



State expert meeting on international humanitarian law: protecting the environment in armed conflicts

Chair's summary

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Introduction

The *State expert meeting on international humanitarian law: protecting the environment in armed conflicts* was held on 24, 26, 31 January and 2 February 2023. It was organized and chaired by Switzerland and the International Committee of the Red Cross (ICRC). The meeting brought together almost 380 experts, primarily from ministries of defense, environment and foreign affairs, from over 120 countries. In addition, expert resource persons from the United Nations Environment Programme (UNEP), the UN International Law Commission (ILC) and the International Union for Conservation of Nature (IUCN) attended certain sessions to support the exchange among states and answer technical questions.

The objective of the State expert meeting was to contribute to achieving realistic and pragmatic progress on the national implementation of international humanitarian law (IHL) relating to the protection of the natural environment in armed conflicts. The meeting did not aim to discuss applicable IHL rules or the legal interpretation of them. Rather, it sought to collectively identify challenges and practices related to the protection of the natural environment in armed conflicts – without criticism regarding the practice of individual states – on three core areas:

1. Disseminating, training and integrating at the national level IHL rules regarding the protection of the natural environment;
2. Assessing the effects of military operations on the natural environment and the implications for operations;
3. Identifying and designating areas of particular environmental importance or fragility as demilitarized zones.

The exchanges were guided by a background document prepared by the Co-Chairs (see Annex) that posed a number of guiding questions on these areas related to the implementation of IHL.

The present chair's summary provides a brief account of the meeting. It does not attribute statements made during the meeting to specific delegations nor does it purport to reflect the consensual view of delegations. This summary is under the sole responsibility of Switzerland and the ICRC.

General remarks

Throughout the meeting, delegations highlighted examples of environmental impacts of armed conflicts, including direct and indirect damage resulting from military operations, and expressed concern for, and ambition to protect, the environment in armed conflicts. Although some degree of damage was referred to as unavoidable, delegations underlined that environmental considerations cannot be ignored and that measures need to be taken to limit conflict-related environmental damage. Some delegations also mentioned that protecting the environment is important as a matter of national reputation.

Together, delegations shared views on practical challenges they have encountered, or could encounter, when seeking to protect the environment in armed conflicts. They noted challenges that arise due to the distinct nature of the natural environment and the technical demands of the topic. Relatedly, some delegations noted that states have differing views on the applicability or interpretation of certain IHL rules and what these require in practice.

Delegations also identified laws, regulations, procedures, policies and good practices that they have developed, or that could be considered, to better protect the environment in armed conflicts. Some of these expressly implement IHL obligations related to the natural environment, while in other cases the policies and practices were unrelated to IHL, or the relationship with IHL obligations was unspecified. In particular, the manner and extent to which domestic environmental regulations that apply in peacetime, or practices undertaken in this context, would apply to military operations in armed conflicts was not always explained in detail. Some noted that what is “feasible in times of peace may not necessarily hold in times of armed conflict”. Others affirmed that peacetime measures influence how they conduct their military operations in armed conflict abroad.

1. Disseminating, training and integrating at the national level IHL rules regarding the protection of the natural environment

Session 1 was dedicated to the dissemination, training and integration of IHL rules regarding the protection of the natural environment at the national level. It focused on challenges and practices concerning measures taken, or that could be taken, *before* the outbreak of an armed conflict as well as general measures that aim to prevent future conflict-related damage to the natural environment. Due to their transversal nature, national implementation measures that may be taken were discussed throughout the different sessions.

1.1. Challenges

The challenges encountered by states can be grouped into four areas. First, the lack of sufficient and adequate instruction and training for the armed forces on how IHL addresses the natural environment. Second, challenges surrounding the lack of personnel and/or units within the army who are trained and assigned to provide specific guidance on the protection of the environment in armed conflict. Third, challenges related to the sometimes weak or vague integration of IHL obligations on the natural environment into domestic frameworks. Fourth, challenges related to the scale and complexity of context-specific environmental risks facing certain states.

Delegations recalled that for IHL rules related to the natural environment to be applied, they must be better known, understood and assimilated. It was observed that the key challenge is the need to raise awareness of existing IHL rules and to effectively implement them in practice. Likewise, some delegations referred to challenges that arise due to the technical demands of the topic. Some expressed that they consider the substance or applicability of certain IHL obligations regarding the natural environment to be unclear, and considered that this can impede their concrete application in practice.

First, delegations shared views on the practical challenges that their states face, or would anticipate, regarding instructing and training armed forces on their IHL obligations regarding the protection of the natural environment. They noted that to increase understanding of IHL rules it is necessary to provide training and instruction for the armed forces on IHL and other relevant environmental protection rules and standards. Some delegations highlighted the lack of systematic integration of IHL rules regarding the protection of the natural environment into their existing IHL training courses. It was also mentioned that training does not always sufficiently acknowledge or adequately reflect the cultural identity and local norms and values of the audience. In addition, training should be both theoretical and practical to ensure personnel comprehend and are able to apply the content. This was summed up with the epithet “train as you fight.”

Second, delegations mentioned the lack of experts or units within the army specialized in environmental protection in armed conflict. As the protection of the environment in armed conflict cuts across many areas, some delegations emphasized the importance of having environmental specialists and legal advisers as close as possible to military decision-makers. An additional important challenge is ensuring effective coordination between the military and civilian stakeholders, so that information is available when it is needed.

Third, delegations reflected and shared views on the practical challenges that their states face or would anticipate regarding the integration of environmental protection into doctrine, standard operating procedures and national legal and policy frameworks. Delegations mentioned the importance of integrating environmental considerations in domestic laws and military manuals, ensuring their compatibility with international obligations, and adapting them as necessary.

Some delegations noted the absence of domestic laws, regulations, standard operating procedures and policies on the protection of the environment in armed conflict. Others mentioned that when they do exist, there may be gaps or a lack of clarity on their scope of application. The reasons may vary: more general environmental laws and regulations do not apply in armed conflicts and/or to the armed forces, or only partially; or they do not address environmental issues specifically related to armed conflicts. It was also mentioned that tensions may exist between national and regional legislation. In addition, foreign armed forces may not be familiar with local environmental protection legislation or standards in the host state, which can create uncertainty about the applicable framework. The lack of enforcement and accountability mechanisms for unlawful acts harming the environment was also mentioned as a challenge.

Finally, delegations also shared challenges related to the scale and complexity of context-specific environmental risks, including the difficulty of coping with climate change, demining, deforestation and desertification, the protection of natural resources, as well as mitigating the environmental footprint of military operations and training (for example through waste management, green procurement of military equipment, limiting noise pollution, saving water and reducing CO² emissions). These require expertise and resources (e.g. time, financial, human), and can constitute an additional competing work stream for personnel who are already busy. In this context, delegations emphasized that international support as well as cooperation and assistance between states is crucial.

1.2. Good practices

Delegations shared many practices that their states have developed, or would consider useful, to overcome the challenges described above.

First, delegations stressed the importance of integrating IHL addressing the natural environment into military doctrine, education and training, and of providing effective education, training and exercises for the armed forces. It was explained that “prevention costs less than compensation”. Delegations shared numerous examples of military doctrine, education and training that expressly incorporate IHL rules relating to the protection of the natural environment. Others are working on, or are considering developing or adapting, resources to consider these rules more adequately. More generally, broader environmental directives, training, policies and practices of the armed forces on the protection of the environment in military operations were highlighted, but their relationship with IHL rules addressing the natural environment and/or how they apply in armed conflicts was not always explained in detail.

