

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

HPCR MANUAL ON  
INTERNATIONAL LAW  
APPLICABLE TO AIR AND  
MISSILE WARFARE

The *HPCR Manual on International Law Applicable to Air and Missile Warfare* provides the most up-to-date restatement of existing international law applicable to the conduct of air and missile warfare. The *HPCR Manual* and its associated rule-by-rule Commentary are the results of a six-year endeavor led by the Program on Humanitarian Policy and Conflict Research (HPCR) at Harvard University, during which it convened an international group of renowned legal experts and practitioners to reflect on the current legal framework regulating air and missile warfare from various sources of international law. Through the publication of the *HPCR Manual* and its associated Commentary, HPCR hopes that legal advisors and military officers will benefit from an in-depth presentation – and interpretation – of international law applicable to military operations involving air and missile warfare. As a result, it is expected that a greater clarity of the law will enhance the protection of civilians in armed conflict.

The Program on Humanitarian Policy and Conflict Research (HPCR) at Harvard University is a research and policy center focusing on international humanitarian law and the protection of civilians in situations of armed conflict. The Program was established in 2000 as a collaborative effort between the Swiss government, the United Nations, and Harvard University. HPCR aims to provide legal and policy expertise in the development of cogent tools and methods to enhance the capabilities of professionals and agencies engaged in the implementation and monitoring of international humanitarian law.

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

---

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

# HIPICIR

## MANUAL ON INTERNATIONAL LAW APPLICABLE TO AIR AND MISSILE WARFARE

Produced By  
The Program on Humanitarian Policy and Conflict  
Research at Harvard University



Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town,  
Singapore, São Paulo, Delhi, Mexico City

Cambridge University Press

32 Avenue of the Americas, New York, NY 10013-2473, USA

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9781107625686](http://www.cambridge.org/9781107625686)

© The Program on Humanitarian Policy and Conflict Research at Harvard University 2013

This publication is in copyright. Subject to statutory exception  
and to the provisions of relevant collective licensing agreements,  
no reproduction of any part may take place without the written  
permission of Cambridge University Press.

First published 2013

Printed in the United States of America

*A catalog record for this publication is available from the British Library.*

*Library of Congress Cataloging in Publication Data*

HPCR Manual on international law applicable to air and missile warfare / Program on  
Humanitarian Policy and Conflict Research at Harvard University.

pages cm

Includes bibliographical references and index.

ISBN 978-1-107-03419-8 (hardback : alk. paper) – ISBN 978-1-107-62568-6 (pbk. : alk. paper)  
1. Air warfare (International law) 2. Humanitarian law. I. Harvard School of Public Health.  
Program on Humanitarian Policy and Conflict Research. II. Title: Manual on international law  
applicable to air and missile warfare.

KZ6680.H68 2013

341.6'3–dc23 2013001697

ISBN 978-1-107-03419-8 Hardback

ISBN 978-1-107-62568-6 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for  
external or third-party Internet Web sites referred to in this publication and does not guarantee  
that any content on such Web sites is, or will remain, accurate or appropriate.

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

## CONTENTS

<i>Foreword</i>	vii
<i>Introduction</i>	ix
<b>Black-Letter Rules of the <i>HPCR Manual on International Law Applicable to Air and Missile Warfare</i></b>	xix
<b>Commentary to the <i>HPCR Manual on International Law Applicable to Air and Missile Warfare</i></b>	1
<b>Appendix I Group of Experts</b>	405
<b>Appendix II Sessions of the Group of Experts</b>	409
<b>Appendix III List of Informal Meetings with State Representatives</b>	410
<b>Appendix IV Drafting Committee: Members &amp; Meetings</b>	413
<b>Appendix V Table of Treaties (Chronological)</b>	414
<b>Appendix VI Table of Abbreviations</b>	417
<i>Index</i>	423

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

---

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

## FOREWORD

It is my pleasure and honor to present the *HPCR Manual on International Law Applicable to Air and Missile Warfare* and its *Commentary*. The *HPCR Manual* provides the most up-to-date restatement of existing international law applicable to air and missile warfare, as elaborated by an international Group of Experts. As an authoritative restatement, the *HPCR Manual* contributes to the practical understanding of this important international legal framework.

The *HPCR Manual* and its *Commentary* are the results of a six-year-long endeavor led by the Program on Humanitarian Policy and Conflict Research at Harvard University (HPCR), during which it convened an international Group of Experts to reflect on the existing rules of international law applicable to air and missile warfare. This Group of Experts, under the guidance of HPCR Senior Academic Advisor, Professor Dr. Yoram Dinstein, has conducted, since 2004, a methodical and comprehensive reflection on international legal rules applicable to air and missile warfare, drawing from various sources of international law. The Black-Letter Rules of the *HPCR Manual* were adopted by consensus by the Group of Experts in Bern, Switzerland, on 15 May 2009. The *Commentary* on the Black-Letter Rules was drafted by selected experts from the original group, under the supervision of Professor Dinstein and HPCR Project Coordinator, Bruno Demeyere. While the *HPCR Manual* restates current applicable law, the *Commentary* clarifies the prominent legal interpretations and indicates differing perspectives.

We would like, first and foremost, to acknowledge the remarkable role of Professor Yoram Dinstein throughout this process. His internationally recognized expertise and analytical engagement have been instrumental in maintaining the momentum and authority of this initiative over the years. Members of the Group of Experts (please see Appendix I for the full list) have individually made important contributions to each step of the process by studying a particular area of the law of air operations and by providing comments on the overall exercise. We would like to

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

viii

FOREWORD

recognize, particularly, the members of the Drafting Committee (please see Appendix IV), who have invested countless hours in summarizing the various interpretations of the Black-Letter Rules discussed among the experts. HPCR Project Coordinator Bruno Demeyere managed this process in an adept and diligent manner that was much appreciated by his colleagues.

