

# 1976 CONVENTION ON THE PROHIBITION OF MILITARY OR ANY HOSTILE USE OF ENVIRONMENTAL MODIFICATION TECHNIQUES



The Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques (ENMOD Convention) is an instrument of international disarmament law specifically intended to protect the environment in the event of armed conflict. It prohibits hostile use of the environment as a means of warfare. The provisions of Protocol I of 1977 additional to the Geneva Conventions of 1949 form an essential complement to those of the ENMOD Convention, as they directly prohibit widespread, long-term and severe damage to the environment during armed conflict. Other rules and principles of international humanitarian law also confer protection on the environment during armed conflict, though without mentioning it specifically. This is particularly the case with general customary principles regarding the conduct of hostilities, including the principle of distinction, which limits attacks to military objectives, and that of proportionality, which prohibits the use of means and methods of warfare that cause excessive damage.

The ENMOD Convention was negotiated at the Conference of the Disarmament Commission and was adopted by the General Assembly of the United Nations on 10 December 1976. It was opened for signature in Geneva on 18 May 1977 and entered into force on 5 October 1978.

# THE ENMOD CONVENTION: PROHIBITING USE OF THE ENVIRONMENT AS A MEANS OF WARFARE

The ENMOD Convention is specifically intended to prevent use of the environment as a means of warfare, by prohibiting the deliberate manipulation of natural processes that could produce phenomena such as hurricanes, tidal waves, an upset in the ecological balance of a region, changes in weather patterns, or changes in climate.

## PROHIBITIONS

States party to the Convention undertake “not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party” (Article I, para. 1).

The States Parties further undertake not to “assist, encourage or induce” any State, group of States or international organization to engage in such activities (Article I, para. 2).

The **environmental modification techniques covered** are those intended to change “through the deliberate manipulation of natural processes, the dynamics, composition or structure of the Earth” (Article II).

To be banned by Article I, the use of prohibited techniques must meet all the following criteria:

- be for **hostile purposes**;
- cause destruction, damage or injury to **another State Party**;
- have widespread, long-lasting or severe **effects**.

While not part of the ENMOD Convention, “Understandings” have been drawn up that define the extent, duration and severity criteria (Article I) for application of the Convention.

The definitions are as follows:

- **widespread**: encompassing an area of several hundred square kilometres;
- **long-lasting**: lasting for a period of months, or approximately a season;
- **severe**: involving serious or significant disruption or harm to human life, natural and economic resources or other assets.

As examples, the Understandings also include a non-exhaustive list of phenomena that could result from the use of environmental modification techniques:

- earthquakes and tsunamis;
- an upset in the ecological balance of a region;
- changes in weather patterns (clouds, precipitation, cyclones and tornadic storms);
- changes in climate patterns;
- changes in ocean currents;
- changes in the state of the ozone layer and changes in the state of the ionosphere.

The Second Review Conference of the Parties to the ENMOD Convention identified the military or any other hostile **use of herbicides** as an environmental modification technique that would be prohibited if such use meets the criteria of Article I.

# ADDITIONAL PROTOCOL I: BAN ON THE USE OF METHODS AND MEANS OF WARFARE THAT DAMAGE THE ENVIRONMENT

Protocol I of 1977 additional to the Geneva Conventions of 1949 applies to international armed conflict and contains two specific provisions for the protection of the environment. These provisions are clearly complementary to the ENMOD Convention in the event of armed conflict: while the Convention prohibits deliberate modification of the environment as a means of warfare, Additional Protocol I prohibits attacks on the environment as such, regardless of the means used.

Article 35, para. 3 of Additional Protocol I prohibits the use of “methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment”. This rule establishes an absolute ceiling of destruction that prohibits all widespread, long-term and severe damage to the natural environment, regardless of considerations of military necessity or proportionality.

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*Specific provisions of the Additional Protocol I addressing the protection of the environment are complementary to the ENMOD Convention in the event of armed conflict.*

Using the same language, Article 55 aims to protect the population, whose health and survival in the event of armed conflict could be endangered by damage to the environment. The article also prohibits attacks on the natural environment by way of reprisals.