Delegations underlined that, to be effective and efficient, education should be “contemporary”, “tailor-made”, and engaging; training should appropriately consider the cultural identities, local norms and values of the audience so that it “resonates” with those concerned. Materials and tools should be “easy to use and easy to understand”. Training should be comprehensive to allow people to capture the technical demands of the topic. For instance, an example was shared of adapting training so that IHL rules addressing the natural environment are

considered in a continuous and detailed manner, to ensure commanders understand the importance of taking into account immediate and long-term effects of military operations on the environment, as well as indirect environmental effects. Furthermore, training should be both theoretical and practical, including through field exercises. Delegations also shared examples of education and training aimed at different levels – from commanders, to soldiers, to personnel with environmental responsibilities in conflict situations. Some noted that they tailor training to provide more specialized pre-deployment training for soldiers who will be deployed on missions involving hostilities and for those involved in tactical decision-making.

The following examples were shared of resources used for education and training on IHL, at times specifically including its rules on the protection of the natural environment: courses (including with academics and third-parties) and modules on self-learning online platforms, manuals, guidebooks and toolboxes, audio and video material, interactive video games, maps, case study analyses and practical simulations. Other similar examples were shared related to environmental protection more generally by the armed forces, not necessarily linked to IHL. Some of these materials are prepared jointly by several states, or were produced with the support of other states or relevant experts. Specific areas of training were mentioned, including on demining, hazardous materials and minimizing environmental impacts of heavy weapons. Delegations also underlined the value of organizing individual or joint military exercises to increase understanding of IHL rules and to share knowledge on how to observe them in practice.

Second, regarding specialized staff within the armed forces, some delegations mentioned they have legal advisers to the armed forces or other personnel that they train on IHL rules protecting the natural environment for the purpose of providing concrete advice to military commanders. Some states have created such pools of experts or are considering creating them. Furthermore, delegations highlighted the importance of tasking personnel or units in the ministry of defence and the armed forces with environmental responsibilities. Delegations shared examples of such staff supporting field training, for example to provide expertise on reducing environmental damage or assessing such damage, while others mentioned the need for more of them.

Third, delegations underlined the importance of integrating IHL, including its rules protecting the natural environment, into national legal and administrative frameworks and of disseminating these rules to the general population. Some mentioned that their state has ratified or acceded to international treaties that protect the environment in armed conflict, or is considering doing so.¹ As a means to improve protection, one participant proposed consultations to prepare a draft international agreement on the protection of the natural environment during armed conflicts, similar to the framework that exists for cultural property, including special protection of certain natural areas. Delegations also shared examples of domestic laws and regulations, for instance on assessing the environmental effects of operations in the production of military equipment and criminalizing unlawful acts against the environment in armed conflicts. Finally, although not specifically related to armed conflict, some delegations also mentioned adherence to relevant international environmental management standards, including ISO 14001, and explained their relevance for how defense forces plan for waste management and spill response.

¹ Treaties mentioned in this respect included the Geneva Conventions (1949) and their Additional Protocols of 1977, the Treaty on the Non-Proliferation of Nuclear Weapons (1968), the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1976), the Statute of the International Criminal Court (1998), the African Convention on the Conservation of Nature and Natural Resources (2003), and the Treaty on the Prohibition of Nuclear Weapons (2017).

Delegations spoke about different agencies with environmental responsibilities, including military and civilian authorities, as well as the importance of coordination between them, as relevant to the integration of IHL on this topic into national legal and administrative frameworks. Agencies for the protection or conservation of nature were highlighted in this regard. For instance, armed forces may draw from the expertise of other national authorities in identifying environmental vulnerabilities and preventing environmental harm, taking into account the knowledge we have today. Delegations also mentioned the contribution of other relevant actors, including National Red Cross and Red Crescent Societies, for example in training. Some delegations also stressed the importance of collaborating with relevant organizations, including the ICRC, when preparing IHL guidance material, conducting training activities and exchanging good practices. The [International Law Commission's Principles on the protection of the environment in relation to armed conflicts](#) as well as the [ICRC Guidelines on the Protection of the Natural Environment in Armed Conflict](#) were mentioned as possible tools to increase understanding of relevant IHL rules and their application in practice.

Finally, delegations also shared examples of the use of international and national fora, platforms or initiatives to increase awareness of relevant IHL rules, including among the general population, and promote their implementation. For example, states organize or attend workshops or conferences. They make pledges at the International Conference of the Red Cross and the Red Crescent and implement them. The use of public websites by states to disseminate IHL and on the implementation of relevant obligations was also mentioned.

It is clear from the contributions that environmental protection in armed conflicts and the implementation of these measures is a long-term task. Delegations recalled the importance of taking implementation measures proactively in peacetime to ensure that IHL obligations are better applied when armed conflicts break out.

2. Assessing the effects of military operations on the natural environment and the implications for operations

Session 2 focused on assessing the effects of military operations on the natural environment and the implications for operations.

Delegations observed that military operations in armed conflict can result in direct and indirect as well as in intended and unintended environmental damage. Climate change was also mentioned as an additional factor impacting the environment that militaries should be aware of. While delegations identified challenges to assessing environmental impacts of military operations and to taking them into account, they also shared a variety of practical measures that armed forces are taking, or could take, to consider environmental impacts of military operations before, during and after armed conflicts.

2.1. Challenges

The challenges encountered can be grouped in five areas. First, challenges arising due to the distinct nature of environmental damage as compared to other types of conflict-related damage. Second, challenges that accompany a lack of sufficient national regulation, resources, skills or tools. Third, a lack of awareness among personnel with planning responsibilities regarding how IHL protects the natural environment. Fourth, the challenge of silos between staff planning military operations and staff with expertise on environmental protection. Finally, challenges surrounding the remediation of conflict-related environmental damage.

Regarding the first set of challenges, delegations distinguished the nature of environmental damage from other types of conflict-related damage in broadly four ways. First, damage to the environment may not be immediately apparent to the eye in the manner that loss of civilian life, injury or building destruction can be. Instead, the effects can take time to be felt or require technical expertise to assess, though this does not mean they are not grave. Second, environmental damage may flow from a chain of events – or a combination of factors – rather than a single act, and this can be a challenge to commanders who must consider damage that is reasonably foreseeable in the application of relevant IHL, such as the rules implementing proportionality and precautions in attack. Third, assessing environmental damage in peacetime would typically depart from a baseline study against which environmental change is measured. This baseline tends to be less available in conduct of hostility scenarios, so damage often needs to be estimated via recourse to other sources of information. Fourth, some delegations mentioned that determining the parts of the natural environment to take into account when planning military operations – in a manner that is realistic for commanders – is difficult. To determine this, some look to which elements of the natural environment are relied on for health or survival by civilians, which can also be complex to determine; some adapt planning when there are environmental areas known to be important or fragile in the operation area, including on the advice of environmental agencies; and some plan to reduce risks to valuable natural resources.

Second, delegations highlighted the lack of sufficient national regulation, resources, skills or tools as a significant challenge. For example, some mentioned they do not have new technologies or tools to measure the impact of military operations on the environment. Furthermore, while some delegations emphasized that they have specialized staff with

environmental protection responsibilities within their armed forces, others identified the absence of such staff as an impediment to reducing environmental impact. Where such staff exists, it was noted that the intensity and type of military operations may not always permit their extensive involvement during operations. The lack of prior knowledge of the duration of an operation might also be a challenge for putting in place complex or long-term environmental protective measures. Finally, it was pointed out that environmental impact assessments developed for peacetime projects are not always well-adapted for military operations. It is difficult to carry out environmental impact assessments in areas of active hostilities or in the vicinity of military positions of the adversary.