As ever, this project would not have been possible without the substantial financial support and generosity of its donors, primarily the Swiss Federal Department of Foreign Affairs. In addition, several governments supported the convening of the Group of Experts in their various meetings, as well as regional consultations, namely Australia, Belgium, Canada, Germany, the Netherlands, and Norway. The International Society for Military Law and the Law of War also facilitated consultations with military experts at regular intervals during the project. Words of gratitude are also in order for the Fritz Thyssen Foundation and the Max Planck Institute for Comparative Public Law and International Law for their support in hosting of the Group of Experts meetings. Finally, a word of special thanks goes to Barbara Fontana, from the Political Division IV of the Swiss Federal Department of Foreign Affairs, who kept a watchful and constructive eye on this process since its inception.

Through the publication of the *HPCR Manual* and its *Commentary*, HPCR hopes that legal advisors and military officers will benefit from an in-depth presentation – and interpretation – of international law applicable to air and missile warfare. As a result, it is expected that a greater clarity of the law will enhance the protection of civilians in armed conflict.

Claude Bruderlein  
Director, Program on Humanitarian Policy  
and Conflict Research



Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

## INTRODUCTION

### A. The Background of the Project

Following a series of informal consultations with scholars and governmental experts, the Program on Humanitarian Policy and Conflict Research at Harvard University (HPCR) launched in 2004 a multi-annual project, with a view to restating the existing law of air and missile warfare. This initiative, based on the work of renowned international legal experts, culminated in the formulation of the present *HPCR Manual on International Law Applicable to Air and Missile Warfare* (hereinafter: the *HPCR Manual*).

Some 80 years earlier, in 1923, the famous Rules of Air Warfare were informally drafted at The Hague by a Commission of Jurists (established in 1922 by the Washington Conference on the Limitation of Armament). The Hague Rules, albeit not binding, have had considerable impact on the development of the customary law of armed conflict. Still, much has happened in the intervening 80 years in air warfare, which was in its infancy when the Hague Rules were drawn up. Air power has become a central component of the military arsenal of States and plays a critical role in modern warfare. As for missiles, they were not even conceived in 1923. The exponential changes brought about in air and missile technology in the last few decades have transformed the face of the modern battlefield, revolutionized military strategy, and created a series of distinct challenges to the protection of civilians in time of armed conflict.

Over the course of the recent decades, the challenge of applying existing law to the use of aircraft and missiles in time of hostilities has amply demonstrated that there are bones of contention regarding the scope and content of the international legal rules pertaining to air and missile warfare. More recently, the use of Unmanned Aerial Vehicles – frequently referred to as “drones” – has brought even greater attention to the need for a clear understanding of the applicable legal framework.

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter[More information](#)

Although, since the drafting of the 1923 Rules of Air Warfare, a number of international treaties have been adopted in response to developments in modern warfare (in particular, the four 1949 Geneva Conventions for the Protection of War Victims and the two Additional Protocols of 1977, as well as diverse conventions regarding cultural property, biological weapons, chemical weapons, etc.), it must be taken into account that (i) these instruments, although containing rules relevant to air and missile warfare, do not address a number of important aspects of air and missile operations; and (ii) while the Geneva Conventions are universal in their scope of application, other instruments (especially AP/I) are not binding on all States: non-Contracting States (primarily the United States) explicitly contest some of their rules. It is for that reason that the Commentary on the *HPCR Manual* has endeavored to identify US practices and positions which are consistent with the rules of AP/I.

It is important to bear in mind that the current daunting challenges to the law of air and missile warfare are not derived merely from the rapid pace of development of new technologies. There is also an urgent need to confront new methods of warfare (however gruesome), introduced by international terrorism. At least since 11 September 2001, the law of armed conflict has been forced to consider, e.g., the use of a hijacked civilian airliner as a weapon (*cf.* Rule 63 (b) of this Manual).

The lack of a contemporary methodical restatement of the law regulating air and missile warfare has become particularly glaring in light of the successful effort to restate the law applicable to sea warfare, culminating in the *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* (published by the International Institute of Humanitarian Law in 1995). Most of the rules of the *San Remo Manual*, while non-binding, have gained over time extended support from leading maritime powers. The *San Remo Manual* covers – to some extent – aerial elements of naval warfare, which are mentioned in the Commentary on the *HPCR Manual*. But, naturally, this was not the main thrust of the San Remo text.

The present project uses the *San Remo Manual* as a model. Like the *San Remo Manual*, the *HPCR Manual* must not be confused with a draft treaty, prepared as the groundwork for a future diplomatic conference. The goal is rather to present a methodical restatement of existing international law on air and missile warfare, based on the general practice of States accepted as law (*opinio juris*) and treaties in force. No attempt has been made to be innovative or to propose new norms (*lex ferenda*), however desirable this may appear to be: the sole aim of this project has been to systematically capture in the text existing rules of international law

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter[More information](#)

(*lex lata*). Since the authors of the *HPCR Manual* have no power to legislate, it is freely acknowledged that the emerging restatement must be evaluated not on the basis of logic, expediency, or policy considerations. The only test is whether the text of the *HPCR Manual* is an accurate mirror-image of existing international law. For its part, existing international law is presented with no attempt to conceal any blemishes or inadequacies.

