, or access to, contaminated land.

These considerations can also disincentivize land release efforts and further deter non-state parties from joining the conventions. In some cases, these States may view EO contamination as a means of preventing escalation or as an effective way to ensure the security of their borders.[53] Meanwhile, unstable borders may generate unsafe conditions for mine action operations.

Finally, the absence of delimitation and/or demarcation of borders between two or more States can create difficulties in determining responsibility and legal access for land release efforts. Minefields on non-demarcated or disputed borders, as well as the lack of agreement between neighbouring countries, pose significant operational and liability challenges. In this regard, the analysis showed that certain countries also acknowledge 'shared ownership' of certain contaminated areas. For instance, Zimbabwe's 2013 extension request noted shared ownership for the clearance of a minefield stretching across 44 km, from the Sheba Forest to Leacon Hill, in an area straddling Mozambique and Zimbabwe.[54] Ongoing demarcation issues along this border also mean that, even though Mozambique has declared completion on their APMBC obligations, Mozambicans can still be exposed to EO contamination should they cross the border.[55]

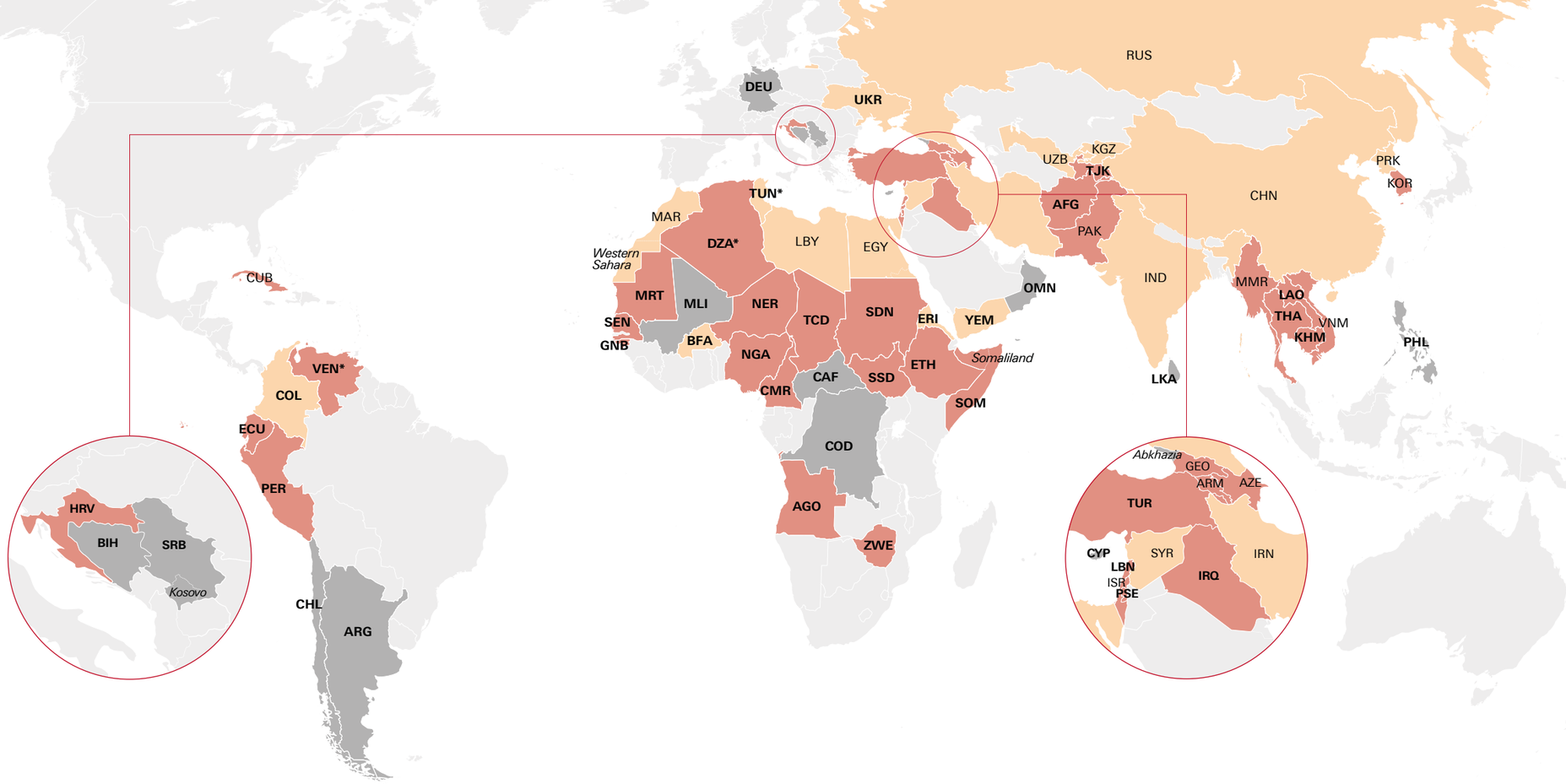
FIGURE 1.

# 2024 MAPPING OF BORDER CONTAMINATION

**Key**

- Border contamination
- Potential border contamination
- No border contamination

Note: In alignment with the Landmine and Cluster Munition Monitor, **States Parties** to the APMBC and/or CCM are in bold, non-signatories are in plain text, and *territories* are written in full and italicised. All States are written in ISO country codes.




*Algeria, Tunisia, and Venezuela have declared themselves free of antipersonnel mines but are known or suspected to have explosive ordnance contamination in their border areas.

Further key information on the border contamination status of States and territories, as well as information on the sources of information, can be found in Table 1. Analysis of border contamination on page 12.

*Disclaimer: The borderlines drawn on this map delineate the separation between States, territories, and other areas included in this report. This map is for illustrative purposes and does not imply the expression of any opinion on the part of the GICHD concerning the legal status of any country or territory, or concerning the delimitation of frontiers or boundaries.*

FIGURE 2.

# KEY FIGURES ON BORDER CONTAMINATION

Out of **69** **States/territories** with EO contamination →

**37** **States/territories** have border contamination

**18** **States/territories** have potential border contamination

**14** **States/territories** have no border contamination

| | Parties to the APMBC only | Parties to both | Parties to the CCM only | Parties to neither convention |
|---|---|---|---|---|
| BORDER CONTAMINATION | **10** States | **15** States | **2** States | **9** States / **1** Territory |
| POTENTIAL BORDER CONTAMINATION | **3** States | **3** States | | **11** States / **1** Territory |
| NO BORDER CONTAMINATION | **6** States | **6** States | | **2** Territories |

**41** out of **86**
APMBC extension requests reviewed contain information demonstrating **evidence of border contamination**

**5** out of **10**
CCM extension requests reviewed contain information demonstrating **evidence of border contamination**

**33** out of **69**
Landmine and Cluster Munition Monitor country profiles reviewed contain information demonstrating **evidence of border contamination**

TABLE 1.

# ANALYSIS OF BORDER CONTAMINATION

| STATES PARTIES | INFORMATION | CRITERIA | PRIMARY SOURCE | LINK |
|---|---|---|---|---|
| **ALGERIA** | Contamination noted on the border with Morocco (p.4-11). | 1 | APMBC | Transparency report, 2024 |
| **AFGHANISTAN** | Border contamination illustrated through mapping on borders with Iran, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan (APMBC Panel presentation, p.2). | 2 | APMBC | Convention presentation, 2020 |
| | Border contamination illustrated through mapping on border with Pakistan (CCM Extension request, p.10). Bordering province of Nangahar noted as contaminated, also shown through mapping (annex D, p.20). | 2,3 | CCM | Extension request, 2021 |
| **ANGOLA** | Border contamination demonstrated through mapping and specific details on the location of contamination at border with Democratic Republic of the Congo, Namibia, and Zambia (multiple references). | 2,3 | APMBC | Revised extension request, 2017 |
| **ARGENTINA** | - | - | - | |
| **BOSNIA AND HERZEGOVINA** | - | - | - | |
| **BURKINA FASO** | New EO contamination, particularly in the Liptako-Gourma region which borders Burkina Faso, Mali, and Niger. Contamination by improvised mines and/or victim-activated improvised explosive devices (IEDs). In 2021, UNMAS had established a regional mine action program covering Burkina Faso and Niger, in response to cross-border IED contamination in Liptako-Gourma. While the information about the areas is not sufficiently specific, sources (UNOCHA, ACLED, UNMAS) confirm the presence of contamination in border areas. | - | The Monitor | Country profile, 2023 |
| **CAMBODIA** | Contamination noted on the border with Thailand (p.17,42). | 1 | APMBC | Extension request, 2019 |
| **CAMEROON** | Contamination noted on the border with Nigeria. Potential contamination by IEDs in the northern borders shared with both Nigeria and Chad. | 1 | The Monitor | Country profile, 2022 |
| **CENTRAL AFRICAN REPUBLIC** | - | - | - | |
| **CHAD** | Contamination noted on the border with Libya (p.34,35). Contamination also illustrated through mapping at the borders with Sudan and the Central African Republic (annex 4a, p.55). | 1,2 | APMBC | Extension request 2024 |
| | Contamination noted on the border with Libya, Sudan, and the Central African Republic. | 1 | The Monitor | Country profile, 2022 |
| **CHILE** | - | - | - | |
| **COLOMBIA** | EO accidents have been reported in the border areas of Chocó [Panama border](p.103,107), Arauca [Venezuela border] (p.103), and Nariño and Putumayo [Ecuador border] (multiple references). | - | APMBC | Extension request, 2020 |
| **CROATIA** | Border contamination illustrated through mapping on border with Bosnia and Herzegovina (Annex, p.47-48). | 2 | APMBC | Extension request, 2018 |
| | Contamination noted on the border with Bosnia and Herzegovina, Hungary, and Serbia. | 1 | The Monitor | Country profile, 2022 |
| **CYPRUS** | - | - | - | |
| **DEMOCRATIC REPUBLIC OF THE CONGO** | - | - | - | |
| **ECUADOR** | Contamination noted on the border with Peru. | 1 | The Monitor | Country profile, 2022 |
| **ERITREA** | Land release on the border with Ethiopia not completed (p.3,8). This is, however, not mentioned in the latest extension request in 2023. | - | APMBC | Extension request, 2011 |
| | EO contamination noted as an ongoing threat in border areas in 2019 by UNICEF. | - | The Monitor | Country profile, 2022 |
| **ETHIOPIA** | Contamination noted on the border with Eritrea (p.8, 14). | 1 | APMBC | Extension request, 2019 |
| **GERMANY** | - | - | - | |
| **GUINEA-BISSAU** | Border contamination demonstrated through specific locations and coordinates at the border with Senegal, including the localities of Cuntima and Djequemondo (p.28). | 3 | APMBC | Extension request, 2024 |
| **IRAQ** | Suspected contamination noted on the border with Iran (p.23,70). Contamination at the border with Iran also illustrated through mapping (p.23). | 1,2 | APMBC | Extension request, 2017 |
| | Border contamination illustrated through mapping on borders with Iran and Kuwait (p.11). | 2 | CCM | Extension request, 2022 |
| | Contamination noted on the border with Iran and Saudi Arabia. | 1 | The Monitor | Country profile, 2022 |
| **LAO PEOPLE'S DEMOCRATIC REPUBLIC** | Border contamination illustrated through mapping on the border with Vietnam (p.10). | 2 | CCM | Extension request, 2024 |
| | Contamination is noted in some border regions but unspecified. | - | The Monitor | Country profile, 2014 |
| **LEBANON** | Contamination noted on the borders with Syria and Israel (p.6,24). Border contamination also illustrated through mapping of both of these borders (p.6). | 1,2 | CCM | Extension request, 2019 |
| | Contamination noted on the borders with Syria and Israel. | 1 | The Monitor | Country profile, 2022 |

**Key**

- Border contamination
- Potential border contamination
- No border contamination

Territories have been ***italicised.***

## CRITERIA

**1:** Sources have specifically indicated or referred to the existence of known border contamination in a particular State or territory.