Third, a lack of awareness of existing IHL rules regarding the protection of the natural environment – leading to failure to effectively implement the rules during operational planning – was identified as a significant impediment to avoiding environmental damage. In connection with this, some noted that staff involved in planning an operation may tend to focus on IHL rules related to the protection of civilians, viewing environmental concerns as less important; others gave examples illustrating how environmental damage has knock-on impacts for civilians too.

Fourth, the existence of silos between staff planning military operations and staff with expertise on environmental protection was mentioned as another challenge. It was observed that specialized information is required to minimize environmental damage, but that military operational planning is not always coordinated with units or staff with environmental protection expertise, including because planners can have different priorities.

Finally, some delegations emphasized the challenges they face regarding the remediation of conflict-related environmental damage. One of the issues mentioned was scale: large swathes of territory can be impacted by soil and water contamination resulting from hostilities, or by conflict-related deforestation. Delegations described how the implications for clean-up can be immense, long-term, and time-sensitive.

2.2. Good practices

Delegations shared a range of good practices related to the assessment of environmental factors and integration of these into the planning of military operations. These can be grouped into six general areas.

First, a number of delegations stressed the importance of anticipating environmental aspects in planning from the beginning and then at different stages throughout the operational cycle and shared their practice. Some specified they implement this assessment via various environmental risk analysis processes. For instance, relevant environmental data on the area of operations is collected, including local environmental legislation and infrastructure as well as locations prone to environmental hazards and fragile or protected ecosystems, before deployment. This information is then included in operational orders, allowing actors involved to be aware of environmental issues and to take measures to protect and preserve the area from harm. In addition, prior to or during a military operation, the practice of conducting collateral damage assessments to assess reasonably foreseeable expected damage was referred to, together with doctrine that includes the natural environment as an element to factor into such assessments. After a military operation, delegations referred to the practice of conducting an “after-action review” or “battle damage assessments” that include within their scope a review of environmental damage to inform future operations.

Second, delegations observed that measures related to environmental protection or management are relevant not solely during the conduct of hostilities but rather throughout the entire military campaign or operation. Some delegations emphasized that armed forces personnel responsible for planning consider environmental risk factors, for instance in relation to training and capacity development, in the establishment of bases or camps, and in logistics. An example given was the preparation of maps for training exercises that feature an environmental protection annex and accompanying instructions for training instructors. To operationalize this more holistic view of environmental risks, some delegations establish a clear operating structure and processes, assign environmental responsibilities, and deliver training and capacity-building for staff of different ranks on environmental protection.

Third, delegations emphasized that assessment and integration of environmental factors into the planning of military operations rests on whether the necessary expertise and tools are available. It was affirmed that environmental damage can be avoided and minimized if planning takes place but, given the complexity of the planning process, a systemized approach to collecting and integrating environmental information was deemed critical. In this respect, delegations shared a wide range of examples of tools that can facilitate the collection and analysis of data on environmental effects. These include the use of dedicated databases or data sheets to track military activities, products or services that impact the environment. Examples were given of information that can be gathered therein, including data on waste generation, the use of ammunition, water consumption, chemical or accident-related emissions, and greenhouse gas emissions. This information is reported on by different parts of the defense sector and its partners, and can serve to inform measures to protect the environment, such as changing what types of ammunitions are used. Another example cited was a collaboratively produced guidance document that contains technical and practical recommendations to minimize environmental impacts of the use of heavy weapons during training. Relevant to many of these tools, the reflection was shared that it is key to present environmental data in an accessible format so that it is easily understandable by military personnel. Finally, the resources of the joint UNEP-OCHA environment unit, which address environmental issues in emergencies, including armed conflict situations, were also shared.²

Still on the topic of tools, delegations highlighted advances in technology as having the potential to minimize environmental damage resulting from military operations. The use of technology to conduct geospatial analysis was given as an example: armed forces can obtain understandings of the natural environment in which they plan to operate via geospatial analysis in the form of maps, charts, and reports. So far, this technology has been used in disaster and relief activities of the armed forces, for instance to identify information about ports or naval landing points. It was suggested that it could also be relevant to assess environmental effects of military operations in armed conflict.

In addition to these examples of practical tools, delegations also shared practice on how they inject environmental expertise into military operational planning. Generally, this can involve the establishment of staff or units within armed forces with specific environmental expertise and responsibilities, for example to conduct an environmental study prior to deployment or as soon as possible thereafter. Moreover, some states have appointed environmental coordinators or other personnel to oversee environmental management in military operations, or are considering doing so. It was emphasized that during the conduct of hostilities, it is important to have legal and environmental advice available to commanders. Delegations explained that

² See UNEP/OCHA Joint Environment Unit, [Environmental Dimensions of Emergencies](#), web resources available online.

legal advisers are not always well-equipped to assess environmental impacts; an example was given of training them on environmental assessments. A suggestion was made to explore the idea of involving experts in the decision-making chain to systematically integrate environmental considerations during military operations, including to advise against certain attacks.

Another factor considered important was coordination between the armed forces and national agencies with environmental responsibilities. Delegations gave examples of joint work with environmental agencies, for instance to address environmental issues arising from conflicts around natural resources. Coordination with water and forest agencies during planning or for environmental impact assessments was also mentioned. It was noted that such agencies can have useful knowledge otherwise unknown to the armed forces. Further, it was observed that, in joint operations, information should flow between environmental experts in host nations and partner forces. Finally, delegations also suggested that, if feasible, it might be advisable to engage and consult with local communities in the planning of military operations and when seeking to address environmental remediation, including in demining activities.

Fourth, delegations stressed the importance of measures and policies overseen by national bodies mandated with environmental responsibilities and of national laws addressing environmental governance. These are important because they can determine how environmental protection is put into practice by the armed forces. Generally, examples given of relevant national bodies include agencies for security, energy and the environment, national forestry commissions, as well as national institutes of ecology and climate change. With regard to relevant laws, examples include those on ecological balance, national waters, wildlife, sustainable forestry development, and climate change. In compliance with these national requirements, the following practices of armed forces to minimize their environmental impact were mentioned: the monitoring and evaluation of energy and fuel use; the management of water and solid waste; efforts to reduce carbon emissions; and conducting environmental baseline studies accompanied by subsequent close-out studies to monitor environmental impact of a given armed force activity and identify lessons learned.

The extent to which these national-level environmental governance institutions and standards expressly regulate armed force activities was not always specified, or at times such regulations apply with caveats around what is feasible in military contexts. However, it was pointed out that although divisions exist for some states between domestic peacetime practices on the one hand and operational practices in armed conflict on the other hand, they can impact each other. How armed forces train influences how they fight. For instance, the application of good environmental standards, which originate from national environmental governance institutions or laws, in training can shape the behaviour of the same forces when they act abroad. To illustrate, it was mentioned that the expertise gained in protecting water during military training, although in peacetime, could also limit contamination of water in wartime, despite constraints of hostilities.

While not specifically related to military operations in armed conflicts, some delegations drew a parallel with the planning and preparatory activities undertaken by armed forces assisting populations impacted by disasters, pointing out that this tends to involve the processing of information on the environment. An example was also cited of armed forces being tasked with certain projects to proactively limit environmental degradation in conflict-affected areas.