All too frequently, due to the immense proliferation of international law – and the inability of any single expert to be familiar in detail with all its divergent branches – there is a growing tendency of overspecialization in the field. In the preparation of the *HPCR Manual*, it was deemed indispensable to tie together separate strands of the law, going beyond the strict law of armed conflict to incorporate norms of air law (the Chicago Convention of 1944 and its subsequent annexes), maritime law (the 1982 UN Convention on the Law of the Sea), etc., insofar as they are relevant to air and missile operations.

## B. The Process

The genesis of the present project was in the first Informal High-Level Expert Meeting on Current Challenges to International Humanitarian Law (so-called Alabama 1 meeting), co-organized by HPCR and the Swiss Federal Department of Foreign Affairs in January 2003. A key recommendation of government representatives at the meeting focused on the importance of addressing potential gaps in the present law of armed conflict applicable to high-tech warfare. The theme of air and missile warfare was identified as a high-priority area for the restatement of existing international law. HPCR emerged as the facilitator of this new project (directed by Professor Yoram Dinstein as Program Advisor).

Following consultations with key governments and representatives of the International Committee of the Red Cross (ICRC), HPCR convened a Group of Experts, which ultimately grew to approximately 30 qualified international scholars and practitioners, including selected experts from government circles (military and civilian) and from the ICRC, all of them participating in the project in their purely personal capacity (the names of all the experts appear in Appendix I, A). Government representatives of donor countries (a roster that grew over the years to include Switzerland, Germany, Norway, Belgium, Sweden, Australia, and Canada) were also invited in their official capacity to observe the deliberations of the Group of Experts (see Appendix I, B). It ought to be made clear that the views

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

expressed in the *HPCR Manual* do not necessarily reflect those of the governments or institutions for which some of the experts participating in the project are working.

The first meeting of the Group of Experts took place at Harvard University in January 2004, and it came up with a Plan of Action: more than 20 topics were selected and assigned to individual experts, with a view to the preparation of research papers (roughly matching the various Sections of the emerging *HPCR Manual*). It is hoped that the principal research papers will ultimately be published in a revised form: they lie at the root of the *HPCR Manual* and explain many of the decisions taken by the Group of Experts.

The Group of Experts met several times, in order to examine the research papers and debate legal issues. After thorough examination of the papers, the Group of Experts drew up a first version of the *HPCR Manual* (consisting of Black-letter Rules) in Brussels in March 2006. A final text of the Black-letter Rules of the *HPCR Manual* was adopted by the Group of Experts in Bern on 15 May 2009. A list of all sessions of the Group of Experts is produced in Appendix II.

From the onset of the project, it was perceived that – if the *HPCR Manual* is to have any impact in the world of reality – it cannot be finalized without prior consultations with governments. While HPCR did not seek the endorsement of governments for the Manual, it believes that their views as to the applicable law are indispensable to the elaboration of both the Black-Letter Rules and the Commentary. The first consultation took place when the Brussels draft Manual was presented to representatives from approximately 25 States at the Third Informal High-Level Expert Meeting on Current Challenges to International Humanitarian Law (so-called Alabama 3 meeting), held in Montreux, Switzerland, in May 2006. Participating government representatives provided many critical comments and observations. These were subsequently reviewed by the Group of Experts, leading to a considerable revision of the *HPCR Manual*.

The *HPCR Manual* (in a number of updated versions) was also submitted to a series of regional and bilateral informal meetings with State representatives (for a complete list of meetings, and States taking part in these consultations, see Appendix III). In all, most of the leading States in the sphere of air and missile warfare have been consulted. Although participation of States in any of the consultation meetings does not imply official endorsement of the specific formulation of any given Black-letter Rule of the *HPCR Manual*, it is hoped that the final text of the *HPCR Manual* will be put to actual use by their respective armed forces.

### C. The Purpose of the *HPCR Manual* and Its Commentary

The *HPCR Manual* does not have a binding force, but hopefully it will serve as a valuable resource for armed forces in the development of rules of engagement, the writing of domestic military manuals, the preparation of training courses, and – above all – the actual conduct of armed forces in combat operations. In the first place, the goal is to provide armed services' lawyers – who advise military commanders, draft legal texts, and plan legal modules of military training – with a pragmatic and cogent text, assisting them in carrying out their crucial tasks. But, moreover, it is hoped that military commanders in the field will find in the *HPCR Manual* a practical tool that will make decision making easier in a real-time operational environment and that they will consult it when the need arises. In the final analysis, the possibility to consult the *HPCR Manual* ought to make the officers concerned (including, but not exclusively, individual members of aircrews) more confident of themselves at a time when decisions have to be made rapidly. If something goes wrong in a military operation, there is a regrettable tendency to appraise what happened on the basis of hindsight criteria. The objective of the *HPCR Manual* is to be of help to those who plan, approve, or execute air or missile operations before rather than after the event.

Surely, the *HPCR Manual* is designed for operational use not only by air forces but also by other segments of the armed forces in time of armed conflict, as well as by those organizations and entities mandated to monitor and report on the implementation of international law by the parties to armed conflicts. In particular, when it comes to targeting and precautions, knowledge and understanding of the law of air and missile warfare is of crucial importance not only to the commanders, air staffs, and aircrews of the attacking air powers but also to all those engaged in the protection of populations. Needless to say, it is hoped that the *HPCR Manual* will be used extensively in training and instruction courses (not only in wartime but also in peacetime), so as to familiarize prospective users with the patterns of behavior expected of them.