Other provisions of Additional Protocol I protect the natural environment. Any part of the natural environment that is not a military objective is protected by the general principles and rules on the conduct of hostilities that protect civilian objects, including the principles of distinction, proportionality and precautions.

The Rome Statute of 1998 incorporates some of the prohibitions contained in Additional Protocol I. For instance, the **International Criminal Court** (ICC) has jurisdiction in respect of war crimes that consist in “intentionally launching an attack in the knowledge that such attack will cause incidental [...] widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated” (Article 8, para. 2 [b, iv]). In 2025, the ICC Office of the Prosecutor released a *Policy on Addressing Environmental Damage Through the Rome Statute*. The policy addresses how “environmental crimes may be prosecuted under a variety of provisions in the Rome Statute”.<sup>1</sup>

## BREACHES OF THE CONVENTION BY A STATE PARTY

Any State with reason to believe that any other State is violating the Convention may lodge a complaint with the Security Council of the United Nations, on the basis of which the Security Council may conduct an enquiry (Article V, para. 3 and 4).

Each State Party also undertakes to assist any State Party that so requests, if the Security Council decides that the party concerned has been exposed to danger as a result of a violation of the Convention (Article V, para. 5).

Accountability for violations may also be pursued on the basis of national legislation.

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<sup>1</sup> ICC Office of the Prosecutor, *Policy on Addressing Environmental Damage Through the Rome Statute*, ICC, The Hague, 2025, p. 13: [www.icc-cpi.int/news/policy-addressing-environmental-damage-through-rome-statute](https://www.icc-cpi.int/news/policy-addressing-environmental-damage-through-rome-statute).

## NATIONAL IMPLEMENTATION MEASURES

Each State Party to the Convention undertakes to “take any measures it considers necessary in accordance with its constitutional processes to **prohibit and prevent** any activity in violation of the provisions of the Convention anywhere under its jurisdiction or control” (Article IV).

In particular, each State should enact **criminal legislation** to outlaw and repress the use of prohibited techniques within its territory and anywhere else under its jurisdiction or control. In addition, that legislation should contain provisions to ensure extraterritorial application.

Effective protection of the environment during armed conflict would be made more possible if participation in the ENMOD Convention and in Additional Protocol I were universal. The widest possible adherence to the Convention plays an essential preventative role.

Prevention also involves raising awareness of the existing rules. The States are therefore expected to **make known** the provisions of the ENMOD Convention as widely as possible starting in peacetime.

As the armed forces are the group most directly concerned by the prohibitions laid down in the Convention, these should be included in **military training, military manuals and regulations** concerning the law of war.

Following consultation with an international group of specialists, in 1994 the ICRC drew up a set of *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict* for States to use when incorporating this material into such documents. These guidelines include the prohibitions contained in the ENMOD Convention. The General Assembly of the United Nations has invited all States to “disseminate widely the revised guidelines” and to “give due consideration to the possibility of incorporating them into their military manuals and other instructions addressed to their military personnel” (resolution A/RES/49/50, 9 December 1994). The ICRC updated these guidelines in 2020.<sup>2</sup>

Examples of how States have implemented the ENMOD Convention in their national frameworks are presented in the ICRC’s 2026 *Implementation Guidance on the Protection of the Natural Environment in Armed Conflict under International Humanitarian Law*.<sup>3</sup>

## REVIEW CONFERENCES

The Convention stipulates a procedure for the regular review of the operation of the Convention (Article VIII). The ENMOD review conference has met in 1984 and 1992.

The secretary-general of the United Nations (UN) is the Depositary of the Convention. The Depositary is responsible for soliciting the views of all States Parties concerning the convening of a review conference. If a minimum of ten States respond affirmatively, the Depositary shall take immediate steps to convene the conference (Article VIII (3)). In 2013, the solicitation of views of States Parties on the convening of a third review conference returned fewer than ten affirmative responses, so no conference was convened at the time.