Fifth, the sharing of expertise was deemed particularly valuable, because mitigating the effects of military operations on the natural environment is a relatively technical topic. The following

were mentioned as examples of existing collaboration: a multinational center of excellence dedicated to climate change and security, the function of which will include evaluating the impact of military operations on the environment; coordination and exchange of information among the involved authorities in an operational theatre (an example was given of that between a host nation and NATO member states); and jointly-produced guidance on how environmental impacts can be mitigated in heavy weapons training. The prospect of future joint training and simulation exercises with elements related to minimizing environmental impact was welcomed.

Finally, some delegations referred to practices undertaken in the legal review of new weapons, means and methods of warfare, an obligation for States party to Additional Protocol I.³ It was noted that it is preferred for a review to be undertaken as early as possible in the study, development, acquisition or adoption of a new weapon, means or method of warfare, and that as part of the review information on the intended and likely effects on the natural environment should be collated. It was further suggested that independent technical experts with a background in environmental sciences be included in these legal reviews. An example given was a review process conducted by legal defence services that consider health-related and environment-related considerations in assessing the legality of a particular weapon. Questions asked as part of this review included whether scientific examinations have been conducted by the manufacturer, what kind of damage is expected to be caused directly or indirectly to the natural environment, and whether a weapon is intended to destroy or modify the natural environment. Another example given was the consideration of the environmental impacts of discarded shell casings.

³ See Article 36 of Additional Protocol I.

3. Identifying and designating areas of particular environmental importance or fragility as demilitarized zones

Session 3 focused on the challenges and practices of identifying and designating areas of particular environmental importance or fragility as demilitarized zones or as otherwise protected in armed conflicts.

Delegations underscored the relevance of this topic due to the impact of armed conflict – sometimes irreversible – on these areas. Such areas are vital assets for their countries for reasons including their economic significance for local communities, and because the environment is to be safeguarded for future generations. In this regard, it was stressed that a narrow focus on the protection of civilians to the exclusion of the environment would be incomplete because civilians ultimately depend on the environment.

Discussions during this session did not focus solely on demilitarization. The exchange also considered challenges and practices related to the identification and prioritization of relevant areas, and how they might be better protected in armed conflict more broadly beyond demilitarization measures.

3.1. Challenges

Delegations shared challenges across five areas.

First, delegations observed that there are large numbers and different categories of protected environmental areas within their territory.⁴ Given this variety, selecting which of these may be candidates for demilitarization, and/or for the armed forces to take into account in another way, thus requires a potentially complicated inventory or prioritization process. Moreover, some delegations noted that cross-border coordination is required to manage, protect and preserve some of these environmental areas; indicating that decisions about their governance in armed conflict would need joint attention.

Second, some delegations explained that the challenge is not the identification of areas of particular environmental importance or fragility as such. Rather, it is not always feasible for armed forces to take these into account, or there may be a lack of clarity and awareness as to the implications of these zones for armed forces in armed conflicts. In this regard, delegations shared concrete examples of the kind of dilemmas that arise. For instance, in one context, plateaus and slopes are environmentally fragile in that they are susceptible to pollution and erosion, yet they are points of strategic importance for the armed forces. In other contexts, protected environmental areas host activity by armed groups or criminal actors, such that armed forces need to undertake operations there. In connection with this, it was observed that research indicates an overlap between conflict and biodiversity hotspots.⁵ For reasons such as these, elsewhere, states have seen value in the notion of voluntary designation of particular areas as protected zones in armed conflict in order to prevent conflict-related environmental harm. In this regard, some delegations mentioned the *ILC Principles on the protection of the*

⁴ See Section 3.2 for examples of the frameworks that establish such areas.

⁵ See for example T. Hanson et al., "Warfare in biodiversity hotspots", *Conservation Biology*, 2009, Vol. 23, No. 3, pp. 578–587; IUCN, [Conflict and Conservation](#), IUCN, Gland, Switzerland, 2021.

environment in relation to armed conflicts.⁶ Finally, complexity was flagged around the role of conservation personnel such as park rangers, and to what extent they might overlap with parties to conflict.

Third, some delegations noted that the topic discussed is relatively new for them, though they remained interested in learning from the experience of others. In this vein, some clarified that they have no practice when it comes to protecting areas of their environment specifically in armed conflict, and thus offered comments in an exploratory fashion. It was noted by different delegations that further consideration of this topic was underway domestically.

Fourth, some delegations questioned the utility of demilitarization as a source of environmental protection. As a counter example, practice was shared whereby armed forces can work with conservation actors to achieve joint interests. For instance, armed forces need expanses of land for their installations and exercises, and there are opportunities to establish these in a manner that enhances climate change adaptation measures and restores conservation habitats.

Finally, some delegations raised questions about how mutual agreements between states for the protection of such areas in armed conflict could feasibly be achieved. Challenges mentioned in this regard included the complexity arising due to the variety in the types of protected areas within states' national frameworks and the number of these, including the fact that they can cover considerable territory. Another challenge identified was that states often work with partner forces or in coalitions, such that agreements to demilitarize certain zones might also merit agreement from partner forces or parties to armed conflict who would need to protect that zone.

3.2. Good practices

Delegations shared a range of good practices, which can be grouped into three broad topics: existing practices both in peacetime and in armed conflict; the potential for coordination between environmental conservation actors and armed forces; and exploratory ideas for future improvements to policy and practice.

First, delegations shared existing practices on how they identify different categories of protected areas based on national, regional, and international criteria. Under national laws, regulations or policies, areas such as parks, fauna reserves, wetlands and forests are protected in different ways. Other environmental areas protected domestically include national heritage sites, biotopes, rainforests and other forestry reserves, arid zones vulnerable to bush fires, areas rich in natural resources, breeding grounds, pasturing grounds, and bird life reserves for migrating birds. Some areas are identified by reference to international environmental law conventions to which states are party, including wetlands under the Ramsar Convention, natural heritage sites under the World Heritage Convention, and the Emerald Network under the Bern Convention. Some are identified pursuant to regional laws, such as the Natura 2000 protected areas network under the European Union Nature Directives. Importantly, such practice relates to the identification and designation of important or fragile

⁶ See notably Principle 4, "Designation of Protected Zones": "States should designate, by agreement or otherwise, areas of environmental importance as protected zones in the event of an armed conflict, including where those areas are of cultural importance."

environmental areas, not whether and how these are relevant for the planning or conduct of military operations by armed forces.

More specifically then, some delegations shared practice whereby the doctrine or guidance given to their armed forces includes the identification – including via recourse to above-mentioned frameworks – of certain areas of particular environmental importance or fragility on their own territory. In particular, examples were cited regarding military maps for troops in training or operations that use special symbols to mark key environmental protected areas. Other examples included a law on environmental protection that expressly includes a provision on demilitarized zones, as well as a military operational law manual that refers to the *possibility* of establishing a demilitarized zone for environmental protection purposes, as an option available for consideration by legal advisers. Some delegations noted that regional environmental laws are integrated into military planning, such that selected habitats and species are granted enhanced protection during military training.

Delegations also shared examples of cross-border peace parks established between states both to preserve the environment and to promote peace by excluding conflict-related activities from the space, under the remit of the United Nations Educational, Scientific and Cultural Organization (UNESCO). To facilitate inter-state cooperation on the governance of such parks, they pointed out that it is critical to work hand-in-hand with local communities, including indigenous peoples. Inter-state commissions between national park entities and environmental ministries are in place to manage these parks, with support from UNESCO and IUCN. Furthermore, a cross-continental coordination network to track and facilitate prosecution of environmental crimes – such as illegal wildlife trafficking – was given as an example of an effective way to pool resources to address environmental threats in certain protected areas.