**2:** Sources have included maps which clearly show known confirmed or suspected hazardous areas or recent accidents at the border of the State or territory.

**3:** Sources provide specific coordinates or details on the location of known EO contamination at the border of the State or territory.

## PRIMARY SOURCE

**APMBC:** Refers to documents submitted to the Anti-Personnel Mine Ban Convention, including extension requests as well as other documents such as observations by the Committee on Article 5 implementation and official interventions.

**CCM:** Refers to documents submitted to the Convention on Cluster Munitions, including extension requests.

**The Monitor:** Refers to country profiles and annual reports from the Landmine and Cluster Munition Monitor.

TABLE 1.

# ANALYSIS OF BORDER CONTAMINATION (continued)

| STATES PARTIES | INFORMATION | CRITERIA | PRIMARY SOURCE | LINK |
|---|---|---|---|---|
| **MALI** | - | - | - | |
| **MAURITANIA** | Border contamination illustrated through mapping on border with Western Sahara (p.5,6). | 2 | APMBC | Extension request, 2021 |
| | Contamination noted on the borders with Mali (p.2) and Western Sahara (p.4). Mapping illustrates contamination in the region of Tires Zemmour on the border with Western Sahara (p.5). | 1,2 | CCM | Extension request, 2023 |
| | Contamination noted on the border with Western Sahara. | 1 | The Monitor | Country Profile, 2022 |
| **NIGER** | Contamination noted on the border with Libya and illustrated through mapping (p.7). | 1,2 | APMBC | Extension request, 2020 |
| **NIGERIA** | Border contamination demonstrated through specific details on the location of contamination in Borno, Adamawa, and Ngala, close to borders with Chad, Niger, and Cameroon, respectively (p.4,13,25). Mapping also illustrates EORE interventions undertaken in response to border contamination incidents along Cameroon, Chad, and Niger (Annex, p.36). | 2,3 | APMBC | Extension request, 2021 |
| **OMAN** | - | - | - | |
| **PALESTINE** | Contamination noted on the border with Jordan (p.1,2). | 1 | APMBC | Preliminary Observations, 2024 |
| | Contamination noted on the border with Jordan. | 1 | The Monitor | Country profile, 2022 |
| **PERU** | Contamination noted on the border with Ecuador (multiple references). | 1 | APMBC | Extension request, 2024 |
| | Contamination noted on the border with Ecuador. | 1 | The Monitor | Country profile, 2022 |
| **PHILIPPINES** | - | - | - | |
| **SENEGAL** | Contamination noted on borders with The Gambia and Guinea-Bissau. | 1 | The Monitor | Country profile, 2022 |
| **SERBIA** | - | - | - | |
| **SOMALIA** | Contamination noted on the border with Ethiopia (p.7). | 1 | APMBC | Extension request, 2021 |
| | Contamination noted on the border with Ethiopia. | 1 | The Monitor | Country profile, 2022 |
| **SOUTH SUDAN** | Border contamination illustrated through mapping on borders with Ethiopia, Kenya, Sudan, and Uganda (p.25). | 2 | APMBC | Extension request, 2020 |
| **SRI LANKA** | - | - | - | |
| **SUDAN** | Border contamination illustrated through mapping on borders with Chad, Ethiopia, and South Sudan (annex, p.81). | 2 | APMBC | Extension request, 2022 |
| | Contamination noted on the border with Chad and South Sudan. | 1 | The Monitor | Country profile, 2022 |
| **TAJIKISTAN** | Contamination noted on the border with Afghanistan and Uzbekistan (multiple references). Contamination is also illustrated through mapping on the border with Afghanistan and Uzbekistan (p.10). | 1,2 | APMBC | Extension request, 2019 |
| | Contamination noted on the border with Afghanistan and Uzbekistan. | 1 | The Monitor | Country profile, 2022 |
| **THAILAND** | Contamination noted on the border with Cambodia (multiple references). | 1 | APMBC | Extension request, 2022 |
| | Contamination noted on the borders with Cambodia, Lao PDR, and Myanmar. | 1 | The Monitor | Country profile, 2022 |
| **TUNISIA** | New use of IEDS, including improvised mines, by NSAGs in the governates of Qsrein Wilaya/Kasserine and Gafsa close to the border with Algeria. | - | The Monitor | Country profile, 2022 |
| **TÜRKIYE** | Contamination noted on the borders with Armenia, Iran, Iraq, and Syria (multiple references). | 1 | APMBC | Extension request, 2021 |
| | Contamination noted on the borders with Armenia, Iran, Iraq, Syria, and Azerbaijan. | 1 | The Monitor | Country profile, 2022 |
| **UKRAINE** | All territories where active hostilities have been conducted or are ongoing, or which are under temporary occupation, are considered potentially contaminated. | - | APMBC | Speech at the Meeting of States Parties, 2023 |
| | Ukraine is severely contaminated with EO. Given the continuation of intensive hostilities, the MoD lacks complete information on the location of contamination. | - | The Monitor | Country profile, 2022 |
| **VENEZUELA, BOLIVIAN REPUBLIC OF** | Venezuelan officials have reported the use of antipersonnel landmines by NSAGs from Colombia, including reports of civilian casualties in the state of Apure on the border with Colombia. | 1 | The Monitor | Country profile, 2022 |
| **YEMEN** | Border contamination illustrated through mapping on the border with Saudi Arabia, however there is a lack of clarity on the location of the contaminated areas (p.30). No specific coordinates are available but the bordering districts of Al-Jawf and Sa'ada provinces are considered contaminated. | - | APMBC | Extension request, 2019 |
| | Heavy contamination is noted in the northern governates, Al-Jawf and Saada (also spelt Sa'ada), bordering Saudi Arabia. | - | The Monitor | Country profile, 2022 |
| **ZIMBABWE** | Contamination noted on the border with Mozambique (p.29) and through mapping (multiple maps). | 1,2 | APMBC | Extension request, 2017 |
| | Contamination noted on the border with Mozambique. | 1 | The Monitor | Country profile, 2022 |

**Key**

- Border contamination
- Potential border contamination
- No border contamination

Territories have been ***italicised.***

## CRITERIA

**1:** Sources have specifically indicated or referred to the existence of known border contamination in a particular State or territory.

**2:** Sources have included maps which clearly show known confirmed or suspected hazardous areas or recent accidents at the border of the State or territory.

**3:** Sources provide specific coordinates or details on the location of known EO contamination at the border of the State or territory.

## PRIMARY SOURCE

**APMBC:** Refers to documents submitted to the Anti-Personnel Mine Ban Convention, including extension requests as well as other documents such as observations by the Committee on Article 5 implementation and official interventions.

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**The Monitor:** Refers to country profiles and annual reports from the Landmine and Cluster Munition Monitor.

TABLE 1.

# ANALYSIS OF BORDER CONTAMINATION (continued)

| NON-STATES PARTIES / TERRITORIES | INFORMATION | CRITERIA | PRIMARY SOURCE | LINK |
|---|---|---|---|---|
| ***ABKHAZIA*** | - | - | - | |
| **ARMENIA** | Contamination noted on the border with Azerbaijan. | 1 | The Monitor | Country profile, 2022 |
| **AZERBAIJAN** | Contamination noted on the border with Armenia. | 1 | The Monitor | Country profile, 2022 |
| **CHINA** | There is suspected EO contamination along the border with Vietnam in the Yunnan province. However, differing accounts have variously noted completion and resumption of land release, as well as reports of injuries, leading to uncertainty on the continued presence of contamination. | - | The Monitor | Country profile, 2022 |
| **CUBA** | Minefields maintained by Cuba around the United States' naval base at Guantánamo. | 1 | The Monitor | Country profile, 2022 |
| **DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA** | There is potential contamination laid along the Demilitarized Zone between the Democratic People's Republic of Korea (also known as North Korea) and the Republic of Korea (also known as South Korea) as well as along parts of the border with China. Casualties of landmines have been reported in Ryanggang province in China. | - | The Monitor | Country profile, 2022 |
| **EGYPT** | Contamination noted around the cities of Marsa Matrouh and Sallum, near the Libyan border. More details on the location of contamination is unavailable. | - | The Monitor | Country profile, 2022 |
| **GEORGIA** | Contamination noted on the border with Azerbaijan. | 1 | The Monitor | Country profile, 2022 |
| **INDIA** | There is potential border contamination with Pakistan, laid by the Indian Army in 2001-2002. Media accounts in 2016 and 2017 noted the clearance of mines in border districts in the Indian-administered region of Jammu and Kashmir. No information is available on the results of these activities. | - | The Monitor | Country profile, 2022 |
| **IRAN (ISLAMIC REPUBLIC OF)** | There is potential contamination on Iran's borders and the government has noted that it sees a military utility to anti-personnel landmines, especially on its borders. | - | The Monitor | Country profile, 2022 |
| **ISRAEL** | There is reported contamination on the border with Syria, dating back to the use of mines by the Israel Defense Force (IDF) in 2011. | 1 | The Monitor | Country profile, 2022 |
| ***KOSOVO*** | - | - | - | |
| **KYRGYZSTAN** | There is potential contamination on the borders with Tajikistan and Uzbekistan. However, there have been conflicting reports on the continued presence of contamination, with varied sources noting clearance of border contamination by both Uzbekistan and Kyrgyzstan, the shifting of mines due to environmental conditions, and the completion of clearance (noted before reports on clearance operations). | - | The Monitor | Country profile, 2022 |
| **LIBYA** | There is potential contamination with Egypt, Chad (resulting from prior conflicts in 1977 and 1980-1987, respectively) and Tunisia (laid in the period 1979-2011, during the years of Muammar Gaddafi's leadership). However, there is no available evidence with clearer details on this contamination. | - | The Monitor | Country profile, 2022 |
| **MOROCCO** | There is potential contamination on the borders of Morocco, but clear information on the location of this suspected contamination is not available. | - | The Monitor | Annual report, 2023 |
| **MYANMAR** | Contamination noted on the borders with Bangladesh, China, India, and Thailand. | 1 | The Monitor | Country profile, 2022 |
| **PAKISTAN** | Permanent minefields have been maintained by Pakistan along certain portions of the Line of Control where the separation between the Indian- and Pakistani- administration of Kashmir lies. There is also evidence of contamination along the border with Afghanistan, both from the past Soviet-occupation of Afghanistan and from more recent and regional conflicts. | 1 | The Monitor | Country profile, 2022 |
| **REPUBLIC OF KOREA** | There is contamination laid along the Demilitarized Zone (DMZ) on the border with the Democratic People's Republic of Korea (also known as North Korea), as well as the Civilian Control Zone, directly adjoining the DMZ. | 1 | The Monitor | Country profile, 2022 |
| **RUSSIAN FEDERATION** | There is potential contamination on the border with Georgia, however clear information on the location of this contamination is not available. | - | The Monitor | Country profile, 2022 |
| ***SOMALILAND*** | Contamination is noted on the border with Ethiopia. | 1 | The Monitor | Country profile, 2022 |
| **SYRIAN ARAB REPUBLIC** | There is potential contamination in governates bordering Israel and Jordan, as well as landmine contamination on the borders with Lebanon and Türkiye, reportedly laid by Syria for security purposes. | - | The Monitor | Country profile, 2022 |
| **UZBEKISTAN** | There is potential contamination on the borders with Afghanistan, Kyrgyzstan, and Tajikistan, reportedly laid by Uzbek forces at different times. However, clarity is on location of this contamination is not available. | - | The Monitor | Country profile, 2022 |
| **VIETNAM** | Contamination is noted on the border with China and Cambodia. | 1 | The Monitor | Country profile, 2022 |
| ***WESTERN SAHARA*** | Heavy contamination is noted along the Berm - a 2,700km long wall separating the Moroccan- and Polisario-controlled territories in the Western Sahara which passes the borders between Western Sahara and Morocco to the north, and Mauritania to the south. | - | The Monitor | Country profile, 2022 |