#### (i) *The Black-Letter Rules of the HPCR Manual*

The Black-letter Rules of the *HPCR Manual* are the product of the collaborative effort of the Group of Experts as a whole. In large parts, the Black-letter Rules reflect the overall consensus of the Group of Experts as to the state of the most salient elements of the existing law of international

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter[More information](#)

armed conflict (also known as International Humanitarian Law) bearing on air and missile warfare in 2009. Obviously, international law is not static. In time, the *HPCR Manual* may have to be revised to reflect future changes in the law.

Consensus for the purposes of the drafting of the Black-letter Rules of the *HPCR Manual* was understood to mean that no more than two participants in the Group of Experts had reservations about the language in which the Black-letter Rules are couched (caveats were then inserted in the Commentary). Whenever three or more participants in the Group of Experts objected to a given text, it was changed to meet such objections or bridge over conflicting views. In the rare instances in which compromise formulas proved beyond the reach of the Group of Experts, it was agreed to follow in the text the majority view but to give in the Commentary full exposure to the dissenting opinions.

The *HPCR Manual* is divided into 24 Sections of varying lengths, depending on the “density” of State practice and the consequent number of norms that have been consolidated in each sphere. Many Sections are divided into sub-sections of General Rules (applicable in armed conflicts across the board, including air or missile warfare) and specific Rules that are geared to air or missile operations.

It was debated in the Group of Experts whether or not to open the *HPCR Manual* with a Section enumerating the basic principles underlying the law of armed conflict. As a minimum, there are three such cardinal principles (listed by the International Court of Justice in its 1996 Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*, paras. 78 and 88), namely, (i) distinction (between combatants and non-combatants and between military objectives and civilian objects); (ii) the prohibition to cause unnecessary suffering to combatants; and (iii) neutrality (the prohibition of incursion by belligerent forces into neutral territory). There are other principles which may be deemed “basic,” such as the Martens Clause and the limitation on the right of Belligerent Parties to choose methods or means of warfare. Ultimately, the Group of Experts decided not to include such a general Section in the *HPCR Manual*. However, most of the basic principles are, of course, incorporated in the relevant text (see, especially, Rules 2 (c), 4, and 5).

(ii) *The Accompanying Commentary*

Each Black-letter Rule of the *HPCR Manual* is accompanied by a Commentary that is intended to provide user-friendly explanations for both

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

INTRODUCTION

XV

legal advisers and those who plan, approve, or execute air or missile operations on both sides of the armed conflict. The format of the Commentary is tailor-made to the requirements of the “ops” officer. Legal cites are kept to a minimum and the Commentary itself is often encapsulated in terse “bullet point” style. The rationale is that there is usually no real need to go through a legal disquisition in order to figure out what must or must not be done.

Since the success of the *HPCR Manual* is essentially contingent on its responsiveness to the needs of both legal advisers and “ops” officers in terms of clarity and relevance to realistic scenarios, the Group of Experts expressed preference for an easily accessible and comprehensible Commentary. The Commentary was formulated by a select Drafting Committee (the list of members and meetings of the Drafting Committee appears in Appendix IV). The Group of Experts as a whole frequently determined what the Commentary on specific Black-letter Rules ought to include. All participants also had an opportunity to see an earlier version of the Commentary and to critique it. Still, for obvious practical purposes, it was impossible to seek a line-by-line approval of a rather lengthy text by the entire Group of Experts. Hence, whereas the Black-letter Rules of the *HPCR Manual* reflect the views of the members of the Group of Experts, the Commentary must be seen as the sole responsibility of HPCR.

The specific goals of the Commentary are as follows:

- a) Expound underlying premises in the Black-letter Rules and shed light on points that may require greater clarity.
- b) Elaborate ideas mentioned *en passant* in the text, and explain decisions taken by the Group of Experts.
- c) Cite treaties (a Table of Treaties cited in the Commentary appears in Appendix V) and other official instruments (such as recent military manuals), as well as relevant case law, in support of the text. There are no references to academic writings in the Commentary, it being understood that the views of scholars will be presented in full in the published research papers underpinning the *HPCR Manual*.
- d) Address controversial issues not covered by the Black-letter Rules themselves.
- e) Give full expression to differing positions that emerged in the deliberations of the Group of Experts about the substance of the law. The Commentary points out where compromise solutions have been worked out in order to reconcile divergent approaches.



- f) Add to some Black-letter Rules an extrapolation that had originally been included in the black-letter language but was later relegated by the Group of Experts to the Commentary, as a mode of building a consensus for the black-letter phraseology (objections to the wording were often withdrawn on the understanding that a sentence or paragraph – the text of which was agreed upon – will appear in the Commentary rather than in the Black-letter Rule).
- g) Indicate whether the Black-letter Rule is also applicable in non-international armed conflicts (see *infra* E of this Introduction).

#### D. Themes Excluded from the Manual

From the very inception of the project, it was understood that the *HPCR Manual* is designed for operational use in the conduct of hostilities (*jus in bello*). Hence, it does not cover issues of:

- a) *Jus ad bellum*, especially questions of aggression, armed attack, and self-defense. A basic principle of the *jus in bello* is that it applies equally to all Belligerent Parties, irrespective of their respective standing pursuant to the *jus ad bellum*. In this context, it ought to be stressed that the *HPCR Manual* has been written without prejudice to binding decisions, adopted by the UN Security Council under Chapter VII of the UN Charter.
- b) Individual penal accountability under international criminal law. In other words, the *HPCR Manual* deals with the substance of the law of armed conflict and not with its penal repercussions in terms of prosecution for war crimes (or any other crimes).
- c) Implementation and enforcement of the law in the relations between States. Thus, in particular, belligerent reprisals are not dealt with.
- d) There was discussion of human rights law without agreement. Most members of the Group of Experts believe that it has only minimal bearing on air and missile warfare in international armed conflicts because the law of armed conflict is *lex specialis*.