A different example was given of an area of particular environmental importance or fragility, constituting a cross-border national park, where fighting with armed groups is taking place; the concerned state has made efforts to exclude any human activity, including via demilitarization. Another example was cited of a range of islands demilitarized via bilateral and multilateral agreements among concerned states. Notably, the latter example did not have an environmental protection purpose associated with it. In such cases – where demilitarization is agreed for purposes other than conservation – it was observed that demilitarized zones can nevertheless be promising opportunities for conservation of biodiversity along-side conflict management or peacebuilding.

Second, delegations stressed that coordination between armed or other security forces and environmental ministries or related national agencies is key to guard against risks to protected areas. In both peacetime and armed conflict, it was observed that monitoring areas of particular environmental importance or fragility involves conservation personnel with specialized skills. Accordingly, liaison between conservation actors and armed forces could help both sides work together to mitigate conflict-related risks to the environment. In this regard, some delegations noted that they have expert staff within environmental agencies who are trained in research and in addressing security concerns or conflict-sensitive measures. An example was given of units within the Ministry of the Environment that are comprised of multi-disciplinary professionals trained to respond to crimes related to wildlife trafficking or poaching, and who work closely with security forces.

Third, when discussing how the protection of relevant environmental zones might be made relevant for those planning military operations, delegations suggested possible avenues to

improve future policies and practices. To raise awareness in the armed forces, it was proposed to include references to certain environmental areas in military training and to enhance coordination with national environmental ministries or bodies. The need to involve local communities, including indigenous persons, notably when identifying what zones are environmentally important or fragile was mentioned. It was also noted that, if damage is to be limited, it is not only the physical environmental areas as such that require protection, but also the environmental governance infrastructure in place to maintain conservation. A proposal was made to hold consultations to explore some form of agreement between states to grant special protection to certain environmental areas in armed conflict and suggest ways to minimize damage when operations are conducted therein. Another suggestion was to harmonize codes of the armed forces on this topic to agree on the specific areas of environmental importance that are relevant to military operations in armed conflict. These zones could then be represented on maps and included in training more easily.

Importantly regarding future prospects, it was suggested that – given the number and different categories of protected environmental areas – a prioritization exercise would be important so that measures to take them into account are feasible and practical for armed forces. In this vein, it was suggested that such areas should be identified via recourse to existing peacetime frameworks as a starting point, from which a priority list in armed conflict could be refined. Such a list established in peacetime could prove fruitful in the event of future conflict. Decisions on prioritization could for instance be based on key biodiversity areas, or on the natural sites identified under the World Heritage Convention. The World Heritage Convention was identified as particularly relevant because it makes reference to armed conflict, and because natural sites listed as World Heritage are selected via the international body of the World Heritage Committee, thereby giving it a degree of objectivity. The international legal framework on the rights of indigenous persons, including the Declaration on the Rights of Indigenous Peoples, was also mentioned as an important consideration in any measures to protect environmental areas in armed conflict. This is because there is likely to be much overlap between areas of important biodiversity and the lands of indigenous peoples.

Finally, the discussion also indicated that the protection of particularly important or fragile environmental areas could be achieved via measures other than full demilitarization. It was remarked that the best protective measure would be to avoid armed conflicts from the outset. Other delegations proposed the following alternative or additional measures: a policy of avoiding the location of troops and military objectives in such zones where feasible (but short of a commitment to full demilitarization); informing the adversary of such zones; establishing specialized units within armed forces operating in cross-border areas of particular environmental importance or fragility to strengthen respect for the environment; and collaboration between military and conservation actors around such zones.

Conclusion

Switzerland and the ICRC consider that the *State expert meeting on IHL: protecting the environment in armed conflicts* facilitated meaningful dialogue between states on challenges and practices. The level of interest that the meeting generated from all regions of the world, and the commitment of delegations to protecting the environment in armed conflicts, highlights the importance of the topic.

As delegations pointed out, discussions during the meeting were rich and substantial. The experiences shared by delegations differ, yet often echo each other. This means that there is potential to learn from one another – be it within a single state or among states. As one delegation observed, “this [meeting] is an opportunity to hear and take inspiration from what other countries have done and from their experience in this field.”

Switzerland and the ICRC hope that the good practices identified during the meeting and gathered in this report will inspire efforts to advance IHL implementation at the national level and encourage states to continue reflecting on measures they could take to improve their practices, tailored to the specificities of their contexts. States are invited to keep Switzerland and the ICRC informed of any follow-up action they may take in this regard. We stand ready to continue engaging on this.



Annexes

The annexed Agenda and Background Document were prepared under the sole responsibility of Switzerland and the ICRC to guide exchanges during the *State expert meeting on international humanitarian law: protecting the environment in armed conflicts*, which was held on 24, 26, 31 January and 2 February 2023.

State expert meeting on international humanitarian law: protecting the environment in armed conflicts

Agenda

The time zone referred to throughout the agenda is Geneva time (CET).

24 January 2023 (online)

- | | |
|---------------|---|
| 14:00 – 14:25 | Introduction to the State expert meeting on international humanitarian law (IHL) |
| 14:25 – 14:35 | Introduction to session 1: Disseminating, training and integrating at the national level IHL rules regarding the protection of the natural environment |

In view of the impacts that armed conflicts may have on the natural environment and, in turn, on people, the adoption of concrete implementation measures at the national level remains necessary. States can take a number of actions to protect the natural environment, including the dissemination of relevant IHL rules and integration of these in the doctrine, education, training and disciplinary systems of the armed forces as well as in national legal and policy frameworks. Sound acquaintance of IHL rules and implementation of these is essential for their effective application and, ultimately, the protection of victims of armed conflicts.

- | | |
|---------------|---|
| 14:35 – 16:00 | Discussion: Challenges and good practices in disseminating, training and integrating at the national level IHL rules regarding the protection of the natural environment |
|---------------|---|

Based on the background document, experts are invited to reflect and share views on the practical challenges and practices that their state has developed, or that it would consider useful to develop, on the dissemination and training of IHL (e.g. instructing armed forces on the protection of the natural environment). They are also invited to reflect on the practical challenges their respective state has experienced, or would anticipate, regarding the integration of IHL rules regarding the protection of the natural environment, and on relevant practice (e.g. integrating the protection of the natural environment in the doctrine and standard operating procedures of the armed forces as well as in national legal and policy frameworks).

26 January 2023 (online)

14:00 – 14:10 **Introduction to session 2: Assessing the effects of military operations on the natural environment and the implications for operations**

Military operations can damage the environment. The consequences of such environmental damage for conflict-affected populations can extend to their health, food security and livelihoods, particularly as climate risks exacerbate environmental degradation. New weapons, means and methods of warfare also raise questions as to their effects, including on the environment.

This session aims to explore measures that may be taken to improve military understandings of environmental impacts of the conduct of hostilities. It also aims to facilitate an exchange on corresponding steps that states could take to reduce incidental damage to the natural environment during the conduct of hostilities (including in the review of new weapons, means and methods, as relevant).

14:10 – 16:00 **Discussion: Challenges and practices in assessing the effects of military operations on the natural environment and the implications for operations**

Based on the background document, experts are invited to reflect and share views on the practical challenges their respective state has experienced, or would anticipate. Challenges may relate to the assessment of the effects of military operations on the natural environment. They may also concern the implementation of that information in the conduct of hostilities to minimize incidental damage to the natural environment. Experts are also invited to reflect on the practices their state has developed, or that it would consider useful to develop, on this.