**Key**

Border contamination

Potential border contamination

No border contamination

Territories have been ***italicised.***

## CRITERIA

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## PRIMARY SOURCE

**APMBC:** Refers to documents submitted to the Anti-Personnel Mine Ban Convention, including extension requests as well as other documents such as observations by the Committee on Article 5 implementation and official interventions.

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**The Monitor:** Refers to country profiles and annual reports from the Landmine and Cluster Munition Monitor.

National operational manager during quality control at a minefield, Darwaz-e-Bala district Bagh-i Tal village. ©FSD

# 1. COORDINATION AND COOPERATION IN ADDRESSING BORDER CONTAMINATION

There is value in exploring the role of joint efforts in mine action, particularly across shared borders. These initiatives can enhance capabilities, streamline resource allocation, facilitate information sharing and enable coordinated operations. Collaboration in cross-border mine action interventions not only mitigates risks for border communities but also has the potential to foster trust and confidence building among bordering States.

The experiences of international operators and national authorities can shed light on the diverse challenges and opportunities encountered in border interventions, from overcoming logistical and funding obstacles to establishing coordination and community engagement – offering insights into practical considerations of mine action programmes in border areas. These experiences reveal how effective coordination mechanisms and collaboration are established at different levels, how logistical challenges are overcome and how funding dynamics influence operations.

This section presents different ways in which coordination and cooperation by stakeholders on both sides of a border can significantly support mine action in border areas.

## Coordination mechanisms for cross-border collaboration

Due to the challenges mentioned above, land release operations in border areas often require formal coordination between relevant authorities on both sides of the border. These efforts can be undertaken through a range of different mechanisms – including establishing official partnerships, joint programmes or joint committees; relying on informal coordination; and involving third parties such as operators or UN agencies, among others – to facilitate effective operations. The level of coordination needed for such mechanisms can vary, from simple information sharing to more interconnected programmes.

One example of formal coordination has been the establishment of joint border commissions for land release. This has provided States with a platform for information sharing, regular communication, and coordination, while allowing them to keep some operations separate. Joint border commissions have been found to foster cooperation and streamline resources for efficient demining operations in border areas.

CASE STUDY

**Coordination across the Thai-Cambodian border**

The Thai-Cambodian border is highly contaminated and still not fully demarcated.[56] In 2000, Thailand and Cambodia signed the Memorandum of Understanding on the Survey and Demarcation of Land Boundary and established a Joint Boundary Commission (JBC) in 2003 responsible for surveying and demarcating the entire stretch of the common land boundary.[57]

Outstanding disagreements between the two countries were addressed using the framework of the JBC.[58] Regarding the land border, the JBC's terms of reference identified five procedural steps, including locating existing border markers planted in the early 20th century.[59] After locating 48 out of 73 markers, technical operations ceased and bilateral talks slowed in 2008 due to increased tensions.[60] Some agreement was reached in 2009 regarding the production of maps, boundary pillar surveys, and the English translation of survey reports, but the JBC did not meet again for two years as the minutes from the previous meeting were still pending approval.

Recent discussions have considered reconvening the JBC to address pending issues, including the upgrading of border-crossing checkpoints.[61] The lack of full demarcation more than two decades after the establishment of the JBC in 2003 highlights that historical disputes, trust issues and political tensions make it challenging for the JBC to achieve lasting and significant progress. Nevertheless, official statements in 2023 and 2024 signal positive developments in the bilateral discussions at the highest political levels.[62] Some concrete steps have also been taken towards more active collaboration,[63] including ahead of the resolution of border demarcation disputes.[64]

In some cases, coordination mechanisms may simplify operations by facilitating bureaucratic processes such as obtaining permits for personnel to access restricted areas or cross borders, undergoing customs checks for demining equipment, agreeing on the medical evacuation of staff, liaising with communities residing along borders, synchronizing operations and obtaining, as well as applying, information through non-technical survey and technical survey on the other side of the border.

For instance, a memorandum of understanding (MoU) between Afghanistan and Tajikistan supported the clearance of contaminated, difficult-to-access areas along the shared border.[65] The agreements reached in the MoU allowed the Fondation Suisse de Déminage (FSD) to undertake demining as well as risk education activities in the north-eastern province of Badakhshan, located between the two countries.[66] FSD entered this province from the Tajikistan side, which is more easily accessible and provided referrals to medical facilities on both sides of the border for Afghan landmine victims. Since the takeover of the Taliban in 2021, cross-border activities have been halted, although the FSD continues to conduct activities on both sides, with permanent bases staffed by locals.[67]

A deminer works in the Andarabi Village, Khan Abad district of Kunduz Province, Afghanistan, 14 July 2024. ©FSD

CASE STUDY

**Cross-border mine action coordination through a peace agreement**

In the case of Peru and Ecuador, joint operations across border areas were established through the Brasilia Presidential Act of 1998 – the formal peace agreement settling the border dispute between Peru and Ecuador. Through this agreement, both countries agreed to initiate demining efforts along their shared border.[68]

In August 2002, Peru and Ecuador signed an MoU that provided a framework for information exchange, coordinated evacuation procedures, and joint EORE campaigns.[69] As a result of several meetings held by their respective authorities throughout 2002 and 2003, the two countries agreed to extend the scope of efforts to coordinate demining activities.

Between 2007 and 2008, Peru and Ecuador reached agreements concerning the medical evacuation of deminers, the exchange of information and equipment, and the establishment of a joint training and information centre for demining.[70] The Ecuadorian Mine Clearance Centre (CENDESMI) and the Executive Council of the Peruvian Centre for Mine Action (CONTRAMINAS) held their first meeting in May 2008, and agreed to hold subsequent meetings biannually.[71] It is worth noting the interministerial composition of both, chaired by the respective Ministry of Foreign Affairs and integrated by several other ministries.[72] This structure allows for enhanced coordination and a more comprehensive approach to mine action, covering all key aspects from land release to victim assistance and risk education.

The institutionalization of biannual meetings between national authorities from both countries made it possible to coordinate relevant technical and political aspects, including information exchange, binational campaigns and the coordination of joint participation in multilateral discussions.[73]


Representatives of ARMAC at the Third Global Conference on Victim Assistance for the Mine Ban Convention. 17-19 October 2023 ©Convention ISU

In other contexts, informal coordination mechanisms were preferred to advance mine action efforts in border areas, as was the case for Serbia and Croatia regarding the Batrovci-Bajakovo area. Up until the border was cleared in 2009, national mine action authorities from Serbia and Croatia worked together to address various issues arising from the absence of a demarcated border, complicated risk management, and legal and administrative constraints, as well as to garner support for the release of land from communities of both sides.[74, 75] The cooperation was significantly facilitated by strong personal relationships between the director and staff of the respective mine action centres; regular meetings and communications also helped to address challenges promptly and effectively, avoiding bureaucratic delays.[76]

While both countries performed surveys and clearance independently within their territories, they coordinated closely to ensure the use of consistent methodology and terminology on both sides.[77] The Serbian and Croatian authorities also engaged with local communities to explain the benefits of land release, using harmonized terminology in their communication with communities. This helped to ensure that the public received consistent information – a key element in gaining local support.[78] The two sides also shared contamination maps not containing any sensitive information.[79]

Finally, regional organizations also play an important role in promoting dialogue, coordination and cooperation across borders.[80] Building on a deep understanding of the local context, they can help to not only build trust and confidence, but also pool resources from Member States and international donors and advocate for mine action interventions at higher levels.

Two regional organizations have played a prominent role in fostering cross-border collaboration: the ASEAN Regional Mine Action Center (ARMAC) – in support of Cambodia and Thailand – and the Organization of American States (OAS) regarding Ecuador and Peru.

ARMAC organizes workshops and meetings that bring together representatives from across the ASEAN region to discuss regional partnerships, cooperation and resource mobilization in order to support the sharing of information, the implementation of joint operations and capacity building.

Through its Comprehensive Action against Antipersonnel Mines (OAS AICMA) programme, the OAS supported Ecuador and Peru's mine action programmes from 2001 until 2014. Concretely, the OAS has supported joint demining operations conducted by the armed forces of both countries and facilitated financial support from various donors. This resource mobilization helped to fund operations and supported the procurement of demining equipment and the training of personnel.[81]

Deminer during minefield clearance in Darwaz-e-bala district, Afghanistan, 16 June 2023. ©FSD

# 2. CROSS-BORDER MINE ACTION INTERVENTIONS

## Joint clearance operations

Clearance is one of the mine action pillars and States that have ratified or acceded the Conventions have the obligation to comply with their specific provisions.[82]

Joint clearance operations are considered effective in ensuring coordinated approaches to address cross-border contamination and the involvement of states impacted by EO contamination, including the sharing of relevant information (such as maps) and, in some cases, resources. Moreover, joint clearance operations bolster the national ownership of border clearance, allowing both states to play an active role in removing EO contamination from border regions.

The process of joint operations can also help to support reconciliation efforts between formerly opposing sides of a conflict. Joint activities require a level of trust and can help to foster collaboration between national agencies, and lead to a more concerted approach to supporting communities living in border areas.