Moreover, although the original (2006) draft *HPCR Manual* dealt with issues of military operations in outer space, it was agreed to delete these Black-letter Rules from the text, in response to the vigorous recommendation of most government representatives in the Montreux meeting (“Alabama 3”). While the Group of Experts recognized the growing importance of outer space as far as reconnaissance or missile operations



are concerned, it decided to abide by the view prevalent in Montreux, leaving the subject for a separate study in the future.

### E. Scope of the Manual

In the Plan of Action session, the Group of Experts resolved not to address the subject matter of non-international armed conflicts. The decision met with harsh criticism in Montreux and the Group of Experts gave the matter further reflection. While accepting the Montreux desire to bring non-international armed conflicts within the framework of the *HPCR Manual*, it was impossible to ignore serious terminological difficulties implicit in the disparity between the Parties to the conflict. Terms such as “Belligerent Parties,” “enemy,” “Neutral,” and even “combatants” are overtly inappropriate for usage in non-international armed conflicts. Instead of employing imprecise generic terms for both types of armed conflict, the Group of Experts arrived at the conclusion that it would be better to confine the Black-letter Rules to international armed conflicts, yet in the Commentary on every Black-letter Rule to indicate clearly whether it is specifically applicable also to non-international armed conflicts. Where this is not the case, the Commentary explains whether the Black-letter Rule is totally irrelevant to non-international armed conflicts or is applicable to them in a different fashion.

### F. Terminology

As far as possible, the *HPCR Manual* uses consistent terminology throughout the Black-letter Rules. Where necessary, it is advisable to consult Rule 1 (Definitions) as a guide for the meaning of expressions employed elsewhere in the text. Definitions apart, certain linguistic usages may require an explanation:

- a) The Group of Experts decided to avoid in the Black-letter Rules some popular terms that are apt to cause confusion (e.g., “dual-use facilities” and “information warfare”).
- b) Whenever the word “presumption” appears in the text, it is understood that the presumption is rebuttable.
- c) The *HPCR Manual* generally avoids use of the term “shall,” inasmuch as the Group of Experts wished to emphasize that the present Manual is a restatement of existing law and is not – by itself – the source of binding legal norms. Hence, when mandatory language (indicating

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

---

the existence of an international legal obligation) is called for, the expressions used are either “must” or “have (has) to.” When the Group of Experts wanted to denote that a certain conduct is desirable albeit not obligatory, this is connoted by the words “ought to.” The phrase “should” has been reserved to convey the message that there was a certain disagreement on the subject within the Group of Experts: some participants thinking that an obligation does exist and others denying it. In the absence of a consensus, it was felt best to signify through the word “should” that the existence of an obligation is cast in doubt.

- d) The Commentary uses extensively abbreviations for names of treaties (e.g., GC/I), courts (e.g., ICJ), and common expressions (e.g., POW). A list of all abbreviations is appended herewith (Appendix VI).

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter[More information](#)

BLACK-LETTER RULES OF THE HPCR  
MANUAL ON INTERNATIONAL LAW  
APPLICABLE TO AIR AND MISSILE WARFARE

Adopted by the Group of Experts in Bern, Switzerland,  
on 15 May 2009.

<b>Section A: Definitions</b>	<b>xxii</b>
<i>Rule 1</i>	
<b>Section B: General Framework</b>	<b>xxvi</b>
<i>Rules 2–4</i>	
<b>Section C: Weapons</b>	<b>xxvi</b>
<i>Rules 5–9</i>	
<b>Section D: Attacks</b>	<b>xxviii</b>
<i>Rules 10–21</i>	
I. General rules	xxviii
II. Specifics of air or missile operations	xxix
<b>Section E: Military Objectives</b>	<b>xxx</b>
<i>Rules 22–27</i>	
I. General rules	xxx
II. Specifics of air or missile operations	xxxi
<b>Section F: Direct Participation in Hostilities</b>	<b>xxxi</b>
<i>Rules 28–29</i>	
<b>Section G: Precautions in Attacks</b>	<b>xxxiii</b>
<i>Rules 30–41</i>	
I. General rules	xxxiii
II. Specifics of air or missile operations	xxxiii
III. Specifics of attacks directed at aircraft in the air	xxxiv
<b>Section H: Precautions by the Belligerent Party Subject to Attack</b>	<b>xxxv</b>
<i>Rules 42–46</i>	
<b>Section I: Protection of Civilian Aircraft</b>	<b>xxxvi</b>
<i>Rules 47–57</i>	
I. General rules	xxxvi
II. Enemy civilian aircraft	xxxvi
III. Neutral civilian aircraft	xxxvi
IV. Safety in flight	xxxvi

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter[More information](#)