31 January 2023 (online)

14:00 – 14:10 **Introduction to session 3: Identifying and designating areas of particular environmental importance or fragility as demilitarized zones**

Areas of particular environmental importance or fragility – such as national parks, natural reserves and endangered species habitats – are especially vulnerable in armed conflicts. Effects of military operations in such zones may cause serious damage to the environment and the local population.

By establishing a demilitarized zone, parties to a conflict could agree to keep areas of particular environmental importance or fragility off-limits to military operations. Combatants and military equipment could be excluded from such zones, and the zones could only be attacked if they contain a military objective. The designation of such zones as demilitarized is a voluntary measure: there is no obligation in IHL to establish such zones. They constitute one way states may choose to enhance the protection of their national zones of environmental importance. While not without complexity, this kind of area-based demarcation may offer commanders the kind of clarity that is helpful to guide operational planning.

This session aims to explore measures that may be taken to identify areas of particular environmental importance or fragility and designate them as demilitarized or otherwise protected in armed conflicts. It also aims to address challenges for achieving the protection of such areas – once designated – in practice.

14:10 – 16:00 **Discussion: Challenges and practices in identifying and designating areas of particular environmental importance or fragility as demilitarized zones**

Based on the background document, experts are invited to reflect and share views on the practical challenges their respective state has experienced, or would anticipate, in identifying and designating such areas of particular environmental importance or fragility as demilitarized zones or otherwise protected. Experts are also invited to reflect on the practices their state has developed, or that it would consider useful, in this regard.

2 February 2023 (online, followed by a reception in Geneva)

14:00 – 15:15 **Summary and closing remarks on the thematic issues addressed in the previous sessions**

This session starts with an executive summary of the discussions from sessions 1 to 3. Technical experts as well as representatives from the permanent missions to the United Nations in Geneva may ask questions or make comments. They may also share additional views on challenges and good practices to better protect the environment in armed conflicts, in relation to the three core areas and practical issues discussed at the previous sessions. General reflections on the content of the State expert meeting and delegations' closing remarks are welcome.

15:15 – 15:30 **Closing remarks by the Co-chairs**

17:00 – 19:00 **Reception for Geneva-based participants**



Background document

This document seeks to provide background information to facilitate an exchange among state experts on how to overcome challenges in protecting the environment in armed conflicts, at a four-day meeting organized by Switzerland and the International Committee of the Red Cross (ICRC). The document outlines the relevance of the topic, the objectives and the methodology of the meeting and sets out details related to participation. It then poses a number of guiding questions on three core areas and practical issues that Switzerland and the ICRC invite experts to consider. It also summarizes relevant international humanitarian law (IHL) rules.

Relevance of the topic

The natural environment has frequently remained a silent casualty of war. Military operations can cause significant harm to the natural environment, including due to direct attacks against it or incidental damage resulting from the use of certain methods or means of warfare. It is also affected by damage or destruction to the built environment across urban and rural areas, including industrial complexes and solid and hazardous waste sites. The indirect effects of conflicts, such as the collapse of governance and the deterioration of infrastructure service systems, can cause further environmental degradation. Direct and indirect impacts include the contamination of water, soil and land and the release of pollutants into the air, and can persist for years or decades after wars end. Biodiversity is also impacted: Conservation Biology scholars have concluded that over 80% of all major armed conflicts between 1950 and 2000 took place directly in biodiversity hotspots.

These environmental consequences, in turn, threaten people's health, livelihoods and security. Today, the harm for dependent communities is compounded by climate risks. Of the 25 countries most vulnerable to climate change and least ready to adapt, 14 are mired in conflict. Ultimately, environmental degradation and destruction can also undermine peacebuilding efforts. Protecting the natural environment in armed conflict is therefore in the interest of all, including parties to armed conflicts.

The environmental degradation and destruction resulting from armed conflict has been a source of concern for the international community for decades. Yet, its scale is still often underestimated and it is not always a priority for warring parties. There is now, once again, a growing global momentum on the need to take action to protect the environment and mitigate the effects of climate change. This meeting fits within these efforts and seeks to provide an opportunity to support discussions among states on the implementation of applicable treaty and customary IHL rules protecting the natural environment in international and non-international armed conflicts. Better respect for these rules can limit the environmental impacts of armed conflicts and their resulting consequences on conflict-affected populations.

Objective

The objective of the State expert meeting is to contribute to achieving realistic and pragmatic progress on the national implementation of IHL relating to the protection of the natural environment in armed conflicts. To do so, the meeting will aim to collectively identify challenges and practices related to the protection of the natural environment in armed conflicts. It will facilitate an exchange about domestic laws, regulations, procedures, policies and good practices that states have developed, or that could be considered, to address challenges.

Experts will focus on ways and means for states to seek better protection of the natural environment related to three core areas and practical issues:

1. Disseminating, training and integrating at the national level IHL rules regarding the protection of the natural environment;
2. Assessing the effects of military operations on the natural environment and the implications for operations;
3. Identifying and designating areas of particular environmental importance or fragility as demilitarized zones.

Methodology

To facilitate substantive discussions and exchange of practices on concrete challenges to the protection of the natural environment in armed conflicts, the background document poses a number of guiding questions on the abovementioned three core areas and practical issues related to the implementation of IHL. Based on these questions, experts are invited to reflect on and discuss the practical challenges they have encountered, or could encounter, when seeking to ensure the protection of the natural environment in armed conflicts. They are encouraged to do so with relevant international law and internationally recognized standards in mind.¹ Experts are also invited to share the practices they have developed, or would consider useful, to overcome such challenges.

Switzerland and the ICRC wish to encourage active and open discussions. They will ensure that exchanges focus on practical and technical matters, without criticism regarding the practices of individual states. Furthermore, they do not intend to discuss applicable rules of IHL relating to the protection of the natural environment in armed conflicts or the legal interpretation of these, nor to develop a set of standards or an outcome agreed among participants. Switzerland and the ICRC emphasize that participating in discussions does not mean that experts or their respective states endorse a specific interpretation of IHL.

¹ In 2020, the ICRC released the updated version of its [Guidelines on the Protection of the Natural Environment in Armed Conflict](#), setting out 32 rules and recommendations relating to the protection of the natural environment under IHL. The Guidelines are a restatement of the law as it stands in the eyes of the ICRC, and should not be interpreted as limiting or prejudicing existing obligations under international law or as creating or developing new ones. Recognizing that states have varying interpretations of a number of these IHL rules, the meeting does not seek to address legal applicability or interpretation of these but rather to exchange national practices and challenges on the protection of the natural environment in armed conflicts. As deemed relevant by individual states, the Guidelines can be considered as a resource for discussions on these practices and challenges.

The discussions will take place in plenary and each of the three core areas and practical issues will be addressed in a separate session in plenary (see agenda).

After the meeting, Switzerland and the ICRC will circulate to all participants a summary to provide a brief account of the discussions. This summary will not attribute to participants the views they have expressed during the meeting nor will it purport to reflect a consensual view of participants. The summary will be the sole responsibility of Switzerland and the ICRC.

Participation

All state parties to the Geneva Conventions are invited. In light of the technical nature of the discussions, Switzerland and the ICRC encourage participation by experts at technical level whose portfolio includes and/or who have experience in the protection of the environment on the three core areas and practical issues to be addressed, ideally from relevant ministries (defense, environment).