Deminers in a joint clearance operation between Peru and Ecuador. ©CONTRAMINAS

CASE STUDY

### Joint Peru-Ecuador clearance operations

The first joint demining activities by the Peruvian and Ecuadorian armies were carried out in 2002 and 2003, in an area of approximately 20,278 $m^2$ in the departments of Tumbes and Piura.[83] In 2006, joint humanitarian demining activities were also carried out to address contamination on the common land border, near the Chira River.[84]

This work was undertaken in response to information provided by Ecuador regarding the existence of nine anti-personnel mines that its army had planted in its territory; these mines were subsequently reported as lost, and it was suspected that, due to the flooding of the Chira River, they may have moved into Peruvian territory.[85]

Ecuador and Peru cleared Ecuador's El Oro province and the departments of Tumbes and Piura in Peru in 2004.[86] In the First Review Conference of the APMBC in 2004, Peru announced a joint demining operation with Ecuador in Cordillera del Cóndor, a mountain range that borders Ecuador and Peru.[87] In December 2005, the European Union (EU) provided for the joint clearance of Cordillera del Cóndor and for EORE efforts, with Peruvian and Ecuadorian governments responsible for contributing with personnel and logistics support.[88]

In March 2006, Peru and Ecuador began a European Commission-funded joint mine action project in the Cóndor region, supported by OAS AICMA. This project included demining, EORE and victim assistance activities.[89] Demining operations in Tiwinza were successful due to precise records documenting the location of mines placements, allowing for efficient clearance and underscoring the importance of accurate record-keeping in demining operations.[90] As one of the most critical areas, and the last Ecuadorian base, during the conflict, Tiwinza is a symbolically important area. Tiwinza was never reached by the Peruvian army, and was ceded to Peru in the peace agreement. Operations in the area lasted four years given the absence of roads. A key ingredient for success was that some of the personnel that laid the mines also participated in clearance operations.[91]

To further support these efforts, Ecuador and Peru adopted a Binational Manual for Humanitarian Demining (Manual Binacional de Desminado Humanitario) in April 2013 to unify the demining procedures of both states in accordance with the International Mine Action Standards (IMAS). The manual was updated in 2015 and is still being used.[92]

CASE STUDY

**Joint Thailand-Cambodia clearance operations**

The General Border Committee (GBC) was established in 2006 between the governments of Thailand and Cambodia for cooperation on security issues along the shared border.[93] Through this committee, the Thailand Mine Action Centre (TMAC) and the Cambodian Mine Action Centre (CMAC) were designated lead agencies for the clearance of the shared Thai-Cambodian border. A joint 'Pilot Project on Demining Cooperation along the Border of Thailand and Cambodia' by these two agencies began following discussions at the 13th GBC Meeting.[94] As a result, 95,000 $m^2$ of land were released in Thailand and 123,810 $m^2$ of land in Cambodia along the shared border.[95]

Following this joint project, CMAC and TMAC agreed to collaborate further on demining efforts in the remaining contaminated areas along the border.[96] At the 2023 intersessional meetings, Thailand spoke of a new joint demining project, through which TMAC proposed to Cambodia possible areas for cooperation to kickstart the operations under the Thailand-Cambodia GBC framework.

As of 2024, there are six Thai provinces bordering Cambodia with known or suspected contamination.[97] As of 2023, 52 per cent of Cambodia's remaining contamination was located less than seven kilometres from the borders of neighbouring countries, including Thailand.[98] Both countries continue to conduct survey and demarcation of land in accordance under a joint MoU signed in June 2000.[99]

## Cross-border clearance conducted by international operators

**Clearance across the Ethiopia-Somaliland (Somalia) border**

Operations in border regions require flexible coordination mechanisms to adapt to changing circumstances. The regional approach of the HALO Trust (HALO), in the framework of the Border Project along the Ethiopia-Somaliland border, allowed for the efficient use of resources for informed decision-making based on shared data.

The Border Project has been a significant initiative aimed at clearing minefields that have been a threat to lives and livelihoods in the region for over 40 years.[100] This project, which commenced in Somaliland in 1999, has included demining, EORE, non-technical survey, and community liaison, playing a vital role in ensuring the safety and development of the local communities. In 2021, liaison with the Ethiopian government enabled border operations to commence the following year, with 64 minefields surveyed between September 2022 and March 2024. These activities benefitted from strong coordination across HALO's two teams working on both sides of the border, which utilized aligned standards of operation (SOPs) and shared information regularly.[101]

Through a single operator, fluid information exchange enabled teams to be informed and updated on clearance work across the border. HALO has operated using two primary offices on opposing sides of the border - one programme office located in Addis Ababa and an operations office in Hargeisa, as well as a smaller office in Jijiga (Ethiopia) for liaising with regional authorities close to the operation site.[102]

Through discussions with the Ministry of Defence on both sides, HALO was authorized to make regular border crossings at the locations of clearance operations, although customs checks were necessary. Although unclear demarcation at some points across the border meant the location of certain minefields were ambiguous, authorisation to work on both sides of the border enabled authorized operations to occur on these minefields.[103]

For instance, in the village of Dabogoryaale, split in half by the Ethiopia-Somaliland border, minefields flanked the village school, posing a constant danger to children.[104] The presence of these landmines not only threatened lives but also hindered regional development by cutting off access to vital water sources, killing valuable livestock, and restricting trade routes. Operations to survey and clear both sides of this village were vital to ensure the immediate and longer-term wellbeing of villagers.

A deminer working along the Ethiopia-Somaliland (Somalia) border, June 2023. ©HALO

HALO was also able to ensure the safety of their own staff working in border areas through medical evacuation procedures. As all staff working on demining had dual-nationality, arrangements were made with the Somaliland Ministry of Defence to enable medical evacuation to the nearest hospital in Hargeisa.[105]

Operations on the Ethiopian side were halted in March 2024 with two minefields left to survey. Liaison with the Ethiopian Ministry of Defence is ongoing to recommence operational efforts in Ethiopia, as well as to support the creation of national mine action standards.[106] HALO's mine action programme along the Ethiopian-Somaliland border demonstrates the complexities and opportunities of operating in border contexts. Despite logistical, legal, and strategic challenges, the programme made significant progress in enhancing safety, supporting infrastructure development, and fostering community resilience.[107]

**Clearance along the Cambodia-Thailand border**

Norwegian People's Aid (NPA) has programmes on both sides of the Cambodia-Thailand border. The demining operations of NPA along the border require the exchange of information between teams from both countries, although some operational challenges persist regarding access as demining teams are at times requested not to proceed further by the relevant authorities.[108]

Besides demining operations, NPA provides capacity-development support. One notable initiative involved the training of Cambodian deminers in handling mine detection dogs. Following training with the NPA, these deminers were deployed in Thailand, where they worked under Thai handlers, effectively contributing to the demining operations within Thai territory.[109] This cross-border training and deployment serves to highlight the collaborative efforts between Cambodia and Thailand, facilitated by NPA, to address contamination in the border regions, while enhancing technical skills and fostering cooperation along the border.

## EORE in border areas

EORE is a vital protection activity, and one of the five pillars of the mine action sector. States that have ratified or acceded the conventions have the obligation to comply with their specific provisions. EORE interventions aim to ensure that individuals and communities are aware of the risks posed by EO and of the behaviours to adopt in order to reduce these risks to a level that allows them to live safely. In many scenarios, and particularly in areas where land release operations are not yet possible, EORE is often the only feasible activity that can be implemented.

EORE plays a crucial role in preventing accidents and saving lives in areas contaminated by EO, whether in emergency, conflict, post-conflict or peacetime settings. The implementation of context-specific EORE interventions is critical in border regions where the presence of EO represents a risk to people.

In all scenarios, EORE messages and approaches should be developed based on a clear understanding of the target groups (such as shepherds, traders, indigenous groups, people on the move and returnees), threats and risk behaviours, and the mechanisms that drive individual behaviours, as well as those that drive behavioural change. Particular attention should also be paid to ensure efforts 'do no harm' and consider conflict sensitivities in order to avoid negative consequences (such as smuggling and scrap metal collecting).

Depending on the needs identified and at-risk groups, EORE interventions can be carried out with the local population living close to, or frequently crossing, the

Explosive ordnance risk education staff in Darwaz-e-bala at the Tajikistan Afghanistan border, 13 June 2023. ©Fondation Suisse de Déminage

border to attend school, earn their living (such as going to markets), visit relatives, and access health facilities or other services. Equally important is the delivery of EORE to people on the move who cross borders either to flee conflict or to return home after hostilities have ended. Guidance for the delivery of emergency EORE was developed in 2008.[110]

Implementing EORE interventions in border areas presents specific challenges. A key issue is the coordination of efforts across borders, particularly the sharing of disaggregated information on casualties and at-risk groups, and ensuring consistent EORE messaging among various actors operating in different countries.

Cross-border coordination of EORE is essential to harmonize approaches and messaging for at-risk groups, including resident populations, refugees and internally displaced communities.[111] The IMAS (12.10) emphasizes the need for regional coordination during 'humanitarian crises or conflicts with large-scale cross-border movements'.[112] IMAS 12.10 suggests the use of existing humanitarian clusters (such as protection and education) or the establishment of EORE working groups in cases where there is no effective mine action coordination.[113]

Regional-level harmonized messages, materials and approaches on risk education are crucial, especially in the context of measures to prepare refugees for safe return.[114] Refugees may spend many years in displacement and may not be aware of EO contamination in their communities, or the risks they may face during their journey.[115] The provision of information on explosive hazard risks in countries of asylum can be useful in helping refugees to decide whether to return, and contributing to the safety of refugees once they return.[116] In Afghanistan, the Danish Refugee Council provides EORE to Afghan returnees at strategic sites, including the Office of the United Nations High Commissioner for Refugees (UNHCR) Encashment Centers, International Organization for Migration (IOM) transit centres and at the country's different border crossings.[117] DRC also provides EORE to refugees from Ethiopia and Sudan in the Upper Nile State of South Sudan, using community-based interpreters.[118]

Regional context-specific efforts, such as those reflected in the 'Guidelines on Explosive Hazards Risk Education for Safer Return' focusing on the provision of EORE to Syrian refugee populations,[119] can provide guidance, recommendations and resources for humanitarian actors and risk education providers planning to deliver EORE for refugees prior to, during and in the early stages of their return. These guidelines are informed by regional data on the refugee population, the contamination threat and recorded risk-taking behaviours.[120]

EORE activities regularly target internally displaced person (IDP) or refugee camps on the border. Operators have also noted the importance of ensuring that EORE activities take place even if camps are not in proximity to borders or to EO contamination, since these populations are particularly vulnerable to encountering hazardous areas near borders.[121] Therefore, when it comes to targeting populations on the move across borders, EORE messaging should focus not only on risks posed by border crossings but also those in areas further inland that may be encountered by these groups.[122] Systemic coordination and strategic planning can ensure that no routes used by IDPs or refugees are unintentionally missed,[123] as people on the move, unaware of the presence of EO in new areas, are at higher risk of traversing contaminated zones.