XX

HPCR MANUAL

<b>Section J: Protection of Particular Types of Aircraft</b>	<b>xxxviii</b>
<i>Rules 58–70</i>	
I. Civilian airliners	xxxviii
II. Aircraft granted safe conduct	xxxix
III. Provisions common to civilian airliners and aircraft granted safe conduct	xl
<b>Section K: Specific Protection of Medical and Religious Personnel, Medical Units and Transports</b>	<b>xl</b>
<i>Rules 71–74</i>	
<b>Section L: Specific Protection of Medical Aircraft</b>	<b>xlii</b>
<i>Rules 75–87</i>	
<b>Section M: Specific Protection of the Natural Environment</b>	<b>xliv</b>
<i>Rules 88–89</i>	
I. General rule	xliv
II. Specifics of air or missile operations	xliv
<b>Section N: Specific Protection of Other Persons and Objects</b>	<b>xlvi</b>
<i>Rules 90–99</i>	
I. Civil defence	xlvi
II. Cultural property	xlvi
III. Objects indispensable to the survival of the civilian population	xlvi
IV. UN personnel	xlvi
V. Protection by special agreement	xlvi
<b>Section O: Humanitarian Aid</b>	<b>xlvi</b>
<i>Rules 100–104</i>	
I. General rules	xlvi
II. Specifics of air or missile operations	xlvi
<b>Section P: “Exclusion Zones” and No-Fly Zones</b>	<b>xlvi</b>
<i>Rules 105–110</i>	
I. General rules	xlvi
II. “Exclusion zones” in international airspace	xlvii
III. No-fly zones in belligerent airspace	xlvii
<b>Section Q: Deception, Ruses of War and Perfidy</b>	<b>xlvii</b>
<i>Rules 111–117</i>	
I. General rules	xlvii
II. Specifics of air or missile operations	l
<b>Section R: Espionage</b>	<b>li</b>
<i>Rules 118–124</i>	
I. General rules	li
II. Specifics of air or missile operations	li
<b>Section S: Surrender</b>	<b>lii</b>

Cambridge University Press

978-1-107-03419-8 - HPCR: Manual on International Law Applicable to Air and Missile Warfare:  
Produced by the Program on Humanitarian Policy and Conflict Research at Harvard University  
Frontmatter

[More information](#)

HPCR MANUAL	xxi
<i>Rules 125–131</i>	
I. General rules	lii
II. Specifics of air or missile operations	lii
<b>Section T: Parachutists from an Aircraft in Distress</b>	<b>liii</b>
<i>Rules 132–133</i>	
<b>Section U: Contraband, Interception, Inspection and Capture</b>	<b>liii</b>
<i>Rules 134–146</i>	
I. Enemy aircraft and goods on board on such aircraft	liii
II. Neutral civilian aircraft	liv
III. Safeguards	lv
IV. Determination of enemy character	lv
<b>Section V: Aerial Blockade</b>	<b>lvi</b>
<i>Rules 147–159</i>	
<b>Section W: Combined Operations</b>	<b>lviii</b>
<i>Rules 160–164</i>	
<b>Section X: Neutrality</b>	<b>lix</b>
<i>Rules 165–175</i>	
I. Scope of application	lix
II. General rules	lix
III. Specifics of air or missile operations	lx
<b>Commentary to the HPCR Manual on International Law Applicable to Air and Missile Warfare</b>	<b>1</b>

## Section A: Definitions

### 1. For the purposes of this Manual –

- (a) “Air” or “airspace” means the air up to the highest altitude at which an aircraft can fly and below the lowest possible perigee of an earth satellite in orbit. Under international law, airspace is classified as either national airspace (that over the land, internal waters, archipelagic waters, and territorial seas of any State) or international airspace (that over contiguous zones, exclusive economic zones, the high seas, and territory not subject to the sovereignty of any State).
- (b) “Air or missile operations” mean military operations in armed conflict involving the use of aircraft or missiles of all types; whether in offence or defence; and whether or not over the territory of one of the Belligerent Parties.
- (c) “Air or missile combat operations” mean air or missile operations designed to injure, kill, destroy, damage, capture or neutralize targets, the support of such operations, or active defence against them.
- (d) “Aircraft” means any vehicle – whether manned or unmanned – that can derive support in the atmosphere from the reactions of the air (other than the reactions of the air against the earth’s surface), including vehicles with either fixed or rotary wings.
- (e) “Attack” means an act of violence, whether in offence or in defence.
- (f) “Belligerent Party” means a State Party to an international armed conflict.
- (g) “Cartel aircraft” means an aircraft granted safe conduct by agreement between the Belligerent Parties for the purpose of performing a specific function, such as the transport of prisoners of war or parlementaires.
- (h) “Civilian aircraft” means any aircraft other than military or other State aircraft.
- (i) “Civilian airliner” means a civilian aircraft identifiable as such and engaged in carrying civilian passengers in scheduled or non-scheduled service.

(j) “Civilian objects” mean all objects which are not military objectives, as defined in Rule 1 (y).

(k) “Civil defence” means the performance of some or all of the humanitarian tasks mentioned below, intended to protect the civilian population against the dangers, and to help it to recover from the immediate effects, of hostilities or disasters and also to provide the conditions necessary for its survival. These tasks are: (i) warning; (ii) evacuation; (iii) management of shelters; (iv) management of blackout measures; (v) rescue; (vi) medical services, including first aid, and religious assistance; (vii) fire-fighting; (viii) detection and marking of danger areas; (ix) decontamination and similar protective measures; (x) provision of emergency accommodation and supplies; (xi) emergency assistance in the restoration and maintenance of order in distressed areas; (xii) emergency repair of indispensable public utilities; (xiii) emergency disposal of the dead; (xiv) assistance in the preservation of objects essential for survival; (xv) complementary activities necessary to carry out any of the tasks mentioned above, including, but not limited to, planning and organization.