1. Disseminating, training and integrating at the national level IHL rules regarding the protection of the natural environment

1.1. Introduction

In view of the impacts that armed conflicts may have on the natural environment and, in turn, on people, the adoption of concrete implementation measures at the national level remains necessary. States can take a number of actions to protect the natural environment, including the dissemination of relevant IHL rules and integration of these in the doctrine, education, training and disciplinary systems of the armed forces as well as in national legal and policy frameworks. Sound acquaintance of IHL rules and implementation of these is essential for their effective application and, ultimately, for the protection of victims of armed conflicts. Disseminating IHL rules on the protection of the natural environment among the armed forces, government officials, decision makers, the judicial sector, experts and the general public and integrating these into military manuals, national policy and legal frameworks is key to that end.

Due to their transversal nature, implementation measures that states can take at the national level will be discussed throughout the different sessions. This first session will be dedicated to implementation measures that states can take before the outbreak of an armed conflict as well as general measures that aim to prevent future damage to the natural environment. It aims to explore measures that may be taken on the dissemination, training and integration of IHL rules on the protection of the natural environment at the national level as well as challenges related to this.

1.2. Overview of the relevant rules of IHL

Under IHL, states have obligations related to respect for, implementation and dissemination of IHL rules, including those concerning the natural environment. States must adopt the necessary legal, administrative and practical measures to give effect to their obligations on the protection of the natural environment. It is important that preparatory steps be taken already in peacetime to ensure compliance with relevant obligations once an armed conflict breaks out.

Other obligations that are relevant for the implementation of IHL are those on the dissemination of these rules. States are required to instruct their armed forces on applicable IHL rules, including those protecting the natural environment.² They must also encourage the teaching of IHL to the general public.³ In particular, states must ensure that legal advisers are available, when necessary, to advise military commanders on the application of IHL.⁴

² See especially art. 47 Geneva Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (CG I); Art. 48 Geneva Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (GC II); Art. 127 Geneva (III) relative to the Treatment of Prisoners of War (GC III); Art. 144 Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War (GC IV); Arts 83 and 87(2) Additional Protocol (I) to the Geneva Conventions (AP I); art. 19 Additional Protocol (II) to the Geneva Conventions (AP II); rule 142 of the ICRC study on customary IHL. See also A/RES/47/37 from 9 February 1993.

³ See references in previous footnote as well as rule 143 of the ICRC study on customary IHL.

⁴ Art. 82 AP I; rule 141 of the ICRC study on customary IHL.

1.3. Guiding questions

1.3.1. Questions on challenges

Experts are asked to reflect and share their views on the following **broad questions regarding challenges**:

- What practical challenges has your state experienced, or would it anticipate, for:
 - (a) instructing and training armed forces on their obligations regarding the protection of the natural environment and
 - (b) disseminating these to the general population?
- What practical challenges has your state experienced, or would it anticipate, for integrating the protection of the natural environment into the doctrine, standard operating procedures, education and training of the armed forces?
- What practical challenges has your state experienced, or would it anticipate for integrating the protection of the natural environment in national legal and policy frameworks?
- Are there any particular challenges and/or opportunities that your state has experienced in relation to the specific issue of the implementation of IHL rules on the protection of the natural environment? In what way can this issue differ from others in terms of implementation at national level?

1.3.2. Questions on practices

Experts are also asked to reflect and share their views on the following **broad questions regarding practices**:

- What practices has your state developed, or would it consider useful, for integrating the protection of the natural environment into the education, training and exercises of the armed forces?
- What practices has your state developed, or would it consider useful, for instructing armed forces on their obligations regarding the protection of the natural environment?
- What practices has your state developed, or would it consider useful, for disseminating IHL rules relating to the protection of the natural environment among the general population?
- What relevant practices on any of the above questions – or on IHL obligations related to the protection of the natural environment more generally – has your state integrated into laws, regulations, doctrines or policies (e.g. military or field manuals, standard operating procedures, etc.)?

1.4. Examples of good practices

To inform responses to the questions above, experts are invited to reflect on the following examples of good practices:

Good practices related to the integration of IHL into military doctrine, education and training systems

- Developing new or adapting existing resources for the armed forces (e.g. military and field manuals, standard operating procedures, handbooks, toolkits, courses, videos, etc.) to expressly incorporate IHL rules relating to the protection of the natural environment in military doctrine, education and training and to ensure effective instruction on these
- Tasking personnel or units in the Ministry of Defence and armed forces with environmental responsibilities, including for example to provide expertise on reducing environmental damage during armed conflict and to assess these impacts
- Providing training to legal advisers to the armed forces on IHL rules protecting the natural environment with a view to equipping them to provide advice to military commanders
- Organizing individual or joint military exercises – or other similar initiatives – to increase understanding of IHL rules and to share knowledge on how to observe these in practice

Good practices related to the integration of IHL into general legal and administrative frameworks and to the dissemination of IHL to the general population

- Ratifying or acceding to relevant international treaties providing protection to the environment in armed conflict
- Analysing areas requiring further domestic implementation and developing new or modifying existing domestic laws, regulations and practical measures to integrate relevant obligations and ensure that the institutional framework to address these is in place
- Application, as a matter of policy, of IHL rules protecting the natural environment in international armed conflicts to non-international armed conflicts
- Integrating IHL rules on the protection of the natural environment in academic courses and moot court competitions as well as in other measures and initiatives (e.g. publications, conferences) to disseminate these among the civilian population
- Using international fora and platforms or initiatives to boost awareness of relevant IHL rules and promote their implementation
- Tasking national IHL committees or similar entities, as relevant, to advise and assist national authorities in their efforts to implement IHL rules protecting the natural environment and spread knowledge of these

Experts are invited to reflect on the abovementioned practices from the experience of their respective state:

- If your state has developed such practice: How is it carried out in your context? What has this practice resulted in so far?
- If your state has not developed such practice: What do you think of such practice? To what extent would it be relevant in your context? What, if any, would be challenges to putting these in place?

2. Assessing the effects of military operations on the natural environment and the implications for operations

2.1. Introduction

Military operations can damage the natural environment where they take place. The severity of the impact – including on dependent communities – varies significantly. For example, attacks may cause land and water contamination and release pollutants into the air. Explosive and toxic remnants of war can further contaminate soil and water sources and harm wildlife. Biodiversity may be degraded as warfare is waged in hotspots. The consequences of such environmental damage for conflict-affected populations can extend to their health, food security and livelihoods, particularly as climate risks exacerbate environmental degradation. New weapons, means and methods of warfare also raise questions as to their effects on the natural environment.

This session aims to explore measures that may be taken to improve military understandings of environmental impacts of the conduct of hostilities. It also aims to facilitate an exchange on corresponding steps that states could take to reduce incidental damage to the natural environment during the conduct of hostilities (including in the review of new weapons, means and methods, as relevant).

New technologies provide opportunities to assess these effects. They may also facilitate improvements in how states share and use such information in the conduct of hostilities.

2.2. Overview of the relevant rules of IHL

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, including distinction,⁵ proportionality,⁶ and precautions.⁷ These general rules are of a customary nature in both international and non-international armed conflicts.

Beyond these core principles and rules, other IHL rules also extend protection to the natural environment or certain parts of it. These include obligations regarding widespread, long-term and severe damage to the natural environment,⁸ and regarding objects indispensable to the survival of the civilian population, as applicable.⁹

Another relevant obligation, for states parties to Additional Protocol I, is that when studying, developing, acquiring or adopting a new weapon, means or method of warfare, states must determine whether its employment would be contrary to the rules of IHL and any other rule of international law as applicable, including those that protect the natural environment.¹⁰

⁵ Arts 48 and 52 AP I; rule 7 of the ICRC study on customary IHL.

⁶ Art. 51(5)(b) AP I; rule 14 of the ICRC study on customary IHL.