Massod Ahmad Pasoon, EORE/NTS Operator conducts EORE session to returnees at Transit Center, Kandahar, October 2024. ©DRC

CASE STUDY

**Targeted EORE for migrants along the BiH border**

Bosnia and Herzegovina (BiH) receives a substantial number of migrants each year, both entering and transiting the country.[124] These migrants are particularly vulnerable to EO contamination in areas along the north-west and south-east of the country, bordering Croatia and Montenegro.[125] Mountainous regions at the border, including Plješevica, Trebinje, Foča, Gacko, Višegrad and Goražde, have been identified as areas of particular risk for migrants. The city of Bihać has also been prioritized, given that it has a high concentration of migrant populations intending to leave the country.[126]

Given this context, the Bosnia and Herzegovina Mine Action Centre (BHMAC) coordinates with regional units of the BiH Border Police as well as NPA, the IOM, the International Committee of the Red Cross (ICRC) and the Red Cross Society to ensure there is adequate understanding of the movement of different migrant groups along the BiH border.[127] This information enables operators and EORE practitioners to adapt their strategies to vulnerable populations. Regularly evolving migrant routes, in particular, mean that EORE training must be updated to ensure migrant groups are provided with relevant information. Border police and the BHMAC also cooperate in reviewing and maintaining markings relating to EO contamination on migrant routes to ensure that missing signs are replaced.[128]

Temporary reception centres in larger cities, including Sarajevo and Bihać, that house migrants who are either in transit or preparing to leave the country are also targeted for the provision of EORE. IOM hosts programmes at these sites to raise awareness and promote safe behaviours so that migrants can avoid or identify EO when crossing.[129] Due to the diverse cultural and linguistic backgrounds of migrant populations, materials are distributed in English, Arabic and Farsi to ensure wider access to EORE messaging.

Risk education training is provided for migrants by an IOM officer, 2024. ©Slađan Panić, IOM BiH

CASE STUDY

Binational Campaign on Mine Risk Education ©CENDESMI

**Joint EORE campaigns in the Peru-Ecuador border areas**

Even long after the end of the conflict between Peru and Ecuador, EO contamination continues to pose a serious risk for the local population in certain areas along the border. In Zamora Chinchipe in Ecuador, for example, 14 communities and five indigenous groups reside close to areas contaminated with landmines.[130] These minefields restrict access to essential resources and pose challenges for children attending school.[131]

Along the Peru-Ecuador border, the national mine action authorities, CENDESMI and CONTRAMINAS, have organized a series of 'Binational Mine Risk Education campaigns' since 2014, targeting[132] local officials, community leaders, residents and media representatives in bordering provinces in both countries. Cross-sectoral campaigns were adapted for different language needs and involved different government ministries, including health, education, defence and interior.[133] Each campaign was adapted to the specific context.

For instance, in 2016, the Third Binational Campaign on Mine Risk Education focused on preventing accidents among park ranger personnel and the native population living in Ichigkat Muja National Park; the campaign materials and approaches were therefore tailored to the needs of these specific target groups.

The border communities in Zamora Chinchipe were not only beneficiaries of these EORE activities but also primary sources for the identification of the location of EO, as maps and records were not available for these remote areas.[134] These communities were able to provide information on contamination through EORE sessions, thus contributing to non-technical survey efforts.[135]

Homa Jalali explains the EO posters on recognition of EO to returnees at Transit Center, Herat, exploring a new location where DRC started provision of EORE from October 2024. ©DRC

**Challenges to EORE delivery in border areas**

Security conditions in some border areas may affect staff's ability to travel and deliver EORE activities. Due to such considerations, operators often try to reach target beneficiaries, mostly people on the move and bordering communities, at refugee camps or community centres, where possible.[136] Moreover, EORE practitioners have noted difficulties in mapping available services across borders, since some local NGOs prefer to operate without attracting attention in certain contexts due to political sensitivities.[137]

Cross-border EORE often requires capturing and addressing multiple cultural, ethnic and other diversity factors.[138] While this can present a challenge to operators, many have adopted approaches to ensure training and messaging is targeted for and accessible to diverse communities to ensure that all vulnerable populations are able to benefit from EORE. For example, on the Ethiopia-Somaliland (Somalia) border, EORE is a critical component of HALO's operations, conducted primarily in local schools and communities.[139] HALO's educational outreach considers the nomadic and pastoralist lifestyle, as well as the ethnic and cultural context along the border. In Somaliland, HALO has sought to employ staff from different regions, and from both rural and urban backgrounds, to ensure HALO's work with affected communities benefits from a comprehensive understanding of the different sections of society.[140]

In 2020, Humanity & Inclusion organized train-the-trainer workshops to instruct 54 individuals and provided risk education to 146 persons with disabilities along the Thai-Myanmar border, as well as to refugees from Myanmar and IDPs located in nine camps across Thailand.[141] These educational sessions primarily addressed the issue of hazardous areas in Myanmar, particularly areas with improvised mines.[142] The training was conducted by Humanity & Inclusion's camp personnel, who were themselves refugees and fluent in the regional ethnic languages.[143]

Challenges remain in coordinating EORE messaging across borders and measuring the long-term impact of interventions, as EORE activities may be designed, implemented and monitored separately and by different operators across national borders.[144] While this is unlikely to lead to contradictory messaging, coordination can ensure that terminology and approaches used in messaging across borders are harmonized.

Migrants, IDP and refugees, as well as nomadic populations, are targeted for EORE, even if no immediate minefields are present, due to the potential future movement of these populations across contaminated border areas. Coordination with other humanitarian organizations is crucial, though currently limited in many border contexts.[145] Considering the potential movement of people, land release and EORE on one side of the border can have a direct impact on the other side; this presents challenges for measuring such impact – beyond the number of direct beneficiaries – which requires access and coordination.[146] When borders are frequently crossed, the cross-border movement itself is also an obstacle to monitoring and capturing long-term broader results.[147]

## Victim assistance across borders

Victim assistance is a pillar of mine action and states that have ratified or acceded to the conventions have the obligation to comply with their specific provisions. Meeting the needs of victims requires a rights-based, multi-sectoral approach and most victim assistance is managed outside of the mine action sector, although the sector provides important linkages.[148] Identifying victims where they live and supporting them to access services is essential and particularly challenging in remote areas, including border areas.

While victim assistance in border areas may not necessarily require a different approach compared to other rural and remote areas,[149] additional considerations may need to be taken into account in cases where there are territorial disputes or restrictions on access. Affected communities in border areas may face more obstacles regarding access to emergency health facilities or the availability of specialized care, equipment and support on either side of the border. Ideally, cross-border victim assistance activities would enable EO victims residing on both sides of the border to benefit from both emergency and regular medical care, rehabilitation, and psychological and psychosocial support. In some cases, this may require crossing the border to receive care that is not available or not in close proximity to the victim.

Where border contamination may be present, data collection and sharing across borders, coordinated regional outreach to EO victims as well as law and policies facilitating cross-border access are key elements of creating an enabling environment for victim assistance efforts. Addressing the needs of victims on the move, such as migrants, refugees or displaced communities, is vital since accidents may have occurred in their places of origin or on route and are usually under-reported, especially if they cross through unauthorized checkpoints.

Through coordinated efforts in outreach to EO survivors, needs and resources can be better mapped. EORE may facilitate the identification of survivors and victims in border areas, contributing to data collection and referral systems.[150] This, in turn, can support the provision of assistance to EO victims, and EORE sessions can be a means of providing information about the availability of assistance. Operators can also facilitate support by liaising with rehabilitation centres and other service providers in an effort to ensure that assistance is provided.[151]

The Physical Rehabilitation Centre in Guinea Bissau (Centro de Reabilitação Motora), reopened in 2011, is an example of how victim assistance efforts can transcend borders, enabling access to medical services by EO victims from neighbouring Gambia, the Republic of Guinea, Mali and Senegal.[152]

The centre provides medical care, physiotherapy and rehabilitation services.[153] Working in collaboration with the National Demining Centre of Senegal, for example, the centre was able to provide tailored prostheses to survivors.[154] The centre also aims to provide tailored assistance and to ensure social integration of rehabilitated patients. Owing to financial constraints, EO survivors must now pay for their treatment and the number of survivors supported by the centre has consequently decreased.[155] However, a centre for victim assistance, focussed on prosthetics, is also under construction in Senegal, with the aim of servicing both survivors from the Casamance area as well as other EO survivors in the region, including from the Gambia and Guinea-Bissau.[156]

Tailoring training for women in Darwaz-e-Bala District, Badakhshan Province, Afghanistan, 5 November 2023 ©FSD

Joint operations between Peruvian and Ecuadorian teams, April 2021. ©Ejército de Ecuador

# 3. FACILITATING MINE ACTION INTERVENTIONS IN BORDER AREAS

The following section presents some considerations to facilitate interventions in border areas, based on challenges and lessons learned identified by various mine action authorities and operators. This includes the need for information sharing, the issuance of special permits, medical evacuation in case of accidents and multi-year regional funding.

## Information sharing

The sharing of information between affected states is vital, facilitating almost all cross-border activities. A neighbouring state or territory can have crucial information to facilitate land release operations, including military maps of EO contamination and information on the types of EO and mine-laying strategies used. Beyond clearance, information sharing can help to release land through non-technical survey, secure borders by improving marking of contaminated areas and ensuring EORE training is supported by accurate information. Information sharing can also include data such as information on EO incidents or survivors.

Regional cooperation mechanisms or organizations can provide an intermediary platform to facilitate communications between states with ongoing tensions or where a third party is helpful to begin a dialogue, to build confidence and to foster collaboration. ARMAC has previously held workshops focused on information sharing between ASEAN Member States and has developed joint project proposals and capacity- development activities to support regional collaboration.[157] The GICHD regional cooperation programme is another example of a regional platform providing a safe conducive space for states to exchange and share best practices and lessons learned in mine action.

Information sharing has been an important factor, and even an initiator, of joint land release operations. For instance, joint demining between Peru and Ecuador at their shared border in 2006 began following Ecuador's disclosure that previously laid mines on Ecuadorian territory may have been dislodged and moved into Peruvian territory following flooding.[158] Similarly, the flooding of the Sava River led to joint efforts between BiH, Croatia and Serbia to detect and map areas that had been newly contaminated with dislodged mines. The operations required a steady flow of updated information to ensure that all potentially contaminated areas could be identified and marked.[159]

In some cases, the restricted sharing of information can serve as a first step towards rebuilding relations between states, possibly leading to more cooperation. Ongoing collaboration on border contamination between Peru and Ecuador has been strengthened through the sharing of information, under different agreements, at various points over the last decades.[160]

In addition to neighbouring states, border communities and people on the move can provide information about contamination or the occurrence of accidents in border areas. This information has traditionally been collected through various means, such as community liaison and non-technical surveys. Recently, there have been cross-sectoral efforts to systematically gather insights from people on the move, as they can provide relevant information about their places of origin and the areas they transit through.