(l) “Collateral damage” means incidental loss of civilian life, injury to civilians and damage to civilian objects or other protected objects or a combination thereof, caused by an attack on a lawful target.

(m) “Computer network attack” means operations to manipulate, disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computer network itself, or to gain control over the computer or computer network.

(n) “Contraband” means goods which are ultimately destined for territory under the control of an enemy Belligerent Party and which are susceptible for use in international armed conflict.

(o) “Cultural property” means, irrespective of origin or ownership:  
(i) Movable or immovable property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular; archaeological sites; groups of buildings which, as a whole, are of historical or artistic interest; works of art; manuscripts, books and other objects of artistic, historical or archaeological interest; as well as scientific collections and important collections of books or archives or of reproductions of the property defined above;

- (ii) Buildings whose main and effective purpose is to preserve or exhibit the movable cultural property defined in sub-paragraph (i) such as museums, large libraries and depositories of archives, and refuges intended to shelter, in the event of armed conflict, the movable cultural property defined in sub-paragraph (i);

(iii) Centres containing a large amount of cultural property as defined in sub-paragraphs (i) and (ii).
- (p) “Electronic warfare” means any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy.
- (q) “Feasible” means that which is practicable or practically possible, taking into account all circumstances prevailing at the time, including humanitarian and military considerations.
- (r) “International armed conflict” means an armed conflict between two or more States.
- (s) “Law of international armed conflict” means all the principles and rules of treaty and customary international law binding on a State and governing armed conflict between States; the term “law of international armed conflict” is synonymous with “international humanitarian law relating to international armed conflict”.
- (t) “Means of warfare” mean weapons, weapon systems or platforms employed for the purposes of attack.
- (u) “Medical aircraft” means any aircraft permanently or temporarily assigned – by the competent authorities of a Belligerent Party – exclusively to aerial transportation or treatment of wounded, sick, or shipwrecked persons, and/or the transport of medical personnel and medical equipment or supplies.
- (v) “Methods of warfare” mean attacks and other activities designed to adversely affect the enemy’s military operations or military capacity, as distinct from the means of warfare used during military operations, such as weapons. In military terms, methods of warfare consist of the various general categories of operations, such as bombing, as well as the specific tactics used for attack, such as high altitude bombing.



(w) “Military advantage” means those benefits of a military nature that result from an attack. They relate to the attack considered as whole and not merely to isolated or particular parts of the attack.

(x) “Military aircraft” means any aircraft (i) operated by the armed forces of a State; (ii) bearing the military markings of that State; (iii) commanded by a member of the armed forces; and (iv) controlled, manned or preprogrammed by a crew subject to regular armed forces discipline.

(y) “Military objectives”, as far as objects are concerned, are those objects which by their nature, location, purpose or use, make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

(z) “Missiles” mean self-propelled unmanned weapons – launched from aircraft, warships or land-based launchers – that are either guided or ballistic.

(aa) “Neutral” means a State not a Belligerent Party in an international armed conflict.

(bb) “Precision guided weapons” mean weapons that can be directed against a target using either external guidance or a guidance system of their own.

(cc) “State aircraft” means any aircraft owned or used by a State serving exclusively non-commercial government functions.

(dd) “Unmanned Aerial Vehicle (UAV)” means an unmanned aircraft of any size which does not carry a weapon and which cannot control a weapon.

(ee) “Unmanned Combat Aerial Vehicle (UCAV)” means an unmanned military aircraft of any size which carries and launches a weapon, or which can use on-board technology to direct such a weapon to a target.

(ff) “Weapon” means a means of warfare used in combat operations, including a gun, missile, bomb or other munitions, that is capable of causing either (i) injury to, or death of, persons; or (ii) damage to, or destruction of, objects.

### Section B: General Framework

2. (a) The objective of this Manual is to produce a restatement of existing law applicable to air or missile operations in international armed conflict. This is without prejudice to the possible application of some of the Rules in this Manual to non-international armed conflicts (for details, see the Commentary).  
  
(b) Nothing in this Manual affects existing obligations of States under treaties to which they are Contracting Parties.  
  
(c) In cases not covered by this Manual, civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience.
3. (a) Subject to binding decisions adopted by the Security Council under Chapter VII of the Charter of the United Nations, the Rules reflected in this Manual also apply to all air or missile operations conducted by United Nations forces when in situations of armed conflict they are engaged therein as combatants, to the extent and for the duration of their engagement.  
  
(b) The Rules reflected in this Manual also apply to armed conflicts involving any other international governmental organization, global or regional.
4. The fundamental principle is that, in any armed conflict, the right of the Belligerent Parties to choose methods or means of warfare is not unlimited.

### Section C: Weapons

5. Weapons used in air and missile warfare must comply with:  
  
(a) The basic principle of distinction between civilians and combatants and between civilian objects and military objectives.  
  
Consequently, it is prohibited to conduct air or missile combat operations which employ weapons that (i) cannot be directed at a specific lawful target and therefore are of a nature to strike lawful targets and civilians or civilian objects without distinction; or

(ii) the effects of which cannot be limited as required by the law of international armed conflict and which therefore are of a nature to strike lawful targets and civilians or civilian objects without distinction;

(b) The prohibition of unnecessary suffering or superfluous injury.

Consequently, it is prohibited to conduct air or missile combat operations which employ weapons that are calculated, or of a nature, to cause unnecessary suffering or superfluous injury to combatants.