⁷ Arts 57 and 58 AP I; rules 15-24 of the ICRC study on customary IHL.

⁸ Arts 35(3) and 55(1) AP I.

⁹ Art. 54(2) AP I; Art. 14 AP II; rule 54 of the ICRC study on customary IHL.

¹⁰ Art. 36 AP I.

Recognizing that states have varying interpretations of a number of these IHL rules, this session – like all other sessions – does not seek to address legal applicability or interpretation. Rather, states are invited to exchange on challenges and national practices related to the reduction of environmental harm resulting from the conduct of hostilities.

2.3. Guiding questions

2.3.1. Questions on challenges

Experts are asked to reflect and share their views on the following **broad questions regarding challenges**:

- What practical challenges has your state experienced, or would it anticipate, for assessing the effects of military operations on the natural environment?
- What practical challenges has your state experienced, or would it anticipate, for implementing information obtained during planning into the conduct of hostilities in order to prevent and reduce harm to the natural environment?
- What practical challenges has your state experienced, or would it anticipate, for assessing the effects of a new weapon, means or method of warfare on the natural environment?

2.3.2. Questions on practices

Experts are also asked to reflect and share their views on the following **broad questions regarding practices**:

- What practices has your state developed, or would your state consider useful, to assess the effects of military operations on the natural environment? For example, is the natural environment taken into account in collateral damage estimates prior to attacks or during battle damage assessments after attacks?
- What practices has your state developed, or would your state consider useful, to assess the effects of a new weapon, means or method of warfare on the natural environment in accordance with applicable international law? In particular, have scientific studies on the effects on the natural environment been conducted and examined? Is there scientific uncertainty about the effects on the natural environment?
- To what extent does your state use, or would your state consider useful, new technologies to assess effects of military operations on the natural environment?
- What practices or tools has your state developed, or would your state consider useful, to implement such assessments or data in the conduct of hostilities in order to minimize incidental harm to the natural environment?
- What practices or tools has your state developed, or would your state consider useful, to share relevant data on the environmental impacts of conflict with other actors, such as states, humanitarian actors, or allied forces?

- What relevant practices on any of the above questions has your state set out in law, standard operating procedures or policy?

2.4. Examples of good practices

To inform responses to the questions above, experts are invited to reflect on the following examples of good practice:

- Prior to or during military operations, taking into account available sources or databases regarding areas of particular environmental importance or fragility, for the purpose of informing conduct of hostilities planning
- Consulting local communities on the effects of armed conflicts, in particular of military operations, on the natural environment
- Conducting geospatial analysis with new technologies to assess effects of armed conflicts on the natural environment
- Conducting collateral damage assessments (including environmental assessments) before, during and/or after military engagement, as well as prior to specific operations
- Assessing the degree to which areas where the conduct of hostilities is planned to occur are affected by climate risks and shocks, such that the natural environment is already particularly degraded and fragile
- Establishing an environmental database to collect, share and analyze activities, products or services that may affect the natural environment
- Sharing data, for example through memoranda of understanding or during interstate exchanges on review of new weapons, means and methods of warfare
- Conducting “after action reviews” that take into account environmental damage, when it appears that a specific operation has caused damage to the natural environment, in order to understand how to avoid it in the future

3. Identifying and designating areas of particular environmental importance or fragility as demilitarized zones

3.1. Introduction

Areas of particular environmental importance or fragility – such as national parks, natural reserves and endangered species habitats – are especially vulnerable in armed conflicts. Effects of military operations in such zones may cause serious damage to the natural environment and the local population.

By establishing a demilitarized zone, parties to a conflict could agree to keep areas of particular environmental importance or fragility off-limits to military operations. Combatants and military equipment could be excluded from such zones, and the zones could only be attacked if they contain a military objective. The designation of such zones as demilitarized, by agreement between the parties to a conflict, is a voluntary measure; there is no obligation in IHL to establish them. However, they constitute one way states may choose to enhance the protection of their national zones of environmental importance. Although a demilitarized zone under IHL requires agreement between the parties to a conflict, states and parties to armed conflict may decide to designate areas of particular environmental importance or fragility as off-limits to military operations even in the absence of such an agreement and, in situations of armed conflict, seek to put in place such agreements with the opposing side. While not without complexity, this kind of area-based demarcation may offer commanders the kind of clarity that is helpful to guide operational planning.

This session aims to explore measures that may be taken to identify areas of particular environmental importance or fragility and designate them as demilitarized or otherwise protected in armed conflicts. It also aims to address challenges for achieving the protection of such areas – once designated – in practice.

3.2. Overview of the relevant rules of IHL

No rule of IHL confers internationally recognized protection on specific natural areas as such. However, IHL permits the establishment of demilitarized zones by agreement between the parties to a conflict.¹¹ Demilitarized zones are areas in which military operations are not conducted, i.e. the presence of combatants and military material is barred. The agreements may be concluded in time of peace or after the breakout of hostilities.

In general, the terms of the agreement should define and describe the limits of the demilitarized zone and methods of supervision.¹² So far as possible, the party in control of a demilitarized zone shall mark it by clearly visible signs.¹³

A range of existing resources could be used to help identify relevant environmental zones. Examples include sites of major environmental importance appearing on the World Heritage

¹¹ Art. 60 AP I; rule 36 of the ICRC study on customary IHL. In non-international armed conflicts, common Article 3 foresees that parties can conclude special agreements. This could be used as a basis to agree additional protections for the natural environment such as demilitarized zones.

¹² Art. 60(2) AP I.

¹³ Art. 60(5) AP I.

List, identified in the National Biodiversity Strategies and Action Plans, or listed in the International Union for Conservation of Nature's conservation databases. States also have domestic legislation that could be referred to when identifying these areas.

3.3. Guiding questions

3.3.1. Questions on challenges

Experts are asked to reflect and share their views on the following **broad questions regarding challenges**:

- What practical challenges has your state experienced, or would it anticipate, for identifying areas of particular environmental importance or fragility for the purpose of demilitarization or other protection in armed conflict?
- What practical challenges has your state experienced, or would it anticipate, for designating them as demilitarized or otherwise protected areas in armed conflict?
- What practical challenges has your state experienced, or would it anticipate, for implementing provisions related to the status of a demilitarized or otherwise protected zone once it is in place?

3.3.2. Questions on practices

Experts are also asked to reflect and share their views on the following **broad questions regarding practices**:

you

- What practices has your state developed, or would it consider useful, for identifying areas of particular environmental importance or fragility?
- What practices has your state developed, or would it consider useful, for designating areas of particular environmental importance or fragility as demilitarized or otherwise protected in armed conflict?
- Are there other protections that could be put in place for such zones in armed conflict, other than demilitarization?
- Has your state enshrined, or would it consider useful, relevant practices on any of the above questions into law, standard operating procedures or policy?

3.4. Examples of good practices

To inform responses to the questions above, experts are invited to reflect on the following examples of good practice:

- Using existing international or national lists of protected areas to identify relevant zones of particular ecological significance or fragility
- Consulting local communities when considering the establishment of such zones

- Adopting law, standard operating procedures or policy to allow the creation of demilitarized or protected zones
- Informing opposing parties of the existence and location of, and ongoing conservation efforts in, areas of particular ecological significance or fragility
- Training and disseminating the rules on demilitarized zones among the armed forces and the civilian population
- Establishing and maintaining cross-border environmental cooperation structures
- Clarifying the status of personnel assigned to the surveillance of protected environmental areas, to avoid militarization of designated zones