From 2019 to 2020, the IOM Displacement Tracking Matrix (DTM) collaborated with the Mine Action Area of Responsibility to develop a DTM Field Companion for Mine Action. The Field Companion includes questions that can be used for data collection from key informants who are not experts in the sector. The tool aims to enhance the collection of data needed by mine action stakeholders in order to make response-related decisions, and also includes questions on the delivery of EORE and the socio-economic impact of EO. Piloted in Ethiopia, Nigeria and Mali, this Field Companion has the potential to be applied across borders, improving mine action efforts in areas experiencing significant population movements.

However, sharing information across borders creates several legal, technical, and ethical challenges.[161] The cross-border transfer of personal information is especially complex, due to the need for compliance with national data protection and privacy laws. The processing of personal data should not conflict with other legal obligations about secrecy and confidentiality, nor with the do no harm principle.[162] Given the sensitivity of data required for mine action programming, and that border regions often continue to face tensions and instability, the safeguarding of personal data is fundamental to maintaining the trust of communities and other stakeholders.

Inclusive information management – a people-centred approach which requires the active involvement of those affected by explosive ordnance at all stages of the information management cycle – is key to safeguarding personal data, by giving people living in

border regions a choice in what data are collected, as well as how they are collected, stored, and used.[163] A key concern is how data should be managed to prevent any negative consequences for the people whose data are being processed.[164] This is central to building trust and cooperation, especially in border regions.

## Permits

One major barrier in cross-border operations relates to authorization and access to border territories[165] as state authorities may be hesitant to grant access to contaminated areas – or restricted by legal regulations – especially to foreign or non-governmental operators. This can be further complicated by unclear or unresolved border demarcations between states and/or territories, where lack of agreement on territorial ownership can even create security incidents and tensions over access for humanitarian operations.[166] Permits are, however, essential to facilitate and undertake clearance operations in border areas.

Conducting operations simultaneously on both sides of the border can help to optimize processes and ensure a more comprehensive approach to securing border areas. It is, for instance, the operational approach taken by HALO along the Ethiopia-Somaliland (Somalia) border from September 2022 to March 2024. Due to the presence of nomadic and transiting communities along this border, HALO conducted surveys on both sides of the border, with access granted from both Ministries of Defence.[167] In addition, the presence of police forces from both sides facilitated operations by providing additional security.[168] While customs checks were still required, HALO obtained special permission to cross the border at specific points, where mine clearance was conducted.[169] Moreover, most staff members that were operating on the border have dual-nationality status, which further facilitates border crossings.[170]

Nevertheless, some logistical challenges remain for the longer-term stationing of equipment.[171] While temporary permissions allowed for daily crossings with vehicles and equipment, additional accreditation permits would be required to keep these in Ethiopia in the long term.[172]

Operator-led projects in cross-border areas may be a complex means of undertaking land release considering the associated challenges related to authorization and access, including legal impediments for foreign entities to conduct land release in border areas. In many contexts, however, they may be a suitable option considering the available resources for undertaking land release. In such cases, permits can enable access and ease logistical elements, as well as ensure the safety and efficiency of border operations.

## Medical evacuation

The availability of and access to adequate medical services for demining staff is vital for operations to comply with mine action standards and for effective responses to be in place in the event of emergencies in border regions.[173] States/territories are expected to coordinate to ensure that operational staff have access to rapid and adequate medical evacuation.

For instance, Peru and Ecuador have a bilateral agreement in place to evacuate Peruvian personnel to Ecuador in case of an accident occurring alongside the border, since aerial evacuation to a Peruvian medical facility could take up to two hours compared to 20 minutes to a hospital in Ecuador.[174] Deminers from both countries can use the same medical air evacuation route that is approved by Ecuador.[175]

Similar agreements have been established between mine action operators and national authorities. For instance, cross-border medical evacuation plans for clearance operations on the Mozambique-Zimbabwe border were agreed upon and used by NPA.[176] In emergency situations, NPA alerted officers in charge of border crossings and evacuated the staff member to the closest medical facility on either side of the border.[177]

## Funding

For many countries, border areas are the last to be cleared, with insufficient funding being one of the obstacles to completing clearance obligations.[178] Mobilizing resources to conduct land release can be particularly challenging, resulting from a lack of prioritization for mine action at both national and international levels. The lack of clear benefits of land release operations in border areas may also have an impact on prioritization and resource allocation domestically, since these areas may be sparsely populated, militarized or restricted. Moreover, conducting interventions in border areas can be particularly protracted due to challenging access, political tensions and security conditions. This may occasionally impede activities or require budgetary adjustments. Operations in these regions therefore require a flexible and conflict-sensitive approach to adapt to the evolving context. This may occasionally impede activities or require budgetary adjustments.

Multi-year regional funding can be advantageous for the clearance of border areas, enabling quick adjustments based on changing political, security and operational circumstances and authorizations.[179] Since 2004, the Organization for Security and Co-operation in Europe (OSCE) has supported Tajikistan's efforts to meet its clearance obligations under the APMBC, with a focus on the State's border contamination with Afghanistan.[180] These efforts have included the procurement of

Areas impacted by flooding of the Danube and Drava rivers at the borders of Hungary and Croatia. ©Miljenko Vahtaric

machinery and equipment,[181] operational and management capacity development,[182] as well as general operational support and funding.[183]

Various regional funding initiatives have been specifically aimed at clearing border areas and fostering joint clearance efforts by countries sharing borders contaminated with EO.

Since 1999, for example, the OAS has been providing international funding to assist demining efforts across EO-affected countries in the Americas, including Peru and Ecuador.[184] Between 2006 and 2013, the EU provided funds through the OAS.[185] While financial support to both countries has been limited over the past decade, the OAS has hosted regional conferences and events to provide a platform for stakeholders to not only discuss progress and challenges but also coordinate efforts to complete clearance efforts in the border region.[186]

The EU has also provided joint funding to Serbia and Croatia for a binational clearance operation along their common border in the Batrovci-Bajakovo area. The project involved a joint tender commission to oversee operations, including representatives from both national authorities and donors.[187]

The Hungarian-Croatian border was also cleared within the scope of the EU-funded two-year project 'Rehabilitation of Land Mine Contaminated Sites in the Drava-Danube area'.[188] The project aimed primarily at enhancing sustainable environment in the Croatian-Hungarian border region, placing demining as a precondition for the realization of several environmental cross-border projects, including initiatives related to Natura 200 and Corridor 5c.[189] The first is focused on conserving threatened species and habitats in Europe (ecosystems of the Drava, Mura and Danube rivers along the Hungary-Croatia border),[190] while the second is a major pan-European transport link aimed at enhancing economic development and regional connectivity.[191]

A deminer works next to water storage area, Somaliland, 6 June 2023. ©HALO

# 4. BROADER IMPACT OF MINE ACTION INTERVENTIONS IN BORDER AREAS

Border communities often face a unique set of developmental challenges ranging from a lack of adequate infrastructure and the existence of topographical barriers – which in turn affects access to jobs, markets and basic services – to instability or security concerns, among others. Nevertheless, border areas also present specific opportunities as gateways for people, trade and wildlife. Since many borders are defined by natural features, such as rivers and mountains, borderlands are also often highly biodiverse areas requiring environmental protection.

Mine action plays a critical role in helping affected states and territories address the immediate humanitarian challenges stemming from the presence of EO contamination. In doing so, it can also contribute to broader and longer-term sustainable development and peace efforts.

Indeed, cross-border mine action can support sustaining peace and confidence-building efforts. It also has the potential to promote environmental protection, the safe movement of people and wildlife, greater economic opportunities, and to facilitate access to essential services.

The following section highlights the broader impact of mine action in border areas. Mine action can contribute to sustaining peace efforts and sustainable development across regions, including those ensuring safe access and use of agricultural land, construction and upgrade of infrastructure, effective management of the flow of goods and people across borders, or access to areas for environmental protection, disaster risk reduction and post-disaster recovery purposes.

## Peacebuilding and sustaining peace

There is limited research on the specific role of mine action in peace, and even less focusing specifically on border areas. Research on the role of mine action in peace agreements, however, found that they often emphasize 'the humanitarian nature of demining'.[192]

Compared to the rest of the country, the contamination in border areas is more likely to be left unaddressed, due to not only the complexity of land release efforts, but also potentially lasting tensions between neighbouring states. Border contamination therefore remains a physical and symbolic barrier to peace; mine action in these areas has the potential to foster mutual trust and transparency through information exchange, helping to remove the lasting vestiges of conflict from areas separating two or more states and/or territories.

To a certain degree, conflict-sensitive mine action has the potential to reduce insecurity and thereby contribute to peace, given that its activities can reduce violence and support communities affected by conflict. Mine action efforts can be particularly relevant at border areas, which are more likely to be zones of contention, and therefore result in the use of EO. The border between Cambodia and Thailand, for instance, is the site of the world's most heavily mined area, known as the K5 belt.[193]

The UN recommends considering mine action in peace accords and mentioning mine action-related issues in ceasefire and peace agreements, primarily for humanitarian reasons.[194] While the relevance of including mine action in these agreements is context specific, it can also be a strategic method to support peace processes. Research suggests that mine action can act as an entry point to engage conflicting parties; ensure immediate improvements to security; support relevant programmes such as disarmament, demobilization and reintegration (DDR); and act as a 'vector' through which to advocate for human rights, international humanitarian law and reconciliation.[195] Mine action interventions can serve as confidence-building measures before, during and after peace processes, while coordinated interventions in border areas can be a way to signal states' intent to move beyond conflict and to align efforts.

Peru and Ecuador's joint demining efforts following their formal peace agreement is a clear example of this (see case study on page 38).

CASE STUDY

**Peace impacts of mine action along the Peru-Ecuador border**

Anti-personnel mines were laid along the Peru-Ecuador border as a result of conflict between the two countries in the Cóndor Mountain Range region in 1995.[196] This contamination had severe impacts on the remote communities living in the region, with hundreds of EO victims and significant negative socio-economic impacts – including on traditional livelihoods, movement and the trade of goods and services.[197]

The conflict ended when the border dispute was settled through a formal peace agreement, the Brasilia Presidential Act of 1998. Following the signing of the agreement, both sides initiated demining efforts along the shared border

In the decades following this settlement, other agreements aimed to accelerate the clearance of landmines and ensure the safety and development of border communities.[198] These included activities to enhance cooperation, provide technical assistance and training, allocate resources and engage community members, as well as provisions for monitoring and evaluation. Military personnel from both countries held meetings to coordinate their demining activities.

The creation of the Binational Humanitarian Demining Unit of Peru and Ecuador (Unidad Binacional de Desminado Humanitario, UBDH) aimed to bring together military units with a common humanitarian mission.[199] The UBDH has been considered 'an example of peace and brotherhood', with a stated objective of EO clearance, along with the symbolic purpose of demonstrating that the states had moved beyond the conflict.[200] Its activities include the 'strengthening of confidence-building measures', joint operational tasks, capacity building and risk education campaigns, as well as the exchange of information.[201]

While EO contamination remains at the border, these joint efforts have enabled progress to be made, with ongoing joint activities continuing in 2024 and no territorial disputes between the two States.[202]


Commemorative plaque, with the words 'peace, integration, and development', on the bridge connecting Peru and Ecuador – the venue of an annual ceremony of peace between the two countries, 2023. ©GICHD

Mine action in border areas can also be particularly relevant for peacebuilding in border communities. In addition to sustaining peace at an international level, a more nuanced consideration of land release along border areas suggests that it is also helpful for peacebuilding between and among groups living in these areas.