6. Specific weapons are prohibited in air or missile combat operations. These include:

(a) Biological, including bacteriological, weapons.

(b) Chemical weapons.

(c) Laser weapons specifically designed, as their sole combat function or as one of their combat functions, to cause permanent blindness to unenhanced vision, that is to the naked eye or to the eye with corrective eyesight devices.

(d) Poison, poisoned substances and poisoned weapons.

(e) Small arms projectiles calculated, or of a nature, to cause explosion on impact with or within the human body.

(f) Weapons the primary effect of which is to injure by fragments which in the human body escape detection by x-ray.

7. The use of any weapon not expressly mentioned under this Section of the Manual is subject to the general rules and principles of customary and treaty law of international armed conflict (in particular the principle of distinction and the prohibition of unnecessary suffering), as well as to any other treaty law applicable for Contracting Parties.

8. There is no specific obligation on Belligerent Parties to use precision guided weapons. There may however be situations in which the prohibition of indiscriminate attacks, or the obligation to avoid – or, -in any event, minimize – collateral damage, cannot be fulfilled without using precision guided weapons.

**9. States are obligated to assess the legality of weapons before fielding them in order to determine whether their employment would, in some or all circumstances, be prohibited.**

**Section D:  
Attacks**

*I. General rules*

- 10. (a) In accordance with the basic principle of distinction, attacks must be confined to lawful targets.**
- (b) Lawful targets are:**
- (i) Combatants;**
  - (ii) Military objectives (as defined in Rules 1 (y) and 22);**
  - (iii) Civilians directly participating in hostilities (see section F of this Manual).**
- 11. Attacks directed against civilians or civilian objects are prohibited.**
- 12. (a) In case of doubt as to whether a person is a civilian, that person shall be considered a civilian.**
- (b) In case of doubt as to whether an object which is ordinarily dedicated to civilian purposes is being used for military purposes, it may only be attacked if, based on all the information reasonably available to the commander at the time, there are reasonable grounds to believe that it has become and remains a military objective.**
- 13. (a) Indiscriminate attacks are prohibited.**
- (b) Indiscriminate attacks are those that cannot be or are not directed against lawful targets (as defined in Rule 10 (b)) or the effects of which cannot be limited as required by the law of international armed conflict, and which therefore are of a nature to strike lawful targets and civilians or civilian objects without distinction.**
- (c) Attacks must not treat as a single lawful target a number of clearly separated and distinct lawful targets located in a city, town, village or area containing a similar concentration of civilians or civilian objects.**

14. An attack that may be expected to cause collateral damage which would be excessive in relation to the concrete and direct military advantage anticipated is prohibited.
15. (a) It is prohibited to order that there shall be no survivors in combat operations, to threaten an adversary therewith, or to conduct hostilities on that basis.
- (b) Persons who are *hors de combat* – either because they have clearly expressed an intention to surrender or as a result of sickness, wounds or shipwreck – must not be attacked, provided that they abstain from any hostile act and no attempt is made to evade capture.
16. (a) At all times, and particularly after an engagement, Belligerent Parties must, without delay, take all possible measures to search for and collect the wounded, sick and shipwrecked, to protect them against pillage and ill-treatment, and to search for the dead and prevent their being despoiled.
- (b) The wounded, sick and shipwrecked must receive, to the fullest extent practicable and with the least possible delay, the medical care and attention required by their condition. No distinction may be made among them founded on any grounds other than medical ones.

## II. *Specifics of air or missile operations*

17. (a) Only military aircraft, includingUCAVs, are entitled to engage in attacks.
- (b) The same Rule applies to the exercise of other belligerent rights, such as interception.
18. Acts or threats of violence in the course of air or missile operations cannot be pursued for the sole or primary purpose of spreading terror among the civilian population.
19. Belligerent Parties conducting, or subject to, air or missile operations:
- (a) Must take all possible measures to search for and collect the wounded, sick and shipwrecked, ensure their adequate care, permit their removal, exchange and transport, and search for the dead;

- (b) **Must, whenever circumstances permit, arrange cease-fires, if necessary through a neutral intermediary, to facilitate the activities described in paragraph (a);**
  - (c) **Ought to accept the assistance of impartial humanitarian organizations and facilitate their work in favour of the wounded and other victims of air or missile attacks.**
20. **Air or missile attacks must be conducted in accordance with those feasible precautions required under Section G of this Manual designed to avoid – or, in any event, minimize – collateral damage.**
21. **The application of the general Rules prohibiting attacks directed against civilians or civilian objects, as well as indiscriminate attacks, is confined to air or missile attacks that entail violent effects, namely, acts resulting in death, injury, damage or destruction.**

## Section E: Military Objectives

### *I. General rules*

22. **In the definition of objects as military objectives (see Rule 1 (y)), the following criteria apply:**
- (a) **The “nature” of an object symbolizes its fundamental character. Examples of military objectives by nature include military aircraft (including military UAV/UCAVs); military vehicles (other than medical transport); missiles and other weapons; military equipment; military fortifications, facilities and depots; warships; ministries of defence and armaments factories.**
  - (b) **Application of the “location” criterion can result in specific areas of land such as a mountain pass, a bridgehead or jungle trail becoming military objectives.**
  - (c) **The “purpose” of an object – although not military by nature – is concerned with the intended future use of an object.**
  - (d) **The “use” of an object relates to its present function, with the result that a civilian object can become a military objective due to its use by armed forces.**
23. **Objects which may qualify as military objectives through the definition in Rules 1 (y) and 22 (a) include, but are not limited to, factories,**