In addition, a majority of the States Parties to the Convention may obtain, by submitting a proposal to this effect to the Depositary, the convening of a review conference (Article VIII (2)).

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<sup>2</sup> ICRC, *Guidelines on the Protection of the Natural Environment in Armed Conflict*, ICRC, Geneva, 2020: [www.icrc.org/en/publication/4382-guidelines-protection-natural-environment-armed-conflict](http://www.icrc.org/en/publication/4382-guidelines-protection-natural-environment-armed-conflict).

<sup>3</sup> ICRC, *Implementation Guidance on the Protection of the Natural Environment in Armed Conflict under International Humanitarian Law*, ICRC, Geneva, 2026 (*forthcoming*).

## CONSULTATION, COOPERATION, SCIENTIFIC EXCHANGE AND THE CONSULTATIVE COMMITTEE OF EXPERTS

The States Parties have a duty to consult each other and cooperate to resolve any problems related to the objectives of the Convention or its application (Article V, para. 1 and 2). In particular, a Consultative Committee of Experts may be convened for that purpose.

Any State Party can make a request to the Depositary of the Convention to convene the Consultative Committee of Experts (Article V and Annex). The Committee can make appropriate findings of fact and provide expert views relevant to any problem raised in relation to the Convention. The Committee's functions and rules of procedure are set out in an annex to the Convention.

The States Parties also undertake to facilitate the fullest possible exchange of scientific and technological information on the use of environmental modification techniques for peaceful purposes, and to cooperate in the economic and scientific realms for the preservation, improvement and peaceful utilization of the environment (Article III).

## THE ROLE OF THE ICRC

The ICRC's involvement in protecting the environment during armed conflict stems from its mandate based on international humanitarian law (IHL) and from the fact that the General Assembly of the UN requested it to do so.

After taking part in the second ENMOD Review Conference in 1992 and in other relevant international forums – notably the Rio Conference (also 1992) – the ICRC organized three meetings of experts on protection of the environment during armed conflict. These meetings informed the 1994 *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict*. In 2009, at a seminar organized by the United Nations Environment Programme (UNEP) and the ICRC, it was agreed that the 1994 guidelines needed to be updated and efforts to promote them stepped up. The Legal Division of the ICRC undertook this work.

The resulting 2020 *Guidelines on the Protection of the Natural Environment in Armed Conflict* take account of developments in treaty and customary law since 1994. They form part of the ICRC's continued efforts to work for the understanding, dissemination and faithful application of IHL in relation to the topic.

In 2023, the ICRC and Switzerland organized a *State expert meeting on international humanitarian law: protecting the environment in armed conflicts*. The meeting brought together over 120 States. It aimed to contribute to progress on national implementation. The chair's summary report presents the results of this exchange.<sup>4</sup>

The ICRC's work leads it to conclude that priority should be given to the universalization of existing treaties and effective implementation of existing rules, i.e. finding ways to enhance knowledge of and compliance with the law on protecting the environment during armed conflict.

Instruments of ratification or accession to the ENMOD Convention are to be deposited with the secretary-general of the UN. The UN Office for Disarmament Affairs is the Secretariat and can advise as the convention's custodian. In addition, the ICRC is available to advise States that are considering acceding to the ENMOD Convention or incorporating it into their domestic frameworks.

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<sup>4</sup> ICRC and Switzerland, *Chair's Summary Report of State Expert Meeting on IHL: Protecting the Natural Environment in Armed Conflict*, ICRC, Geneva, 2023: [www.icrc.org/en/document/chairs-summary-report-state-expert-meeting-ihl-protecting-natural-environment-armed](https://www.icrc.org/en/document/chairs-summary-report-state-expert-meeting-ihl-protecting-natural-environment-armed).

## MISSION

The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. The ICRC also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. Established in 1863, the ICRC is at the origin of the Geneva Conventions and the International Red Cross and Red Crescent Movement. It directs and coordinates the international activities conducted by the Movement in armed conflicts and other situations of violence.



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