The drawing of boundary lines between States rarely accounts for the needs of local communities, which can at times result in negative implications – for instance, if border communities are nomadic or pastoral.[203] In some cases, local communities may also identify with groups on both sides of the border, especially in areas with more porous, less defined boundaries.[204]

The impact of conflict on these communities is highly context specific, ranging from internal displacement to the destruction of livelihoods. In these situations, border communities require support beyond immediate humanitarian aid. Mine action can be an early step in helping communities to regain safety and security where they live and allow for broader support.

## Cross-border mobility and border management

Migration refers to the movement of persons away from their usual place of residence, either across an international border or within a state.[205] This includes both voluntary and involuntary movements, regardless of a person's legal status, their reasons for moving or the length of stay.[206] Effective border management can help States and regions enhance their own security, and also protect the rights and reduce the potential vulnerabilities of those crossing borders, in line with international law.[207]

In several regions, different factors linked to economic development, such as cross-border trade, employment opportunities and the availability of goods and services, often make national borderlands attractive to migrants looking for improved livelihoods; however, individuals may not be aware of the existing EO risks along borders.[208] As a consequence, mine action efforts, especially those related to EORE VA, are relevant to prevent accidents and provide further support.


UNHCR-UNBRO Camps on the Thai-Cambodian Border (1980s-1990s). ©UNHCR

Land release in border areas is therefore crucial to reduce the safety risks and protect people on the move, regardless of whether they are forcibly displaced or migrating for other reasons. In cases of existing confirmed hazardous areas or residual risk, proper coordination among relevant authorities and stakeholders, as well as the delivery of targeted EORE messaging, is essential.

For instance, despite being highly contaminated with mines, the Thai-Cambodia border is used and 'traversed' frequently.[209] Movement across the border was prevalent during the 1980s and 1990s as more than 300,000 Cambodian refugees crossed the contaminated land 'in order to reach refugee camps on the Thai-Cambodian border'.[210] In this context, UNHCR contacted the CMAC, Mines Advisory Group and HALO to help in identifying priority locations for safe resettlement and return.[211] UNHCR reported that no mine accidents occurred during the process of repatriation.[212]

The impact of land release in the context of migration extends beyond ensuring the safe movement of migrants through contaminated areas; it is also of great importance for the delivery of assistance to migrants in vulnerable situations. While the lack of preparedness for the influx of migrants is often linked to several factors, the presence of contamination in these regions is an additional major logistical impediment to the delivery of goods and services, the safe mobility of personnel and the installation of proper infrastructure.[213]

In BiH, risk areas for migrants include the mountains of Plješevica, Trebinje, Foča, Gacko, Višegrad and Goražde, located along the border in the north-west and south-east regions of the country, as well as Bihać, since these areas have not yet been cleared.[214]

Despite BHMAC's efforts to ensure sign maintenance, migrants remain highly vulnerable as some move along these areas at night, through forested areas as well as former demarcation lines, where EO can still be found, and they are unable to see warning signs displayed in key places.[215]

In this context, coordination among key stakeholders, such as the BiH Border Police as well as NPA, IOM, the ICRC and the Red Cross Society, is needed to ensure that operators and EORE practitioners have the information to adapt their messaging and strategies to the needs of vulnerable populations (see case study on page 28).[216]

Regarding border management, EO makes borders less rather than more safe and secure, not only for migrants but also for national citizens and personnel in charge of protecting the frontier by restricting their safe movement.[217]

For example, land release allowed for the construction of patrol roads, watch towers and concrete walls to support the integrated border management policy of Türkiye in a previously contaminated area. The minefields that stretch along the south-eastern and parts of the eastern land border prevented Turkish Land Forces from patrolling all areas along the border and establishing a modern border surveillance system.[218] Despite some resistance to and negative perceptions of border demining, it is evident that it is possible to manage, rather than merely observe, borders, and in doing so prevent illegal activities at the border.[219]

## Productive use of land, trade and upgraded infrastructure

Where EO contamination is present in border areas, land is often left inaccessible or under-utilized, with significant implications for the quality of life in border communities. Adequate infrastructure for housing, transport, telecommunications and other basic services can be left damaged or destroyed, without safe access for maintenance or repairs.

Border areas can also be particularly important economic zones, not only for border communities but also for the wider region or state in areas where trade can be facilitated.

Land release in these areas can therefore allow for the return to productive use of land and enable trade and access to key infrastructure.

CASE STUDY

Agricultural land in Macará along the Ecuadorian border, 2023. ©GICHD

**Agriculture and infrastructure along the Peru-Ecuador border**

Safe access to arable land and infrastructure is crucial for border communities to be productive, access local markets and sell their produce. The demining cooperation between Peru and Ecuador has been instrumental in boosting economic activities and improving infrastructure, ultimately serving the needs of, and fostering a more prosperous coexistence between, the communities along the border.

### Impact on agriculture

Macará is an Ecuadorian city located 2 km from the border with Peru. Considering its tactical placement, mines were laid in populated and cultivated areas.[220] Mine contamination severely limited the access to agricultural land as well as the expansion of housing units in the area. This had a significant impact on the local cultivation of macareño rice, which is well-known at the national level and a main source of income.

According to direct beneficiaries living and cultivating in the released area, mine action allowed them to better use these fertile lands and significantly increase production. According to one informant, they never stopped cultivating rice, but many areas were fenced off and inaccessible due to the suspicion or presence of mines.[221] Full access to the area for rice cultivation and the riverbanks – largely used for local fishing – was only possible after clearance, which had a significant impact on local trade.[222]

### Impact on infrastructure

Prior to the conflict, a bridge with a more limited weight restriction linked the neighbouring countries; both the bridge and the highway connecting both countries (the Peru-Loja highway) were mined to prevent incursions.[223]

Clearance along the border with Peru allowed for the upgrading of the Peru-Loja highway and the construction of the Macará International Bridge in November 2012. Financed by the Government of Japan, this binational bridge not only is essential for the cross-border movement of people and goods, but also has great symbolic significance and serves as the venue for annual commemorative ceremonies of the Brasilia Peace Agreement.[224]

Clearance of the old bridge and the highway, combined with the construction of the Macará International Bridge connecting Peru and Ecuador, enabled significant socio-economic development by facilitating trade and commerce.[225]

CASE STUDY

**Enabling trade corridors along the Ethiopia-Somaliland (Somalia) border**

Land release activities in and around the Ethiopia-Somaliland border have cleared the way for the Berbera Corridor, an important route linking Ethiopia to the northern port of Berbera – one of the two major ports in Somalia – through Hargeisa.[226] Work on related transit routes is ongoing in Somaliland, with roads crossing the border and requiring clearance on both sides in order to enable connection across from Jigjiga, on the Ethiopian side, to Berbera.[227] In parallel to these clearance efforts, supported by the HALO Border Project, over USD 440 million has been invested in Berbera Port to support the construction of roads, along with other activities, as part of a project that aims to make the port a regional trading hub for the Horn of Africa.[228] Besides the upgrade of the Berbera Corridor to facilitate trade through Ethiopia, clearance has enabled safe travel within the Somaliland region.[229]

Deminer working in the Ethiopia-Somaliland (Somalia) border region, 2023. ©HALO

## Environmental protection and rehabilitation

### Environmental protection

Border contamination is an obstacle to the conservation of biodiverse areas – including those shared by several States – and wildlife migratory routes as well as environmental rehabilitation, disaster risk reduction and post-disaster recovery in border areas.

For instance, in Angola the protected areas around the Okavango Delta in Kuando Kubango province continued to be cleared by HALO in 2022 with financial support from the Government of Angola.[230] The project aligned with government efforts to protect and promote its biodiversity through the clearance of minefields in all protected areas that lie along the Okavango Basin and Delta area,[231] which is a transboundary environmental project and a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site.[232]

Despite the significant ecological value of the area, remaining EO contamination prevents access to large parts of the watershed feeding the Okavango basin for conservation, and large fertile areas along the Okavango Delta in the Mavinga Valley are frequently left abandoned due to landmine contamination.[233] Hence, this major transboundary conservation initiative is fully dependant on the progress of land release on the Angolan side of the shared border.


Macará, Loja province in Ecuador, 2023. ©GICHD

Similarly, demining in Loja, close to the Peru-Ecuador border, enabled safe access to, and the conservation of, local flora and fauna in the Podocarpus National Park (Parque Nacional Podocarpus).[234] The park hosts a large area of moorland, cloud forest and scrubland, essential for the preservation and continuity of ecosystems in southern Ecuador and northern Peru. As an area of high biodiversity and endemism, it is part of the Biosphere Reserve Podocarpus - El Cóndor since 2007 – a recognition awarded by UNESCO.[235]

**Environmental rehabilitation**

Environmental rehabilitation refers to the process of restoring damaged ecosystems to their original or near-original state and involves a set of activities aimed at repairing the physical, chemical and biological characteristics of the environment.[236] Conflict along border areas can damage fragile ecosystems, especially where large-scale or explosive weapons have been used. In such contexts, the release of land can enable access to areas requiring rehabilitation and conservation activities.

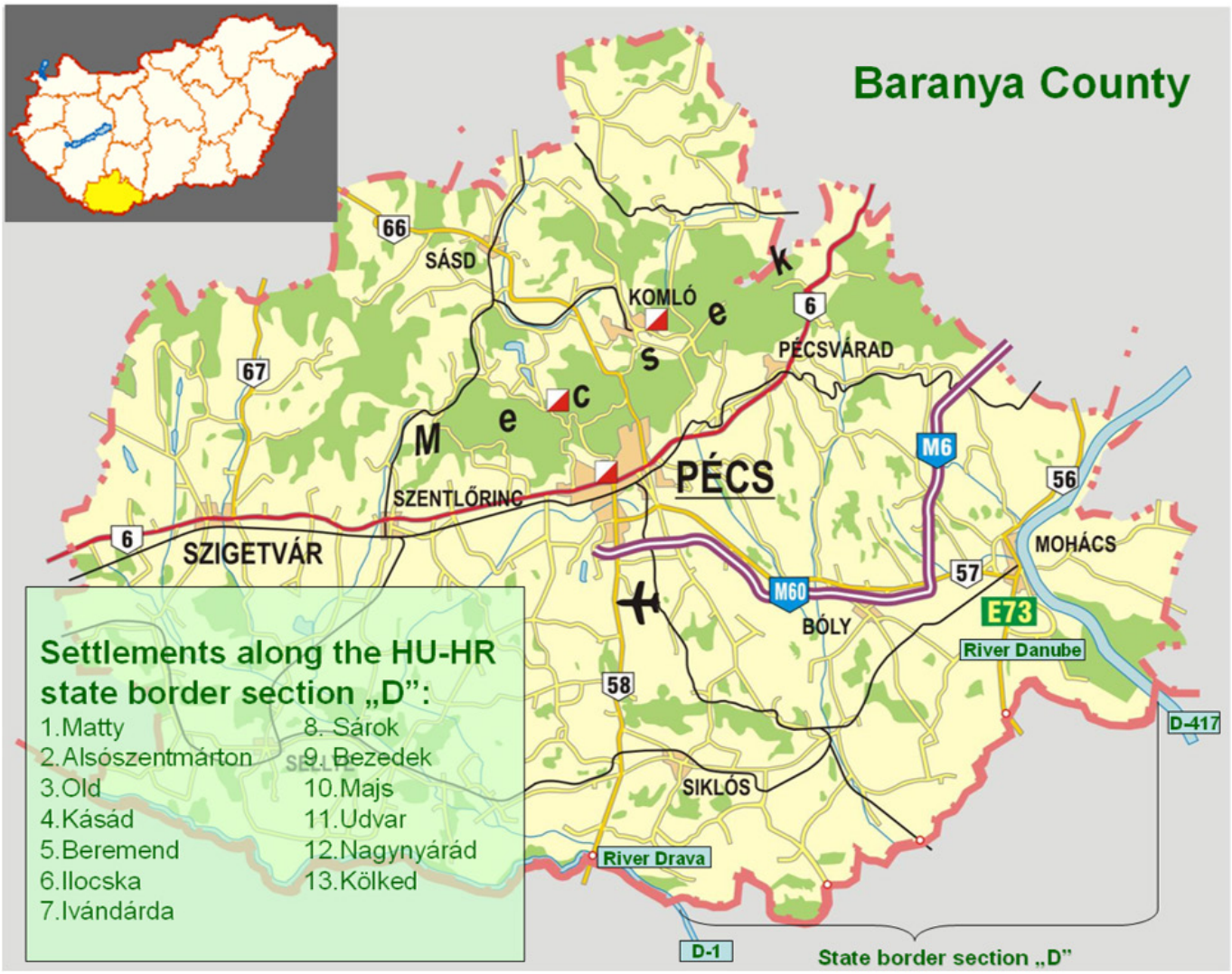
Croatia and Hungary, for example, collaborated on various projects to conduct land release along the border and allow for environmental protection in the Drava-Danube area.[237]

Land release and environmental efforts were undertaken in the framework of the 'Hungary – Croatia IPA Cross-border Co-operation Programme 2007–2013', and the 'Rehabilitation of Land Mine Contaminated Sites in the Drava-Danube Area' project, with the Croatian Mine Action Centre (CROMAC) as lead beneficiary and the Baranya County Police Headquarters (Hungary) as project partner. Partners from both sides cooperated in searching for landmines in the area left over from the conflict in the 1990s. These efforts resulted in the demining of 1,56 km$^2$ of contaminated areas on the Croatian side[238] and environmental rehabilitation along 80 km of the border, including the territories of the Danube-Drava National Park in Hungary.[239]

This partnership was renewed under the Interreg V-A Hungary-Croatia Cooperation Programme 2014-2020, De-mine HU-HR II, focused on the Danube-Drava National Park, the Mura-Drava Regional Park, the Natura 2000 European Ecological Network, and the Mura-Drava-Danube Biosphere Reserve.[240] In this second phase, the project aimed to create a safe environment for the development of the Hungary-Croatia border area and its surroundings. In Croatia, the project mainly involved mine clearance in an area of 146 km$^2$ along the floodplains of the Drava and Danube rivers, covering the municipalities of Belistye, Valpo and Miholjac, and the municipalities of Baranyaszentistván and Draz.[241]

On the Hungarian side of the border, technical survey and clearance were carried out by a consortium of three Hungarian companies, and the environmental rehabilitation activities were carried out by experts of the Danube-Drava National Park as project partners.[242]

These projects not only provide an example of successful collaboration between neighbouring States for cross-border joint demining, but also show how mine action efforts can be integrated into broader plans related to environmental protection.




Clearance along the Hungary-Croatia border, 20 November 2013.
©Kalmár Ádám

**Disaster risk reduction and post-disaster recovery**

EO contamination in border areas also presents an obstacle to accessing land for the purpose of undertaking disaster risk reduction efforts, including actions aimed at preventing and reducing new and existing disaster risk and managing residual risk[243], and post-disaster recovery measures in border areas.


Clearance along the Hungary-Croatia border, 20 November 2013.
©Kalmár Ádám

After heavy rainfall caused extreme flooding of several rivers and landslides throughout BiH in 2014, it was suspected that landmines contaminated over 70 per cent of the flood-affected zone,[244] presenting a major safety hazard to implementing recovery efforts.

In this context, mine action authorities from BiH, Croatia, and Serbia worked together to neutralize the threat of EO linked to the Sava River, which runs along the BiH border with Croatia and Serbia.[245] As part of this regional collaboration, information was exchanged daily. Once water was drained from endangered areas in BiH, work began to detect the new locations of minefields across the three countries. A total of 105 km$^2$ were identified as potentially containing EO after the flooding.[246]

Moreover, one of the reasons for the extent of flooding was damaged control facilities and mine contamination, which hinder access to and regular maintenance of existing drainage channels and other flood protection infrastructure, especially along the Sava River.[247]

APOPO Deminer points to possible Zebra remains on the Cordon Sanitaire minefield on the Cordon Sanitaire, Zimbabwe.
©APOPO/David Brazier

### Wildlife migration

Wildlife migration is essential for maintaining ecological balance, diversity and the health of ecosystems.[248] Migratory routes often span large distances and cross international borders, necessitating comprehensive conservation efforts; the presence of EO can disrupt these endeavours.

EO presents direct and indirect threats to wildlife. Direct impacts include detonations leading to the injury or death of animals. Indirect impacts involve habitat fragmentation, restricted access to water and food resources, and altered migration routes, leading to ecological imbalances.[249]

The Zimbabwe-Mozambique border, affected by EO contamination, is a critical migratory corridor for elephants and other wildlife. Minefields along this border have significantly disrupted elephant migration, evidenced by the presence of elephant bones near minefields.[250]

Similarly, the Angola-Zambia border and the Okavango Delta region are critical areas for diverse wildlife populations, including elephants, lions and numerous bird species, and are affected by EO contamination.[251] While the current population of elephants in Angola is now estimated to be only around 5,000, it is believed that the removal of EO contamination at the border could help to increase the population by enabling safe migration through the creation of a wildlife corridor.[252]

All these examples showcase the impact on wildlife populations and the environment and the need for further coordinated efforts to advance land release in border areas.

# CONCLUSION

Borders are unique areas, important not only to State security but also as potential areas for sustainable development, peacebuilding, and environmental protection.

While the full extent of contamination along border areas remains unknown, this research has identified 37 States and territories with EO contamination in border areas and a further 18 with potential border contamination. These findings suggest that contamination along borders is widespread and has not yet been addressed at scale, both at the strategic and operational levels, due to its complexity.

This study provides initial insights into the successful approaches taken to advance mine action in these areas, demonstrating the broader benefits of these efforts for affected communities living in proximity or across border regions, as well as wider national or regional impacts. It also analyses some of the specific aspects of mine action in border areas, such as the need for permits, information sharing, multi-year funding and access.

Addressing the multifaceted challenges of mine action interventions along borders requires commitment from States – not only those affected by EO contamination but also donors – to prioritize border contamination and foster sustained collaboration, information sharing and alignment of the goals, strategies and programmes of States with border contamination. Despite the different challenges to addressing border contamination that have been noted in this study, it is important that land release of border areas remains a priority for affected States and territories, considering both the humanitarian benefits and the positive impacts in broader areas related to sustainable development and peace.

The mine action sector can support these efforts by working closely with States affected by border contamination, joining multisectoral efforts, learning from actors and experts in other sectors, and taking a conflict-sensitive approach to operations. Operators can continue to leverage their role as neutral parties to support the fulfillment of treaty obligations in border areas impacted by complex regional dynamics and undertake mine action activities without prejudice to either side.

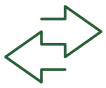
The findings highlight the need for interstate coordination and partnerships to promote safer environments and uphold human rights in border areas, ensuring that border communities are not left behind. Examples of successful partnerships demonstrate that joint border operations can act as a confidence-building measure and improve collaboration between neighbouring States and/or territories. However challenging, addressing border contamination has significant potential for positive longer-term impacts.

# RECOMMENDATIONS

**The following steps are recommended for the improvement of mine action in border areas affected by EO contamination:**

1 

**Sustained attention at the global and national levels, including in the framework of relevant conventions:** Ensuring that convention meetings and documents, including future action plans, continue to recognize the importance of cooperation for land release in border areas helps to draw attention to the issue of EO-contaminated border areas, and encourages assistance. The inclusion of border contamination in mine action strategies and work plans can ensure that border areas are factored into decision-making processes, such as prioritization, and enhance synergies with other relevant strategies on areas such as border management, sustainable development or environmental protection.

2 

**Information sharing**: Improved data collection and sharing on the details of EO contamination and incidents in border areas can streamline mine action efforts, ensuring relevant stakeholders have sufficient information to guide mine action interventions and reducing the potential for bureaucratic setbacks. More comprehensive data can support multisectoral and coordinated efforts to address border contamination.

3 

**Prioritization of EORE in complex border regions**: In border contexts where land release is particularly challenging, EORE should be prioritized to reduce the negative impact on border communities, as well as asylum seekers, migrants or refugees travelling through contaminated areas. Best practices for coordinated efforts – involving consistent messaging; the sharing of data on at-risk groups disaggregated by sex, age and disability; and context-specific approaches – can ensure the effectiveness of these activities.

4 

**Prioritization of border areas for confidence building**: Greater efforts can be made to address EO contamination in border areas as a potential means of confidence building. Ongoing distrust or hostilities between state/territories can be a factor in the delay of mine action interventions in border areas. Small steps can be made, however, towards repairing relations through information sharing, regional discussions, agreements on procedures such as medical evacuation, or coordination on EORE messaging.

5 

**Involvement of regional, international or humanitarian organizations**: Given the inherent sensitivities of mine action in border areas, the involvement of regional, international or humanitarian organizations can help to support or foster joint efforts and coordination mechanisms that facilitate progress on land release. A third party can also mediate or facilitate discussions in particularly contentious or complex contexts.

6 

**Sustainable funding to address EO contamination in border areas**: Funding is vital to ensure that land release, EORE and victim assistance in border areas are undertaken. In particular, flexible regional funding initiatives have not only allowed for clearance but also fostered joint efforts between affected States, supporting improved cross-border collaboration and enhancing the livelihoods and well-being of border communities.

7 

**Further exploration into border EO contamination**: More in-depth research into EO contamination in border areas can support a better understanding of the needs and gaps in addressing border contamination. Greater analysis can also uncover potential partnerships and cooperation between affected States and relevant stakeholders or synergies with actors in different sectors working on relevant issues such as migration, displacement, or cross-border developmental, humanitarian or environmental initiatives.

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